Religion & Sustainability: The Contribution of Religious Belief in Moving Society Towards Sustainability

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Abstract:

Behaviour change initiatives have largely failed in communicating the urgency of the sustainability challenge to the public and thus generate a change of behaviour. Religious communities have achieved remarkable behaviour change in situations where non-faith-based communication failed (Palmer and Finlay 2003). This paper explores what Christian belief contributes to moving society towards sustainability through the lens of the Framework for Strategic Sustainable Development (FSSD). We focus on three themes: (1) the definition of sustainability, (2) the religious motivation for and (3) actions towards sustainability. A number of religious leaders are interviewed and the religious community surveyed. Findings show that religious concepts such as stewardship and the Golden Rule are key motivations for can give guidance on sustainability. However, these concepts are not consciously exploited. Further more, both religious leaders and people lack a full understanding of sustainability and are not strategic about moving towards sustainability. We conclude that religious communities could greatly benefit from adopting a strategic sustainable development (SSD) approach.

Keywords: Sustainability, Religion, Faith, Motivation, Behaviour Change.

Statement of Contribution

We are three MSc students with very different cultural backgrounds and skills. Each one of us brought different strengths and weaknesses to this thesis. There is no doubt that this resulted in unequal textual contributions to the final report. However, the final report is the collaborative effort of several months of research, surveys, presentations *and* report writing. Hence, the measure should not be how many lines each one conceived, edited, or wrote for this final report but that each member contributed whatever they could.

One thing is certain, there is no doubt that we were all motivated by our personal interest in the subject itself. And this passion was felt throughout the entire process. At the beginning of our thesis we took time to develop some guidelines and learn about preferred styles of working. A central pillar was mutual respect and acceptance of each other as more than just academics but as people. This kept the group together throughout our thesis.

While Aniko and Mischa had previously completed a masters or equivalent, the idea of a masters in science was new to Olivier. Due to the nature of Mischa's previous degree in engineering he was able to bring scientific principles to the group and structure the process.

The literature review was very much a joint exercise. It is always a challenge to do a good literature review – comprehensive but not too time consuming, relevant but not too restrictive. Sharing information via the online platform Zotero certainly was helpful and we amassed more articles and information than any one person can take in. Hence, we divided up the main research themes amongst us.

Writing the introduction jointly was a challenge – not least because the command of English varies significantly among the group. However, the concepts, and logical flow were a group effort even if the editing was largely Mischa's effort who is bilingual in German and English.

When interacting with our research participants, each one of us had opportunities to be the primary contact, lead an interview process, and follow up. Methods, Results, Discussion and Conclusion sections were all written jointly amid a healthy dose of passionate discussion.

Overall, it is safe to say that nobody harbours negative feelings towards another team member. We have our own working styles, strengths and weaknesses and for better (or worse) we were in a group and were able to produce what we believe to be a rather cohesive piece of work. We have learned and grown as a group and as individuals, and will walk away a little bit wiser. You never know where our knowledge will be applied next.

In honour of Martin Palmer's insightful interview we are now going to celebrate because this is one of the things that sustainability practitioners can learn from religion.

Karlskrona, May 2012

Aniko Bunta, Mischa Altmann, Olivier Mazimpaka

P.S.: Recognising that this thesis provides only a little insight into this diverse field we would like to continue this conversation and encourage people to share experiences on our LinkedIn group:
Religion & Sustainability: http://www.linkedin.com/groups?gid=4465045

Executive Summary

The purpose of this master thesis is to explore religious belief as a source of motivation for behaviour change in the context of the global sustainability crisis. It establishes the current reality of sustainability awareness within religious communities and aims to help potential change agents to adapt to the religious context.

Humanity is currently facing many environmental and social challenges such as climate change, natural disasters, pollution (IPCC 2007), diseases (Stevenson 2005), poverty, and inequality (Zheng and Bishop 2009). These challenges are all related to sustainability and as such the current state of the world can be defined as the sustainability challenge.

It must be acknowledged that there is very robust scientific evidence that society has a significant negative impact on the natural environment (IPCC 2007). This indicates that a significant change in behaviour is required urgently of a large portion of society to move towards sustainability. Why have we not seen such efforts succeed?

Behaviour Change

Basic awareness of the sustainability challenge, in particular climate change, is now common in most parts of the world (Gore 2006). Nevertheless, the intended large-scale behaviour change has been largely outstanding (Godemann 2011).

Psychologist Doug McKenzie-Mohr (2000) has developed "community-based social marketing", a tried and tested methodology for making behaviour change campaigns more effective. He argues that the many behaviour change initiatives fail because they disregard the first step of CBSM: selecting specific desirable behaviours and uncovering barriers. In addition to McKenzie-Mohr's model, John P. Kotter found that "creating a sense of urgency" is the biggest stumbling block for most organisations. Having a sense of urgency is a key component to build motivation for successful behaviour change because all further steps build on it. Kotter (2008, 35) explains that to bring about change a "broader effort aimed at not just what people are thinking, but how they feel" is necessary.

Religious Communities

Religions have significantly changed the behaviour of their adherents throughout history. However, religions were not only powerful influences in history, they also have a track record of transforming societies and influencing behaviour today (Palmer and Finlay 2003). Arguably, religious communities are amongst the largest organised worldwide networks.

The concept of sustainability is found in the scriptures of all world religions though there is no universal name for it. Instead, each religion has a different teaching, sometimes in the form of a story that offers guidance on how to live a life that is in accordance with the religious principles. Sustainability is becoming a major concern in religious circles. While societal issues such as peace and social justice have been a central theme in religions for a long time, they have been slower in taking up the environmental agenda.

Religious Worldviews

The worldview of religious people is profoundly shaped by their belief. Two concepts that are particularly important with regards to sustainability: the place of humanity within nature and the perception of time. In Abrahamic religions (Judaism, Christianity and Islam) the concept of stewardship or creation care creates a sense of duty. Eastern religions (including Buddhism, Hinduism, and Jainism) subscribe to the principle of non-harm

While each worldview described here can be tapped into to promote action towards sustainability. The approaches used may need to be very different. A universal concept embodying the importance of relationship and a purpose greater than oneself is the Golden Rule.

Building a Common Vision

What is needed is an overarching common vision of the future (Kotter 2007), a common definition of sustainability. In this thesis, sustainability is defined using the four sustainability principles (SPs) of the Framework for Strategic Sustainable Development (FSSD). The four SPs are independent of religious, cultural, geographic or political context. The fourth principle (SP4) defines the conditions required for human society to flourish –

including trust and meeting human needs – within the ecological constraints of SP1-3.

Religious institutions and leaders enjoy a high level of trust from their communities. They have the "power, agency and mandate to be an important force in tackling today's global challenge" (Naberhaus 2011). It is thus crucial that trusted ambassadors of religions communities (such as leaders) develop a solid understanding of the sustainability challenge.

Research Question

RQ: What does religious belief contribute to moving society towards sustainability?

Secondary Research Questions:

SRQ1: How do leaders and members of religious communities define sustainability?

SRQ2: What motivators for moving toward sustainability can be identified in leaders and members of religious communities?

SRQ3: What actions for moving towards sustainability can be identified in leaders and members of religious communities?

Methods

Our research consists of three main phases: (1) literature review and correspondence with experts, (2) interviews with religious leaders with open-ended questions, and (3) online surveys of the religious public.

The survey and interviews were based on three themes: (1) definition of sustainability, (2) the religious motivations for sustainability, and (3) sustainability related actions motivated by religious belief.

All data was coded based on categories developed around three dimensions: (1) the four sustainability principles of the FSSD, (2) motivations, and (3) Max-Neef's human needs. Motivational categories were sense of duty, Golden Rule, and non-harm plus further categories that emerged from the data.

Expected results

We expected that religious belief is a strong motivator and that our research will show that it can play a key role in fostering behaviour change to move society towards sustainability. We expected that the religious community lacks a rigorous definition of sustainability and that the concepts of stewardship and non-harm are central motivators.

Results

Our interviews and surveys resulted in data that was largely based on Christian word views (100% interviews, 88% public survey). Thus, the analysis made is only relevant to Christian communities.

The concept of sustainability is recognised by all religious leaders. However, the level of understanding varies significantly. All leaders identified social and ecological aspects of sustainability, but sometimes they did not think of social aspects of sustainability at all until we prompted them.

Survey responses showed a much lower level of understanding. Social aspect of sustainability were mentioned in about one third of replies. The same was true for environmental aspects. Unexpectedly, the economic aspect of sustainability surfaced several times.

Motivation

Among the leaders many identified the 'golden rule', 'sense of duty', 'concern for the future' and 'love for life and nature' as motivations. Among the survey respondents more than half identified 'sense of duty' and 'concern for future' as motivator. Overall, respondents identified responsibility for sustainability as a matter of higher purpose that is intimately connected to religion.

Actions

Actions appear do not seem to relate to a strategy that is meaningful according to the principles of SSD. Actions related to the ecological principles (SP1-3) follow the text-book example of "reduce, reuse, recycle (3Rs)". Actions relating to social sustainability (SP4) are typically about

maintaining relationships with people known first hand, in particular the immediate family (e.g. family meals). Social justice was not a common theme when listing actions.

Discussion

It is not immediately clear why survey respondents were largely Christian. One possibility is that our personal connections, which are largely Christian, are reflected in our online networks such as Facebook and LinkedIn.

SRQ1: Definition of Sustainability

Both leaders and members recognise the concept of sustainability and are aware of the sustainability challenge. However, members and leaders do not have a full understanding of sustainability and often lack an appreciation of the big picture. In summary, the religious community has an inconsistent and incomplete definition of sustainability, in particular when viewed through the lens of the strategic sustainable development (SSD).

SRQ2: Motivations for Sustainability

All religious leaders and most survey respondents claim they are motivated by either the equivalent of the Golden Rule or a sense of duty. Overall, religious belief clearly motivates the religious community to make the world more sustainable. The Christian community agrees that they carry personal responsibility for sustainability as matter of higher purpose or common good that is intimately connected to their religious belief. Multiple survey respondents and leaders commented that it is difficult to separate religious and non-religious motivation.

SRQ3: Actions for Sustainability

Actions were largely un-strategic from an SSD perspective. Social actions reflect the importance placed on community within religious communities.

RQ: Religious Belief & SSD

In the discussion above we have identified a number of barriers and enablers with respect to how religious belief is moving society towards sustainability. We found that most enablers are properties of the religion

itself (e.g. scripture). One such example is the existence of the concept of sustainability in all religions. Further more, identified barriers typically relate to the personal interpretation and capacity of an individual or community: e.g. a lack of systems awareness.

We further categorised enablers and barriers using the five levels of the FSSD (see Table 4.1). Following McKenzie-Mohr's first step of Community Based Social Marketing (CBSM), we developed recommendations based on our research, which build on enablers to design strategies to systematically remove the identified barriers.

Leaders and members are interested in sustainability, are aware of their lack of knowledge, and are willing to learn more. Christian communities do not have a shared definition of sustainability making it very difficult to develop a common vision. However, the shared motivations provide a base for building a common vision of the future. Complemented by the four sustainability principles, an effective change vision and strategy could be created. Developing a trusted ambassador of sustainability from within a religious community may help to bridge the knowledge gap as well as potentially help create understanding in the secular world of science.

Conclusion

Society is facing a sustainability challenge and all organisations and communities have a role to play in moving society towards sustainability. Religious communities are large purpose-driven networks and religious belief has a positive effect on their motivation to move society towards sustainability.

Our research identified the current reality of Christianity and sustainability based on a small sample of diverse communities. And while it gives compelling reasons for sustainability to be a stronger theme within Christian communities, there is much research left to test how best to bring sustainability to the forefront in Christian and more generally in religious communities.

Acknowledgements

Glossary

Note: The definitions given here help to understand usage of typical terms in the context of this thesis only.

Abrahamic religions:
> Jewish, Christian and Muslim religions. They have the same roots and thus share many concepts and beliefs. Most notably for this thesis they share the concept of *stewardship*.

ahimsa:
> literally "non-injury" (from Sanskrit)
> see *non-harm*

backcasting from principles:
> the central *FSSD* planning method of working from an envisioned future guided by the four *sustainability principles* to the present. During this process actions leading towards this envisioned future can be identified that (1) lead in the right direction, (2) act as platforms for future actions and (3) ensure that the ability to pursue future actions is not encumbered.

belief: a loosely defined set of assumptions related to non-physical subjects.

carrying capacity:
> the ability to support an ecosystem of a certain size.

change agent:
> an individual aiming to bring about change in a religious community. Typically this is a religious leader, an active member of a religious community or a sustainability practitioner outside the community.

community:
> a group of people typically living in close geographic proximity such as a settlement. see *religious community.*

community leader:
> a person that is granted some moral(?) authority over a community by the community itself.

community of faith:
>   see *religious community*

denomination:
>   branch of a religion

Eastern religions:
>   Eastern religions are primarily found in Asia including Buddhism, Hinduism, Jainism, and Shintoism.

expert:
>   (a) an academic researchers working in the field of theology
>   (b) people with extensive experience of working with multiple religious in either social or environmental sustainability.

externality:
>   an undesirable consequence that is not taken into account

faith: a system of religious *belief*

Framework for Strategic Sustainable Development (FSSD):
>   an analysis and planning tool based on a five level framework: system, success, strategic, actions and tools level. It defines four *sustainability principles* that form the boundary conditions of sustainability and employs the method of *backcasting from principles*.

human needs:
>   Max-Neef (1992) defines nine universal human needs: subsistence, protection, affection, understanding, participation, leisure, creation, identity, and freedom. In addition, Max-Neef suggests the existence of a tenth human need that is not yet universal: *transcendence*.

interfaith:
>   between different *faiths*
>   *e.g.* interfaith dialogue = dialogue between different *faiths*

karma:
>   a concept found in many Eastern religions suggesting that every action will return to the doer with equal (positive or negative) impact, i.e. the accumulation of cause and effect of one's actions.

The idea of "what goes around comes around" maybe helpful in understanding the concept of karma.

leader:
see *community leader*

members:
members of any religious community

motivation:
the underlying purpose driving an action or behaviour

needs: see *human needs*

non-abrahamic religions:
religions that are not *Abrahamic* (i.e. not Jewish, Christian, and Muslim)

non-harm:
Principle of non-harm is based on the concept that humans are part of nature and not superior to it (contrast with *stewardship*). It advocates a life based on non-violence and is known as *Ahimsa* in Buddhism, Hinduism, and Jainism.

research participants:
all people who have contributed to the research data analysed for this thesis. This includes all survey respondents and all leaders who took part in the interviews.

religion:
a particular system of *faith* and worship (ritual). often used as synonym for *faith*

religious community:
1. **a** religious community: a *community* of people all belonging to the same *religion*, academically often referred to as *community of faith.*
2. **the** religious community: **all** religious people irrespective of religion or geography)

stewardship:

> the concept of responsibility to look after nature closely tied to an *Abrahamic* worldview of man being tasked with looking after God's creation.

strategic sustainable development (SSD):

> a development and planning approach based on the *FSSD*.

sustainability:

> a system state defined by a steady or increasing *carrying-capacity* of Earth while fulfilling all *needs* of society.

sustainability principles (SP):

> The boundary conditions for sustainability as defined in the *Framework for Strategic Sustainable Development* (*FSSD*):
> In a sustainable society,
> nature is not subject to systematically increasing …
> 1. …concentrations of substances extracted from the Earth's crust
> 2. …concentrations of substances produced by society
> 3. …degradation by physical means
>
> and, in that society …
> 4. …people are not subject to conditions that systematically undermine their capacity to meet their needs.

systems thinking:

> the ability to recognise that the world consists of multiple, inter-related, complex systems that are often nested. Hence, any one problem cannot be solved in isolation but instead must be examined as part of the bigger picture to ensure no unintended consequences are generated.

trusted ambassador:

> an individual who enjoys a certain level of authority due to the trust relationship they have with the community, organisation or individual

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Prologue

The night of April 6, 1994 the presidential jet crashed and two presidents of neighbouring countries were killed. Overwhelming fear was what reigned in the heart of many Rwandese. A few minutes later, gunshots were heard all over the country. A few hours later, it was clear that the ethnic group of Tutsis were hunted in a coordinated fashion across the country.

Surprisingly, and without any meeting or verbal agreement, almost all the people fled to churches and mosques. Everybody, even people who were not practicing before, thought of churches and mosques as a place of safety. Strange to remember how murderers followed the feeling people to houses of worship intending to execute them. Yet, in many cases they obeyed the calls of priests and sheikhs asking them to stop the killing. Whenever a religious leader stood up against the genocide many people were saved in that local community. Where many people died in houses of worship, it was mostly due to the religious leaders collaborating with the planned genocide.

In the post-genocide period, I personally could not believe in the governmental peace and reconciliation initiatives and to forgive those who killed my own. It was only through a Christian unity and reconciliation club at university, where we received many teachings, which were able to change and transform my perception, mindset and behaviour towards true reconciliation. Since then, I share this story with many genocide survivors. Through this experience I recognised that a message preached through religion has a deeper impact in many people's lives than many other ways. For this reason I strongly believe that there is an opportunity and in fact need to integrate sustainability in religion in order to save the world we are living in.

Olivier Mazimpaka

Personal Motivation

It is difficult (and unscientific) to write a thesis on religion without acknowledging the personal motivation for the topic. We recognise the power religious communities hold both in sheer numbers of members but also in the way they shape the daily lives of their members through reflection, education, and ritual.

Aniko and Olivier are active Christians who have observed first hand how their faith communities foster strong relationships between members and the wider public. For example, the Rwandan government was using church networks as communication channels for their energy saving campaign and in Romania women's circles at churches act as effective educational platform for practical advice and support.

While Mischa does not consider himself religious, he has a deep appreciation for religion as a way to foster a sense of community and shared values. Without a doubt this is in part due to growing up in a non-religious family with strong historic connections to Jewish, Protestant, Catholic, and Buddhist traditions. He feels that without a dialogue with (and among) religious communities a major part of the world's population will be uninvolved in existing secular institutions that aim to shape the future.

1 Introduction

This thesis explores religious belief as a source of motivation for behaviour change in the context of the global sustainability crisis. It establishes the current reality of concern for sustainability within religious communities and aims to help potential change agents to adapt to the religious context and thereby enable a faster transition towards sustainability.

Humanity is currently facing many environmental and social challenges such as climate change, natural disasters, pollution (IPCC 2007), diseases (Stevenson 2005), poverty, and inequality (Zheng and Bishop 2009). All of these issues are related to Earth's capacity to sustain life and our human society to sustain itself in an environment of finite resources. This ability to sustain is called sustainability.

1.1 The Sustainability Challenge

Human society is facing a sustainability challenge. It can be visualised with the funnel metaphor to show the shrinking carrying capacity of Earth (Robèrt 2000): while economic, social and environmental pressures are growing, available natural resources are diminishing and the human population is growing.
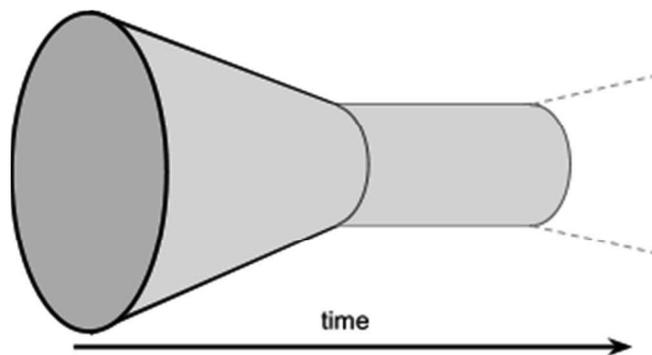
Figure 1.1. The funnel metaphor visualising the deceasing, stabilising, and potentially growing carrying capacity of Earth.

All life on Earth is inside this funnel and unless we stop the walls of the funnel from closing in completely, we will not have the ability to survive as a species. Moving towards sustainability ultimately results in stabilising Earth's the capacity to sustain life, a state of balance represented by the cylinder. Finally, as society continues to live within the constraints of the natural systems, it may start to restore the carrying capacity of Earth again (opening the walls of the funnel, visualised as dashed lines).

Many initiatives have been created by civil society, non-governmental organisations (NGOs), businesses, governments and international institutions (e.g. the United Nations) to address the sustainability challenge. Prominent examples include the Kyoto Protocol[1], Intergovernmental Panel Climate Change (IPCC 2007), ICLEI - Local Governments for Sustainability[2], Carbon Disclosure Program (CDP)[3], 10:10[4], and B-Corporation[5].

Most initiatives work on mitigating specific (single) issues as opposed to looking at the challenge from a global perspective. Most commonly the focus is on reducing green house gas emissions (GHG includes carbon dioxide) – Kyoto, CDP and 10:10 fall into this category. While a clear focus is necessary, it may lead to compartmentalised thinking. Sustainability is a complex issues with multiple inter-related social or broader ecological aspects. Care must be taken to ensure not to focus on one issue to the detriment of another. One such example may be an initiative that minimises GHG emissions but causes pollution of waterways because this is not included in the scope of the original initiative.

To avoid unintended consequences it is key to take a step back to discover the bigger picture. This is the central idea of systems thinking (Meadows 2008): to place an issue into its larger context and in doing so discover how the issue is interconnected with other concepts. They continuously

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[1] http://unfccc.int/kyoto_protocol/items/2830.php

[2] http://www.iclei.org/index.php?id=about

[3] https://www.cdproject.net/

[4] http://www.1010global.org/uk/about

[5] http://www.bcorporation.net/

influence each other causing chains of reactions each provoking a response. Admittedly, it is easy to get overwhelmed by the complexity of the big picture. However, it is possible to gain invaluable insights into the major forces at play.

When applying systems thinking to the sustainability challenge, it must be acknowledged that there is very robust scientific evidence that society has a significant negative impact on the natural environment (IPCC 2007). So much so, that a new geological epoch named Anthropocene (Zalasiewicz et al. 2008) or "new human" period has been proposed. In addition to the evidence amassed regularly by the Intergovernmental Panel on Climate Change (IPCC 2007), more recent evidence suggests that the time window to safely avoid the point of no return (the tipping point) may be much smaller than expected (Lenton 2012, Cook 2009).

All this indicates that a significant change in behaviour is required urgently of a large portion of society to move towards sustainability. Why have we not seen such efforts succeed?

1.2 Behaviour Change

Traditionally, behaviour change initiatives have focused on communicating the issue using information campaigns, in the case of sustainability this typically means scientific data. In recent years, sustainability communication has shifted towards a more popular approach attempting to engage individuals on an emotional level. Martin Palmer (2012) describes this gap commenting "nobody has ever been converted by a pie chart" and argues that we are a "narrative species" and social human beings. A good example of blending scientific data and a compelling story line was Al Gore's popular lecture, film and book "An Inconvenient Truth" (Gore 2006). Basic awareness of the sustainability challenge, in particular climate change, is now common in most parts of the world. Nevertheless, the intended large scale behaviour change has been largely outstanding (Godemann 2011).

> *"The failure of mass-media campaigns to foster sustainable behaviour is due to some extent to the inadequate design of the messages, but more importantly to an underestimation of the difficulty of changing behaviour." (McKenzie-Mohr 2000, rephrasing Costanzo et al. 1986)*

Why doesn't this awareness translate into changed behaviour? Psychologist Doug McKenzie-Mohr (2000), one of the most prominent academics in the field of behaviour change, suggests that traditional information-based approaches are ineffective. Further more, McKenzie-Mohr demonstrates that the often held assumption that we act on (rational) economic self-interest is not reliable. Instead, McKenzie-Mohr has developed "community-based social marketing", a tried and tested methodology for making behaviour change campaigns more effective.

Four steps of community-based social marketing (CBSM):

1. selecting specific desirable behaviours and uncovering barriers (e.g. psychological, economic, physical)
2. designing strategies to systematically remove barriers
3. piloting on small scale and tweak until desired results are achieved
4. evaluating "via direct measurement of behaviour or its consequences […] rather than relying on self-reported measures". (McKenzie-Mohr 2000, 549)

McKenzie-Mohr (2000) argues that the many behaviour change initiatives fail because they disregard the first step of CBSM: selecting specific desirable behaviours and uncovering barriers (e.g. psychological, economic, physical). Thus, they are either too broad because they fail to define what behaviours are desired and/or too few resources are made available for identifying barriers. McKenzie-Mohr specifically notes that resources includes time, money and people.

1.2.1 Motivation

In addition to McKenzie-Mohr's model, it is helpful to examine John P. Kotter's 8-step model for leading change (Kotter 2007). Kotter is recognised as an authority in leadership and change management. He has taught at Harvard Business School, written extensively for the Harvard Business Review and is putting his model in practice as consultant.

"[The] eight steps in Kotter's now classic model for leading change:

1. Create a sense of urgency.
2. Build the guiding team.
3. Develop the change vision and strategy.
4. Communicate for understanding and buy-in.

5. Empower action.
6. Create short-term wins.
7. Don't let up.
8. Create a new culture." (Kotter 2007, 99)

Kotter (2007) stresses that all eight steps are essential and that they should be followed in the specific order given in order to ensure success. Nevertheless he found that the first step – creating a sense of urgency – is the biggest stumbling block for most organisations. In an interview with Harvard Business Review, Kotter (2007, 97) explains "Well over 50% of the companies I have watched fail in this first phase."

Having a sense of urgency is a key component to build motivation for successful behaviour change because all further steps build on it. In the case of the sustainability challenge, scientists are unusually vocal about the urgency of the situation. In other words, they felt responsible to warn the world about the likely impact of climate change. Nevertheless, this urgency doesn't translate into the general public and less so into politics (Naberhaus 2011).

One possible explanation is what Hale (2010) calls the 'attitude-behaviour gap' or 'value-action gap': while people may value the environment and social justice that is not reflected in their actions. Hale cites an example where the most environmentally committed 1% of the UK population fly more on average that the other 99%. (Hale 2010)

1.2.2 Purpose

It can be argued that the sense of responsibility the scientists experienced is related to their perceived purpose. Many scientists will have entered their profession out of curiosity and for the sake of science. However, at a deeper level, this pursuit of science is driven by the ambition to improve our daily lives (UCS 2012). Can this sense of purpose be piece of the puzzle to generating lasting behaviour change?

Kotter (2008, 35) explains that to bring about change a "broader effort aimed at not just what people are thinking, but how they feel" is necessary. Göran Carstedt, one of the most recognised business leaders and currently advisor the Clinton Climate Initiative, poignantly asks "Why are we here? What is our purpose here on Earth?" in his workshops (2011). He intuitively recognises the need of people to do meaningful work and

proposes that very successful organisations are led by people who understand that purpose is key to success.

Peter Price-Thomas (2012) agrees: "in order to really create change […] it must come from heart". One type of organisation that puts purpose in the centre are religious communities.

1.3 Religious Communities

Religions have significantly changed the behaviour of their adherents throughout history. They have shaped food habits, dress codes, and the way people organise their day. They are constantly evolving and have existed since the earliest days of human civilisation. However, religions were not only powerful influences in history, they also have a track record of transforming societies and influencing behaviour today (Palmer and Finlay 2003). The *Central Intelligence Agency*'s World Factbook (2009) estimates that religions shape the daily lives of over 75% of the world's population. Arguably, religious communities are amongst the largest organised worldwide networks. Could these networks be equally effective at changing behaviours in light of the sustainability challenge?

There is mounting evidence that religion can act as powerful force to change behaviour towards more sustainable lifestyles. A benchmark example attesting the influence of religion is an "experiment in Tanzania [that] is emerging as an Islamic model for spreading environmental ideals" (Barclay 2007): A Muslim fishing community was converted from using dragnets to more sustainable fishing methods when the message was delivered by the local imam. "[This] shows that Islamic leaders can empower and organize their constituents on conservation issues much faster than governments can." (Barclay 2007)

In the US, the Interfaith Power and Light (IPL) platform's mission "is to be faithful stewards of Creation by responding to global warming through the promotion of energy conservation, energy efficiency, and renewable energy"[6]. The *United Religions Initiative* (URI) is a global grassroots interfaith network that cultivates peace and justice via its international interfaith network of over 500 so-called cooperation circles. URI casts the

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[6] http://interfaithpowerandlight.org/about/mission-history/

mission of sustainability even wider having created a comprehensive charter aiming "to create cultures of peace, justice and healing for the Earth and all living beings"[7].

The *World Wildlife Fund* (WWF) confirms these developments in their own advocacy work stating "that trying to convey the importance of conservation is much easier if it is transmitted by religious leaders" (Prince of Wales 2010). 350.org, a "global grassroots movement to solve the climate crisis and push for [tougher emissions] policies" also acknowledges that "Communities of faith are at the forefront of the 350 movement" (350.org 2012) and complied a long list of resources for religious communities.

It can thus be concluded that religious communities have achieved remarkable behaviour change towards sustainability often in situations where non-faith-based communication failed (Palmer and Finlay 2003).

Is it possible that the academic community and non-religious public has overlooked the influence of faith-based networks? The Forum for the Future's Green Futures report alerted the sustainable development community that "In the last 25 years, the faiths have become the fastest growing environmental movements in the world, shaping the lives of billions" (Forum for the Future 2011).

1.3.1 Sustainability in Religion

The concept of sustainability is found in the scriptures of all world religions though there is no universal name for it. Instead, each religion has a different teaching, sometimes in the form of a story that offers guidance on how to live a life that is in accordance with the religious principles.

Between 1996 and 1998, the *Religions of the World and Ecology* conference series at *Harvard Divinity School* involving over "800 scholars, religious leaders, and environmental specialists" resulted in the publication of an extensive library analysing sustainability in various religions (FORE 2004).

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[7] http://www.uri.org/browse_resources/uri_charter

Further more, the *Forum on Religion and Ecology* (FORE) has created an extensive[8]"designed for research, education, and outreach. It contains introductory articles on the world's religions and ecology as well as annotated bibliographies for all published monographs and articles in English on this topic. It has syllabi and materials for teaching. It has gathered the statements of religious leaders and organizations on the environmental crisis, including climate change. It also features events, conferences, and news reports."

In the UK, the *Alliance for Religion and Conservation* (ARC) has been working with eleven major religions since 1986. It is developing long-term plans for each religion aimed at enshrining sustainability as a core value. On their website[9], ARC provides resources such as declarations on nature, origins, long term plans, eco-news, beliefs, published statements, and eco-quotations for each religion.

Clearly, sustainability is becoming a major concern in religious circles. In the last few years, the Vatican's *Pontifical Academy of Science* has published multiple document and statements (PAS 2011) demonstrating their understanding that urgent action is required to minimise climate change.

While societal issues such as peace and social justice have been a central theme in religions for a long time, they have been slower in taking up the environmental agenda. In the words of Martin Palmer (2012) "had it not been for the developmental and environmental world to act as prophets, religions would not have known the scale of the crisis that confronts them".

Yet, it is interesting to note that most examples of sustainability initiatives above bear witness to the ecological crisis. The societal dimension, which causes much of this ecological distress is typically not in the foreground.

Every major religion is finding their own response to the sustainability challenge. Mary Evelyn Tucker from FORE suggests that they will be a key ally: "The environmental crisis calls the religions of the world to respond by finding their voice within the global community. As they identify their

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[8] http://www.yale.edu/religionandecology

[9] http://www.arcworld.org

resources for deeper ecological awakening – scriptural, symbolic, ritual and ethical – they will be transforming the deep wellsprings of their traditions" (Tucker 2002).

1.3.2 Religious Worldviews

Everybody views the world through the lens of their own culture, education, and beliefs. This concept is commonly referred to as worldview. Recognising and working with the worldview of the target audience is key for effectively communicating the sustainability challenge.

The worldview of religious people is profoundly shaped by their belief. There are a multitude of differences between worldviews of various religions (and even within denominations of the same religion). However, there are two concepts that Martin Palmer (2012) describes as particularly important with regards to sustainability: the place of humanity within nature and the perception of time.

Nature and Man

Judaism, Christianity and Islam have common origins and are known as Abrahamic religions. They share many concepts, values, and teachings. A central message in Abrahamic religions and Christianity in particular is that mankind holds a special place in and is separate from the rest of creation. Moreover, man has been given the task of caring for creation. This idea is often called stewardship or creation care and Martin Palmer (2012) describes it as "a sense of duty" towards nature.

A number of Eastern religions including Buddhism, Hinduism, and Jainism subscribe to a central principle called *Ahimsa* or non-harm. It advocates a life of non-violence based on the concept that humans are part of nature rather than superior to it. Further more, it emphasises the interconnectedness of all life.

Within the context of strategic sustainable development these two worldviews significantly shape our relationship with nature and thus how we interact and value it.

Perception of Time

Abrahamic religions take time to be a linear concept: The creation story describes the beginning of everything and our individual lives in this world

start with conception and end with death. The religious scriptures describe the end of this world.

Many non-Abrahamic religions have a cyclical concept of time. The world has no beginning nor end. Everything comes and goes. The universe, all life, and each individual life have developed and will disappear again. Often this goes hand in hand with the concept of reincarnation or rebirth, possibly in a different form, based on karma or the accumulation of cause and effect of one's actions. The idea of "what goes around comes around" maybe helpful in understanding the concept of karma.

While each worldview described here can be tapped into to promote action towards sustainability. The approaches used may need to be very different. Palmer and Finlay (2000) give telling examples of how these different worldviews can cause projects with the best of intentions to fail. Bearing in mind the multitude of worldviews (and variety of sustainability definitions), what common concepts exist across all religions?

The Golden Rule

A universal concept embodying the importance of relationship and a purpose greater than oneself is the Golden Rule. It describes the idea of reciprocity: "I know how I like to be treated; and that is how I am to treat others. The rule asks me to be considerate of others rather than indulging in self-centredness." (Wattles 1996, 3)

Karen Armstrong, renowned for her work on the Golden Rule, argues that it is universal and that "it transcends religious, ideological, and national differences." She established the Charter for Compassion[10], which builds on the Golden Rule and attempts to build a world around justice, equity and respect:

> *"Unless we learn to implement the golden rule globally so that we treat all peoples, all nations, as we would wish to be treated ourselves, we will not have a viable world to hand on*

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[10] http://charterforcompassion.org/the-charter/#charter-for-compassion

to the next generation.”
— Dr Karen Armstrong[11]

1.3.3 Building a Common Vision

How can we as a global interconnected society work on the sustainability challenge together? As Tucker and Palmer describe it feels like every religion is developing their own vision of sustainability. This brings us back to the challenge of lack of systems thinking.

> *“We may believe in different heavens but we all live on this same Earth”*
> *—unattributed*

Unless we can step away far enough from the problem to see the scope of this challenge beyond a single religion, culture or country, we will have difficulty finding the root causes of our global issues. What is needed is an overarching common vision of the future (Kotter 2007), a common definition of sustainability.

In this thesis, sustainability is defined using the four sustainability principles (SPs) of the *Framework for Strategic Sustainable Development* (FSSD). Karl-Henrik Robért (Robert, 2010), one of the original developers of the framework, explains that the definition is built on "stopping the unsustainable actions that are currently threatening the socio-ecological system". The four sustainability principles (SPs) state:

> *“In a sustainable society, nature is not subject to systematically increasing…*
> 1. *...concentrations of substances extracted from the Earth's crust*
> 2. *...concentrations of substances produced by society*
> 3. *...degradation by physical means*
> *and, in that society…*
> 4. *…people are not subject to conditions that systematically undermine their capacity to meet their needs.” (Ny et al. 2006, 26)*

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[11] http://www.ted.com/talks/karen_armstrong_let_s_revive_the_golden_rule.html

The four SPs are independent of religious, cultural, geographic or political context. In other words, they are general enough to suit any context, including religious communities.

The first three principles (SP1-3) define the ecological conditions under which the natural system cycles are balanced. SP1 limits the introduction of elements extracted from below ground into our natural surroundings (examples include oil and gas). SP2 defines the need for managing substances that we create and release into nature (examples include plastics and toxins). Finally, SP3 is about the physical protection of nature (e.g. mountain top mining or deforestation).

The fourth principle (SP4) defines the conditions required for human society to flourish within the ecological constraints of SP1-3. At the centre of this are two concepts: trust and human needs. In an interview Robèrt (2011) explains how interpersonal trust is vital for building and maintaining a healthy society: "to come to grips [with the sustainability challenge] we must do so together – it's about community". Trust is sometimes referred to as "social lubricant" (Anderson and Jack 2002) as it reduces the friction among groups of people and thus creates a stronger social fabric.

Trust

Individuals enjoying a high level of trust can act as "trusted ambassadors" (Price-Thomas 2012). They have a much greater influence on their network and are often considered opinion leaders. Religious institutions and leaders enjoy a high level of trust from their communities, higher than most secular leaders and institutions receive from the general public. Naberhaus (2011) concludes that, together with other civil society organisations, religious communities have the "power, agency and mandate to be an important force in tackling today's global challenge".

Tariq Ramadan (2010) warns that change in religious communities has to come from within. Influences seen to be coming from outside the community can be met with hostility if interpreted as external interference or diluting the tradition. Hence, the challenge is to let sustainability emerge from within a religious community. It is thus crucial that trusted ambassadors of religions communities (such as leaders) develop a solid understanding of the sustainability challenge.

The fourth sustainability principle specifically mentions the need to meet the needs of people. The FSSD uses Manfred Max-Neef's definition of human needs (Max-Neef 1991). He proposes that universal motivators exist in the form of nine human needs that are independent of culture. Max-Neef's Human Needs are: subsistence, protection, affection, understanding, participation, leisure, creation, identity, and freedom.[12] Needs must be adequately satisfied and any unsatisfied need results in the individual experiencing a kind of poverty. Further more, "needs are satisfied within three contexts: (1) with regard to oneself (*Eigenwelt*); (2) with regard to the social group (*Mitwelt*); and (3) with regard to the environment (*Umwelt*)." (Max-Neef 1992, 200)

Max-Neef argues that an understanding of human needs is a key requirement for understanding behaviour change: "In short, what is culturally determined are not the fundamental human needs, but the satisfiers for those needs. Cultural change is, among other things, the consequence of dropping traditional satisfiers for the purpose of adopting new or different ones." (Max-Neef 1992, 200) Hence, the concept of human needs can be a useful concept when developing behaviour change initiatives.

1.3.4 Lessons from History

There is no doubt that religions have contributed enormously to society over the course of history as organising and creative force. They have given a sense of purpose to and shaped the culture of civilisations and were the source of inspiration behind many of the worlds most prized art and architecture. Nevertheless, and in spite all the optimism expressed above, it

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[12] Interestingly, but not used within this thesis, Max-Neef suggested the existence of a tenth human need that is not yet universal: the search for transcendence. Max-Neef suggests that human needs are evolving in the same way that our physical anatomy is evolving. "In much the same way, it is likely that in the future the need for Transcendence, which is not included in our proposal, as we do not yet consider it universal, will become as universal as the other needs. It seems legitimate, then, to assume that fundamental human needs change with the pace of evolution." (Max-Neef 1992, 203)

must be acknowledged that religion has been abused to cause immense destruction and suffering (Palmer and Finlay 2003). Whether due to religiously motivated conflicts such as the medieval Crusades, more recently in Northern Ireland or by abusing the position of trusted ambassador for personal gain, there are countless examples of what Tucker (2002) calls "the dark side of religion".

We feel this only fortifies the case we make for the necessity of tapping into the religious motivation to foster more sustainable behaviour and address the sustainability challenge as a global community.

1.4 Research Question

Based on the purpose of this thesis a single research question was formed:

What does religious belief contribute to moving society towards sustainability?

1.4.1 Secondary Research Questions

The following secondary research questions (SRQ) are meant to guide the research process and loosely group it into sections. Each one is designed to move us towards answering the primary research question:

SRQ1: How do leaders and members of religious communities define sustainability?

SRQ2: What motivators for moving toward sustainability can be identified in leaders and members of religious communities?

SRQ3: What actions for moving towards sustainability can be identified in leaders and members of religious communities?

1.5 Scope & Limitations

Bearing in mind the time and logistical limitations of this thesis, the scope has been defined to interview five religious community leaders and conduct a quick survey of religious people. Multi-faith or inter-faith communities are outside of the scope of this thesis.

While this means that this research will rely on a small number of case studies we hope that the general findings will be useful to religious communities and sustainability practitioners looking for help in moving towards sustainability. It is clear that five interviews cannot be representative of all religious world views nor the diversity within any one religion. Thus, this thesis aims not at generalising the situation but instead it aims to highlight the issue itself and in particular provide an inspiration or stepping stone for future research. Lastly, it offers an introduction to the richness and complexities of religious communities to sustainability practitioners on the ground.

It must also be acknowledged that no attempt is being made to evaluate one worldview, religion, or religious community against another. Neither is there an interest in fuelling the debate of science versus religion. Quite on the contrary, if anything this thesis attempts to show that the both parties can learn from each other.

2 Methods

The methods section describes the approaches and techniques, which were used to collect and analyse data. Research methodologies fall into two camps: quantitative (statistical analysis on large samples, focusing on quantifiable evidence) and qualitative research (rich, in-depth data from smaller samples). We have used both methodologies with an emphasis on qualitative analysis: we used quantitative research to answer what sustainable behaviours exist in the religious community, qualitative methods were better suited to provide insights into the reasoning or motivation that leads to the behaviour. "The strengths of qualitative research derive primarily from its inductive approach, its focus on specific situations or people, and its emphasis on words rather than numbers" (Maxwell 2005, 22).

This research used the Framework for Strategic Sustainable Development (FSSD) as overarching guiding framework. It places the religious community within the greater global context, and within the sustainability challenge.

Our research was organised into three phases: a pre-study, data collection, and data analysis phase.

2.1 Pre-study

To understand the context of our research question we did a literature review and engaged with experts to identify the current reality of sustainability in the religious community and inform our interview and survey questions. Finally we piloted our interviews with two religious leaders.

2.1.1 Literature Review

We collected articles and other resources using the Summons search engine[13] of BTH library, which bundles multiple academic search engines.

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[13] http://www.bth.se/eng/library/

In addition, we used Google Scholar[14] to find relevant literature. We shared our collection of resources on a collaborative online research platform called Zotero[15]. Our virtual library of links[16] was visible to the general public and referenced in our communications to experts to foster stronger collaboration.

2.1.2 Experts

Throughout the literature review we identified experts that could contribute to our research: authors of academic articles and books, academic staff of relevant research and education programs and relevant organisations working in the field. In addition, we re-connected with existing acquaintances and approached local religious leaders.

We leveraged multiple ways of contacting key people we felt were relevant to our research. Professional networking platforms such as LinkedIn.com, wiseearth.com, and the 2degrees network[17] all allowed us to reach out to a variety of experts around the world. In addition, use of social media including twitter[18] and facebook[19] offered further ways of contacting experts in the field.

We held multiple interviews and had email exchanges with experts such as theologians, religious community leaders, university academics, and NGOs aligned with our thesis topic. The interviews were semi-structured and were designed to deepen our understanding of motivations of religious communities and informed our research angle and methodology. A list of experts is presented in *Appendix A*.

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[14] http://scholar.google.com/

[15] http://www.zotero.org/

[16] http://www.zotero.org/groups/msls_thesis_-_religion__sustainability

[17] http://www.2degreesnetwork.com/

[18] https://twitter.com/#!/moaltmann/religion-sustainability

[19] http://facebook.com

Interfaith Platforms

In our search for experts, we also contacted multiple interfaith organisations and interviewed them about their experience with religious communities. These interviedws provided insights on differences and commonalities within faiths that supported the literature review.

Key interfaith organisations we have contacted are the Alliance of Religions and Conservation and the United Religions Initiative:

Alliance of Religions and Conservation: "ARC is a secular body that helps the major religions of the world to develop their own environmental programmes, based on their own core teachings, beliefs and practices. We help the religions link with key environmental organisations creating powerful alliances between faith communities and conservation." (ARC 1995)

United Religions Initiative: "URI is a global grassroots interfaith network that cultivates peace and justice by engaging people to bridge religious and cultural differences and work together for the good of their communities and the world." (URI 1996)

2.1.3 Pilot Interviews

Three pilot interviews were conducted in order to help us phrase our research question, inform our interview, and survey questions. See *Appendix A*.

2.2 Data Collection

To answer our secondary research questions we interviewed leaders and surveyed members of the religious community. Maxwell (2005) stresses that it is key to build trusting relationships with groups that are studied. In addition to partnering with local religious community leaders, we have chosen to partner with interfaith organisations, which already have such relationships with a variety of religious communities.

Our interview and survey questions were based on our three secondary research questions: (1) definition of sustainability, (2) the religious motivations for sustainability, and (3) sustainability related actions

motivated by religious belief. For full interview questions refer to *Appendix B*. The survey can be found in *Appendix C*.

2.2.1 Interviews with Leaders of the Religious Community

To address our research question we chose to interview religious community leaders in a structured interview (see *Appendix B*). Maxwell (2005) suggests that interviews can be "an efficient and valid way of understanding someone's perspective."

We approached religious leaders through interfaith platforms, personal contacts, our networks and via social media platforms such as twitter. Where possible, interviews were held in person or via videoconference to enable observation of the interviewee. This gave an opportunity to query non-verbal cues such as hand gestures. To allow the interviewee to focus better every interview had a single interviewer who lead the conversation. This allowed other thesis group members to take notes and clarify responses when they felt necessary.

Each interview was recorded (as audio) on a laptop or mobile phone. This ensured that it could be coded objectively at a later stage as opposed to relying solely on subjective notes made during the interview as well as memory. Further more, this allowed the interview to be critically assessed by thesis group members that were not present during the interview.

2.2.2 Survey of Members of the Religious Community

We chose to survey members of the religious community via an online platform equivalent paper-based survey (see *Appendix C*).

One of the advantages of a survey is that it can be completed by many people and from different places at the same time. In addition it gives the respondent enough time to digest questions and thus be able to give clearer answers. Online surveys offer automatic data collection thus minimising possible errors in data transcription. A disadvantage to a survey is that there is no direct contact with the respondents. Thus, questions cannot be clarified and must be as unambiguous as possible.

Due to the nature of a survey, it contained more guidance for each question than the interview in addition to providing a more comprehensive

introduction and closing. In particular we offered guidance in the form of several themes for actions towards sustainability: transport, waste, food, water, energy, reuse or shared use, family, volunteering and community. Additionally, a possibility was given to add any other action falling outside of suggested themes.

Our survey was published on the well-established online survey platform SurveyMonkey.net. The survey was promoted via online platforms including facebook, twitter and linkedin.com. In addition it was sent out via email to key persons.

2.2.3 Limitations & Validity

We have used both our personal contacts as well as newly made connections with interfaith platforms as vehicles to access the most diverse group of religious leaders and members possible within the time constraints given. Interfaith organisations offer an opportunity to study a wider variety of religious communities than would be possible otherwise, thus improving the balance of our research. However, interfaith organisations were unable to respond within the short time constraints of the thesis.

Maxwell (2005) discusses the importance of triangulation. We reduced systematic biases in our data collection by the following means:

- two different sources: leaders and members of religious communities
- two different methods: structured interviews and survey
- demographic diversity: participants are spread across multiple continents, age groups, religious beliefs, etc.

In addition to the scope and limitations expressed in the introduction, there is some concern that while we are not specifically targeting religious leaders and members that are particularly sustainable, it is likely that such communities will be more interested in participating in our research. This will likely bias our data and should be taken into account during the interpretation of data and forming of conclusions.

2.3 Data Analysis

Following data collection via interviews and surveys, we transcribed each interview and downloaded the collated survey data in the form of a spreadsheet.

Transcription was done by one thesis team member and checked for accuracy and bias by another. Where the interview was held in a language different from English, the main interviewer was responsible for transcription.

The raw survey data was analysed for responses that do not contribute to our research. Disqualification criteria included: joke answer, incomplete answers, and answers submitted by people identifying themselves as not belonging to any religion.

2.3.1 Patterns & Coding Categories

In order to answer our secondary research questions, we analysed the collected data for patterns, which would help develop theoretical concepts (Maxwell 2005). This method is called coding. We identified concepts based on our literature review, exchange with experts and pilot studies. The team then agreed on a preliminary set of coding categories based on concepts from the pre-study to distil data relevant for answering each secondary research question. Categories should be well defined, mutually exclusive and comprehensive within each dimension (Gorden 1992). During the data-collection and coding further categories may emerge and require re-coding.

After defining each category, each one was assigned a symbol (an abbreviation) for later use in coding transcriptions and text responses of the survey. Symbols make basic statistical analysis easier as they are unique and thus can be searched for.

SRQ1: definition of sustainability

For the definition of sustainability, we used the FSSD's definition of sustainability as reference. We coded each response according to whether it mentions aspects relating to the four sustainability principles.

Table 2.1. Coding of sustainability definition according to the 4SPs of the FSSD.

Category	Sub-category	Definition
ecological principles (SP-eco)	SP1	extraction
	SP2	chemical
	SP3	physical
social principle (SP-soc)	SP4	social

SRQ2: motivators for sustainability

To answer SRQ2, we analysed our data on motivation and actions for motivational patterns. From our pre-study, we defined three categories and further analyzed responses with regards to human needs (see table below) and perception of time.

Table 2.2. Coding of motivations including Human needs (Max-Neef, 1991) and perception of time.

Dimension	Category	Definition
motivation	Golden Rule	common good, reciprocity
	Sense of Duty	obligation, responsibility, stewardship
	Non-harm	non-injury, ahimsa
Human Needs	subsistence	physical, emotional and mental health
	protection	care, adaptability, autonomy
	affection	respect, tolerant, sense of humour, generosity, sensuality
	understanding	critical capacity, receptivity, curiosity, intuition
	participation	adaptability, receptivity, dedication, sense of humour

Dimension	Category	Definition
	leisure	imagination, curiosity, tranquillity, spontaneity
	creation	imagination, boldness, curiosity, inventiveness, autonomy, determination
	identity	sense of belonging, self-esteem, consistency
	freedom	autonomy, passion, self-esteem, open-mindedness, tolerance
Perception of Time	linear	beginning & end (typically Abrahamic)
	cyclic	continuous via re-creation, reincarnation, concept of karma

SRQ3: actions for sustainability

Similar actions identified by leaders and members of religious communities were grouped. Then each grouped actions was analysed through the lens of the four SPs of the FSSD.

Table 2.3. coding of actions for 4SPs

Category	Sub-category	Definition
ecological principles (SP-eco)	SP1	extraction
	SP2	chemical
	SP3	physical
social principle (SP-soc)	SP4	social

2.3.2 Coding of Data

Interview transcripts and survey data were coded by one member of the thesis group and then reviewed for accuracy and bias by at least one other person.

Interview coding was done by highlighting relevant text passages and creating a side comment stating the coding symbol. Survey data was coded within the spreadsheet in a separate column next for every open-answer question.

To minimise coding bias, it is recommend that an independent third party also codes the same collected data using the same coding categories and definitions. (Gorden 1992) However, due to time and resource constraints this step was omitted.

2.3.3 Analysis of Coded Data

The concept of validity refers to "the correctness or credibility" (Maxwell 2005, 106) of the interpretation of data and derived conclusions. We pulled together results from both interviews and surveys and identified patterns across both sources.

Coding data was collated into a summary spreadsheet for both interviews and surveys. We identified patterns by searching for commonalities and differences amongst responses. In addition, key quotes were extracted.

The number of occurrences of every coding category was collated for each question as well as for the whole survey or interview.

We used demographic information supplied by survey respondents, to understand the validity and applicability of our findings.

2.4 Expected Results

We assume that religious belief is a strong motivation. As such we expect that our research will show that it can play a key role in fostering behaviour change to move society towards sustainability. We are encouraged by our literature review and expert interviews that seem to confirm our hypothesis.

We expect that the religious community lacks a rigorous definition of sustainability and hence is not able to be strategic in moving towards sustainability. It is likely that there will be an emphasis on social aspects of sustainability as was traditionally the case in religions. However, clearly the general public and religious communities have a growing awareness of the ecological dimension of sustainability.

We anticipate that the religious teachings provide motivation for religious people with respect to sustainability. In particular, we expect to confirm that the concepts of stewardship and non-harm are central motivations. Maybe human needs will be able to shed some light on the nature of motivations.

Finally, the collected actions may show that many research participants are consciously choosing to live more sustainably. It is likely that categories that include actions regarding social justice/equality will elicit more replies.

3 Results

Following the methodology outlined in the previous section, we identified research participants and collected data to answer our main and secondary research questions.

3.1 Research Participants

3.1.1 Interviews of Leaders of the Religious Community

We contacted at least 25 religious leaders of different faiths by posting in LinkedIn groups, using social media, calling and emailing. We interviewed six leaders of religions communities, all of which were Christian:

- Johan Tyrberg, priest
  Svenska Kyrkan, Karlshamn, Sweden
- David M. Carlson, pastor
  Gloria Dei Lutheran Church, Minnesota, USA
- Tea Misago, pastor
  Zion Temple Celebration Centre, Copenhagen, Denmark
- Paul Gitwaza, pastor & founder
  Zion Temple, Celebration Centre, Kigali, Rwanda
- Göran Eckerdal, student chaplain
  Svenska Kyrkan, Blekinge Tekniska Hogskola, Sweden
- Sister Hildegard, prioress
  St. Gabriel Benedictine convent, Herberstein, Austria

We targeted many religious leaders. Based on our phone calls and online forums we have evidence that some leaders perceived that we are looking for particularly sustainable religious communities and hence were discouraged from accepting our invitation. This may mean that data collected is biased towards leaders who have already identified sustainability as an issue.

3.1.2 Survey of Members of the Religions Community

Our online survey was accessible for seven days. A total of 98 people participated in the survey. Twenty-two respondents were disqualified, largely because they self-identified as non-religious. Hence, the total number of responses analysed was 76. A number of responses were incomplete. However, we found incomplete answers to be valuable data and have included them in our analysis.

Age

Over 80% of online respondents fell into the age bracket of 21 to 39. In addition to the online survey, a paper copy of the survey was given to the St. Gabriel convent in Austria. All interviewees were above 65 years. We received their comments summarised for the whole group in a couple of sentences. The data was broadly in line with that collected online. As such it can serve as validation of our data and may indicate that our findings are applicable to a broader age range.

Table 3.1. Survey demographics - Age

Age category	Number of Respondents
under 21	0
21-29	34
30-39	28
40-49	8
50-59	6
over 59	0

Gender

The gender balance of tilted towards female respondents (50 submissions, 66% and only 26 male participants)

Country of Origin

Half the survey respondents came from Africa (38). Next numerous were Europeans (21) and North Americans (9). Eight responses fell outside of these continents including two who indicated their origin was "Earth".

Table 3.2. Survey demographics - Origin

Continent	Number of people
Africa	38
Europe	21
North America	9
Asia	4
South America	2
other: "Earth"	2

Religion

Table 3.3. Survey demographics - Religion

Religion	Number of people
Christianity	67
Islam	5
Judaism	1
Hinduism	2
Buddhism	1

3.1.3 Christian Bias & Diversity

All of the interviewed leaders and 88% of survey respondents identified themselves as Christians. Due to lack of significant data on other religions we have focused on Christianity for the remainder of the study.

Though not statistically significant, we also provide combined Jewish and Muslim data as they share the same origin as Christianity and may offer an indicator as to whether findings are applicable to Abrahamic faiths in general.

In the actions section, we have included responses from all religions. However, there was not enough data to generalise for non-Abrahamic religions.

Our survey resulted in very few Asian participants, which could be a reason for lack of non-Abrahamic representation.

3.2 Definition of Sustainability

We attempted to code the definitions of sustainability given by respondents using the four sustainability principles as discussed in the Methods section. We found that definitions were too broad to fit into the individual SPs and decided to code for the more general categories of ecological (SP1-3) and social (SP4) dimension of sustainability according to the FSSD.

Further more, we identified multiple examples of systems thinking. As this is a quality of sustainability thinking we felt it relevant to include it as a separate coding category.

3.2.1 Leaders

The concept of sustainability is recognised by all religious leaders. However, the level of understanding varies significantly. With respect to the FSSD's definition of sustainability, all leaders identified social and ecological aspects of sustainability. However, most of them identified social aspects only after being prompted specifically about them. Two religious leaders gave fairly complete definitions of sustainability.

One leader received thorough sustainability training based on the FSSD. It is interesting to note that despite the training, they were aware but could not exactly recount the four sustainability principles. The second leader defined sustainability as "a way of living in a manner that I use the resources in such a way that I can leave this world with the same amount of resources still here."

Table 3.4. Frequency of mentioned coding concepts related to understanding sustainability by religious leaders.

Coding Concept	Frequency	Comments / Quotes
Total Sample	6	Total number of interviews
ecological (SP1-3)	6	"We should treat the creation the same way that God treat us"
social (SP4)	6	"people are part of ecology"
Systems Thinking	3	understanding of the bigger picture "Sustainability is the way in which humans can exist within the natural cycles of nature including the bio- and lithosphere without violating any of the SPs that The Natural Steps describes."

3.2.2 Members of the Religions Community

Compared to leaders, survey responses of Christians showed a much lower level of understanding of sustainability. Social aspects were mentioned in about one third of replies. The same was true for environmental aspects. This means that few connected both aspects to sustainability.

A number of survey respondents mentioned economic sustainability.

Table 3.5. Number of times a concept identified by our coding categories was mentioned when defining sustainability.

Category	Christianity	Islam and Judaism	Comments / Quotes
Total Sample	67	6	Total number of respondents
ecological (SP1-3)	16	1	"Teach people attending churches about environment sustainability" (Christian)
social (SP4)	19	3	"trustful and responsible interconnectedness of people and the earth" (Christian)
system thinking	5	1	"Islam is defined complete life cycle considering various circumstances. It covers economics, health, humanity, politics, Family bond-ens, education everything. But unfortunately many so called Muslims miss interpreted those things." (Muslim) Note the lack of environmental examples despite "complete life cycle" "Yes, because my religious belief makes me aware that everything is connected and so we are all one." (Christian) "sustainability is to meet the needs of today without compromising the needs of tomorrow" (Christian)

3.3 Motivation for sustainability

The original coding categories (Golden rule, sense of duty, non-harm) were useful but insufficient to categorise the main motivations. We further identified four motivational categories. The table below states all categories:

Table 3.6. Motivational categories (new categories marked with asterisk)

Category	Definition
altruism*	selfless concern for the well-being of others.
concern for future*	concern for future generations
Golden Rule	common good, reciprocity
love for life & nature*	appreciation of nature for its inherent beauty
non-harm	non-injury, non-violence
sense of duty	feeling of obligation, stewardship
steady state*	stability, balance, continuity, resilience

Multiple survey respondents and leaders commented that it is difficult to separate religious and non-religious motivation. "Everything I do is based on my faith, it's very hard for me to separate" (Christian survey respondent). Sister Hildegard further demonstrated the complexity of motivation recounting that many of her values stem from her adolescence at home rather than religious belief. We recognised this difficulty but were unable to circumvent this issue.

One leader's very personal definition of sustainability shows how important and motivated they are to take meaningful personal action: sustainability is "a way of living in a manner that I use the resources in such a way that I can leave this world with the same amount of resources still here."

Most of the answers from religious leaders and survey respondents claim they are motivated by either the equivalent of the Golden Rule or a sense of duty. Given the Christian bias, this is not surprising and in line with our expectations that Christians feel it is their duty to take care of the Earth and of each other.

Many also identified 'concern for the future' and 'love for life and nature' as motivations. Carlson and Tyrberg commented that while they carry a responsibility due to their religion, they also carry responsibility as "member of the human community" (Carlson 2012).

Overall, respondents have identified that responsibility for sustainability is a matter of higher purpose or common good and intimately connected to religion.

We expected to find evidence of different perceptions of time between Abrahamic and non-Abrahamic religions. However, due to the highly Christian bias of our study an analysis of perception of time was not feasible.

3.3.1 Leaders

'Golden Rule', 'sense of duty', 'concern for the future' and 'love for life and nature' were mentioned by nearly all leaders as religious motivation for moving towards sustainability.

Table 3.7. Frequency of mentioned concepts related to Motivation by religious leaders

Category	Frequency	Comments / Highlights / Quotes
Total Sample	6	Total number of interviewees
Golden Rule	6	"Human was put on the earth to keep seeing after the well-being of the Earth" (Carlson)
Sense of Duty	6	"God has transferred the responsibility/ stewardship to take care of the Earth to the son of man." (Gitwaza)
Love for life and nature	5	"The heart of our belief is that the Earth is precious and full of potential." (Eckerdal) "people should be taught to not be selfish, to be able to live together peacefully in love" (Gitwaza)
Concern for Future	5	"we do not inherit the earth from our parents, but borrow it from our children" (Eckerdal) "If I were to hear that the earth would end tomorrow I would plant a tree today" (Martin Luther quoted by Carlson)
Altruism	2	"passion to care for those who are in poverty" (Carlson)
Steady State	1	-
non-harm	0	-

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3.3.2 Members of the Religions Community

Members mentioned similar motivations for moving towards sustainability as leaders. In addition to 'sense of duty', 'concern for the future', 'love for life and nature' and the 'Golden Rule' the themes of 'steady state' and 'non-harm' were identified. Some members, however, did not associate religion with sustainability.

Table 3.8. Frequency of mentioned concepts related to Motivation by members of religious communities

Category	Christianity	Islam & Judaism	comments/highlights/quotes
Total	67	6	survey sample size
sense of duty	35	2	"Yes because all the resources are Blessings of God. He has made us the caretakers of this world and all the living things in it. We need to take care of it by not wasting the resources and showing compassion to all living beings."
Concern for the future	17	-	"a best future is a work of our present life" "May be, one day, every one will live happily and peacefully" "
Steady state	10	1	"Stability and balance" "Sustainability for me is something, that is capable to last for a long time" "keep the already acquired Christian values in my everyday life"
Love for life/nature	6	1	"Make the world a better place to be Love your neighbours as yourself" "i respect all living creatures as well as the environment"
Golden rule	5	-	"Make the world a better place to be Love your neighbours as yourself"
non-harm	2	1	"Yes. According to religion I don't have any right to do any harm for nature, for any living being and actually for anything."

Category	Christianity	Islam & Judaism	comments/highlights/quotes
Other	n/a	n/a	"No. I keep in mind sustainability because I believe it is important-nothing to do with religion."

3.3.3 Human Needs

We analysed motivations and actions provided by leaders and members with respect to the nine human needs. As discussed in the introduction, human needs can act as motivators as any unsatisfied need leads to a type of poverty.

The human needs identified in responses to questions on motivation largely matched those identified in actions. One exception is the human need for idleness (sometimes referred to as leisure), which is frequently associated with actions for sustainability (see section 3.4) mentioned by research participants.

Analysing data in terms of human needs was not as insightful as expected. We were unable to detect meaningful patterns relating human needs to motivations in sustainability.

Table 3.9. Human needs and related concepts from motivations.

Human Need	related concepts from motivations
subsistence	physical health, living environment, food,
protection	taking care of others, social environment, solidarity(?), concern for future
affection	relationships with humans & nature: togetherness, interconnectedness, friendship, living in harmony "to be able to live together peacefully in love" (Gitwaza) "love for humanity" (Tyrberg)
participation	feeling of responsibility, respect, love for neighbour/family/humanity, social interaction,
identity	related to religion: "God told us, God given creation"

3.4 Actions for sustainability

Every research participant who completed the survey reported multiple activities related to moving towards sustainability. There is some concern about the phrasing of the survey question as it was possible to give answers for each category without being reminded to only list actions that are religiously motivated. This may amplify the existing limitation voiced earlier that the separation of religious versus non-religious motivation is difficult.

Table 3.10. Human need analysis on grouped actions for SRQ2

Grouped Action	Frequency	Affection	Creation	Freedom	Identity	Idleness	Participation	Protection	Subsistence	Understanding
second hand & reuse	18								x	
family meals	15	x			x	x	x		x	
relationships with neighbours	12	x				x	x	x		
care for needy	12	x					x	x		
vegetarian diet	9				x				x	
sharing resources	9	x					x	x		
relationships	7	x			x	x	x	x		
public library	6						x			x
walking	6					x		x		
cycling	5					x			x	
efficient car use, incl. sharing	5						x			
family relationships	5	x				x		x	x	
volunteering	5					x	x			
education	5									x
exercise	4					x			x	
animal welfare	4							x	x	
clean neighbourhood	3	x					x			
grow own food	3					x		x	x	

For the purpose of this analysis, we have included the six non-Abrahamic survey respondents. Most answers received through the survey reflect examples given in the survey question itself. We grouped similar actions to facilitate analysis.

Tyrberg gave a number of actions based on a perceived need for community (in Max-Neef's terminology affection and participation) such as offering opportunities for elderly to help out: "People need to meet other people, […] there is a need that people don't express but we have found it through the action." (Tyrberg)

Sustainability Principle analysis on actions

For SRQ3, all actions were analysed through the lens of the four sustainability principles of the FSSD. Overall, there is a strong theme of "reduce, reuse, recycle (3Rs)" related to the ecological principles SP1-3.

Actions relating to social sustainability (SP4) can be largely summarised as taking care of relationships, in particular within the closest family circle (20 actions), neighbourhood (15) as well as caring for the needy (12).

Table 3.11. Sustainability principle analysis on grouped actions

Grouped Action	Frequency	SP1	SP2	SP3	SP4
recycling	22	x	x	x	
second hand & reuse	18	x	x	x	x
water saving	18			x	
family meals	15				x
energy efficiency	14	x			
food local	13	x			
relationships with neighbours	12				x
care for needy	12				x
public transport	12	x	x		
minimisation paper waste	11			x	
lower consumption	10	x	x	x	
minimise waste (incl. food)	10	x		x	
eating vegetarian	9			x	x
sharing resources	9		x		x
drink tap water	8	x			
repairing	8	x	x	x	

Grouped Action	Frequency	SP1	SP2	SP3	SP4
relationships	7				x
energy efficient appliance	7	x			
public library	6				x
walking	6	x			x
food organic	6		x	x	
eating less meat	6			x	
cycling	5	x			x
efficient car use, incl. sharing	5	x	x		x
family relationships	5				x
volunteering	5				x
education	5				x
energy efficient home	5	x			
local holiday / fly less	5	x	x		
rent multimedia (books, CDs)	5		x		
exercise	4				x
animal welfare	4				x
food seasonal	4	x	x		
nature restoration	4			x	
recycling: composting	4			x	
clean neighbourhood	3			x	x
grow own food	3	x	x		x
less consumption	3	x	x	x	

Notes & Highlights of Actions

Social actions fell largely within the guiding themes of family, community, and local neighbourhood offered by the survey.

"Churches should lead by example, there should be more churches that are involved. To practice what u preach, we should try to exemplify the idea of sustainability." (religious leader)

An example of a religious community applying sustainability to existing traditions is the Gloria Dei community in Duluth, Minnesota. They organise actions into five categories: worship, education, building and grounds (physical infrastructure), community, personal. Further more, they introduced a "'Carbon Fast' during Lent – that is, to take a look at energy use and take steps to reduce carbon emissions. One tool to facilitate this is

the Minnesota Energy Challenge www.mnenergychallenge.org/ and folks will have an opportunity to consider committing to any (or all) of these activities suggested on the web site during Lent."[20]

Sustainability Education

We identified multiple references about the need for, willingness and expectation to receive sustainability education through religious institutions.

Religious leaders were aware and interested to learn more about the sustainability challenge. They understand they can influence their community, as Johan Tyrberg (2012) said "religious leaders are in a position of power based on trust of community" and they can make a difference. "Priest is a role model of a Christian, if a priest believes in something, then everybody takes it as true, and if he rejects (disagree, or do not believe on) nobody will do it..." said Paul Gitwaza (2012) from Rwanda.

Table 3.12. Respondent quotes on sustainability education in religious institutions.

Theme	Quotes by Respondents
need	"It will be better if among your recommendation, if there will be one or more regarding teaching people attending churches about environment sustainability because people don't care about environment" (survey respondent) "Sustainability has been and still is in majority a subject taught separately from believers and mostly left to the scientists. I hope this survey gives you a good overview of mind change or willing to include this as part of the believers teachings. Thanks" (survey respondent)
expectation	"my religion teaches us about social and environmental sustainability" (survey respondent) "churches teach their people how to live with their neighbours in peace and harmony that's a contribution on social sustainability." (survey respondent)

[20] http://www.gloriadeiduluth.org/seasonoflent.html

Theme	Quotes by Respondents
willingness	"We would like to educate our community to participate more in these efforts." (survey respondent) "The thing many people do not know, is that if scientists could come down closer to priests, talk to them and the current situation of the earth, and where it is heading and the problems we have today, together with the scientists, priest can develop something which can help people. If they provide that information (of sustainability), then we will even dig deeper on it and know how to orient well the message we are open to that". (Gitwaza 2012)

4 Discussion

To answer our research question of the contribution of religious belief to moving society towards sustainability we planned to gather data from people subscribing to a variety of religions. However, we were only able to collect significant data from people of Christian religion both for our leader interviews (100%) and the public survey (88%).

It is not immediately clear why survey respondents were largely Christian. One possibility is that our personal connections, which are largely Christian, are reflected in our online networks such as Facebook and LinkedIn. As the survey was promoted via these channels it may have contributed to the Christian bias.

As a result, we cannot make any meaningful statements about non-Abrahamic religions and only very limited generalisations about Muslim and Jewish communities.

4.1 SRQ1: Definition of Sustainability

Both leaders and members recognise the concept of sustainability and are aware of the sustainability challenge. Our data shows a lack of systems thinking, which is a key component of sustainability. This supports our general finding that the understanding of members and leaders only partially overlaps with the proposed definition based on the FSSD. Further more, may participants seem to lack an appreciation of the big picture.

Leaders tend to have a better understanding of sustainability than survey respondents. However, there is a discrepancy between identifying ecological and social aspects of sustainability: While all leaders easily identified ecological aspects when defining sustainability, the quality of definitions by members were more varied.

Contrary to our expectations, neither interview nor survey replies indicated a bias towards social sustainability. Moreover, leaders sometimes did not associate social aspects with sustainability at all until we prompted them. It is possible that this is due to the popular perception that sustainability is only an environmental issue, most often associated with climate change.

In summary, our data shows that the religious community has a varying and incomplete definition of sustainability, in particular when viewed through the lens of the strategic sustainable development (SSD).

4.2 SRQ2: Motivations for sustainability

As mentioned in *Results*, key motivations are sense of duty, the Golden Rule, and concern for the future. Overall, religious belief clearly motivates the religious community to make the world more sustainable. The Christian community agrees that they carry personal responsibility for sustainability as matter of higher purpose or common good that is intimately connected to their religious belief.

Despite this, we caution against appealing solely to the sense of duty: Multiple interviewees expressed concern that too much emphasis on responsibility (coded as 'sense of duty') can be experienced as guilt, suggesting that this will be counterproductive in terms of changing behaviour. Tyrberg tries to shift the debate of responsibility (stewardship) to one of equality and fairness using the Golden Rule: he advises his community that it is "not a question of guilt, just do what is reasonable" (Tyrberg). This echos Kotter's (2008) suggestion to "focus on [… keeping the sense of] urgency up and complacency, anxiety, and anger down".

There is evidence that some people do not connect sustainability with their religious beliefs: "I keep in mind sustainability because I believe it is important – nothing to do with religion." (Christian survey respondent) This seems, however, to be an exception to the rule. Peter Price-Thomas also mentioned this phenomenon as part of a personal story concluding that "If you help people to connect their faith with sustainability and practically doing something about it, you create very powerful change agents" (Price-Thomas 2012). Thus, underlining the effectiveness of religious belief as a powerful motivator for change.

There remains a question to what degree motivations (and actions) expressed are based on religious belief. However, from a strategic sustainable development perspective, this may not be as important as the realisation that a strong motivation to move towards sustainability exists in religious communities once the connection with religious scriptures or concepts are made. Thus, working with religious communities may prove to be very effective in moving society towards sustainability.

4.3 SRQ3: Actions for sustainability

> *"For evil to flourish, it only requires good men to do nothing"*
> *—Edmund Burke [21]*

The collected actions inspired by religious belief designed to move individuals towards sustainability appear do not seem to relate to a strategy that is meaningful according to the principles of SSD. Actions related to the ecological principles (SP1-3) follow the textbook example of "reduce, reuse, recycle (3Rs)". These actions reduce waste, increase product lifetime, and reduce virgin material use. This is potentially helpful for moving society towards sustainability. However, without being more strategic much of the good effort may be lost. Consequently, developing a strategy has the potential to improve the impact of the actions as well as their probability of success.

Actions relating to social sustainability (SP4) are typically about maintaining relationships with people known first hand, in particular the immediate family (e.g. family meals). This may be a reflection of the importance placed on community within religious communities as a whole and specifically within the Christian context. However, this may simply be due to the guiding themes offered by the survey.

Contrary to our expectation, social justice was not a common theme when listing actions. Bearing in mind the importance placed on values such as equality and dignity in most religions and Christianity in particular, we expected ideas such as reasonable working conditions, fair wages, etc. to play a significant role. It is possible that some religious communities are focusing on the more visible needs, i.e. those of the local community. Such behaviour, however, trivialises the problem of the sustainability challenge and exemplifies the lack of systems thinking discussed earlier. Similar behaviour is well known in the business world where negative effects on society and ecology are sometimes seen as an externality, i.e. outside of the project scope.

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[21]Typically attributed to Edmund Burke (though not verifiable) and widely paraphrased, e.g. by Simon Wiesenthal.

Survey respondents gave the most elaborate and interesting comments when asked about examples of volunteering suggesting that they were more passionate about this subject. In addition, idleness (also known as leisure) as human need is strongly associated with many of the social actions submitted. This suggests that the theme of volunteering may be good entry point for engaging the community in sustainability. On the other hand, it suggests that sustainability can be perceived as something that is done after work as opposed to being integral to every day action.

4.4 Religious Belief & Strategic Sustainable Development

4.4.1 Economics and Sustainability

The economic aspect of sustainability was mentioned several times. Typically as part of the triple bottom-line concept, but also as stand-alone definition of sustainability. We attribute this anomaly to sustainability training within business and the current harsh economic reality. Within the framework for strategic sustainable development, the economy is viewed as man-made construct that does not form part of the natural cycles and societal needs as defined by the sustainability principles.

In our interview with Price-Thomas (2012) we received evidence in form of anecdotes that economic gain is not the overriding factor when it comes to motivations and actions: During US elections, members of a church in a rich neighbourhood voted democrat knowing that this will have a negative impact on their finances. Equally, members of a church in a blue-collar neighbourhood voted republican despite being aware that their financial situation may suffer. This is an example of value-based motivation and action in religious communities and in line with McKenzie-Mohr's (2000) findings that the assumption that we act on economic self-interest is not reliable.

4.4.2 Sustainability Education

Throughout the research, it has been clear that the vast majority of participants had a strong interest in sustainability. And we have not had any evidence of anyone denying the importance of the sustainability challenge (or climate change).

From SRQ1 it is clear that there is a need for sustainability education in religious communities. This need is validated by comments received in SRQ2 and SRQ3. Members are open to receiving sustainability-related teachings from their Church. Moreover, there is evidence that some members expected sustainability to be taught in churches.

Interviewed religious leaders would like to educate their members but recognise their general lack of sustainability understanding from a scientific perspective. This may be one of the reasons why leaders find it difficult to talk about sustainability: it would mean stepping outside the comfort zone of their expertise.

Some see this as an opportunity for collaborations with experts from outside the community. Two interviewees expressly mentioned their interest in collaborating with science to bring sustainability education to their communities. However, there is anecdotal evidence that secular experts may shun such invitations. It is not clear why this may be so but one possibility could be the fear of being associated with religion and the perception that this may undermine the scientific credibility of the expert.

Finally, the Christian community is clearly motivated to move towards sustainability and often see this as an extension of their faith (SRQ2). They are already doing a lot of things to improve their sustainability though these efforts are largely lacking in strategy (SRQ3).

4.4.3 Synthesis and Recommendations

In the discussion above we have identified a number of barriers and enablers with respect to how religious belief is moving society towards sustainability. We found that most enablers are properties of the religion itself (e.g. scripture). One such example is the existence of the concept of sustainability in all religions. Further more, identified barriers typically relate to the personal interpretation and capacity of an individual or community: e.g. a lack of systems awareness.

We further categorised enablers and barriers using the five levels of the FSSD (see Table 4.1). Following McKenzie-Mohr's first step of Community Based Social Marketing (CBSM), we developed recommendations based on our research, which build on enablers to design strategies to systematically remove the identified barriers.

*Table 4.1. Barriers, enablers and strategies to remove barriers organised
according to the FSSD*

FSSD level	Barriers	Enablers	Strategy to Remove Barrier
Systems Level	● lack of systems awareness ● lack of systems thinking ● view of social system limited to family & immediate circle	● concept of sustainability exists in all religions ● broad interest in sustainability ● awareness of the need for training ● willingness to learn	● SSD training to leaders and/or key members of the community ● teach sustainability in houses of worship ● connect sustainability teachings to scripture ● emphasize: relationships & interconnections ● work with motivation of common good: stewardship, Golden Rule, concern for the future,...
Success Level	● incomplete definition of sustainability ● no common vision	● shared motivations incl. concern for the future	● develop vision based on scripture, shared motivations and the four sustainability principles (SP).
Strategic Level	● no explicit strategy ● no guidelines ● secular perception that science and religion are incompatible	● purpose & value-driven ● reciprocity & equality via Golden Rule ● sense of duty via stewardship ● willingness to work with science	● backcast from common vision ● apply prioritisation questions to proposed action ● develop trusted ambassadors from within the community
Action Level	● various but not strategic	● willingness to act	● co-create & coordinate actions (using backcasting from common vision)
Tools Level	● no tools identified	● story telling ● sense of community	● FSSD incl. ABCD process ● apply latest behaviour change theory such as Kotter's 8 steps or McKenzie's CBSM ● resources by the Alliance for Religions and Conservation (ARC)

Based on the FSSD, the shared vision or definition of success is the central pillar for all subsequent work. Christian communities have not articulated such a shared definition of sustainability making it very difficult to develop a common vision.

In addition to feeling a sense of duty and relating sustainability to reciprocity and equality (Golden Rule) a significant number of research participants expressed a concern for the future. These shared motivations provide a base for building a common vision of the future.

Without a full understanding of sustainability, leaders will not be able to educate their members or be strategic about moving towards sustainability. Leaders and members are interested in sustainability, are aware of their lack of knowledge, and are willing to learn more. We found the Framework for Strategic Sustainable Development to be a very useful tool for analysing the current situation and can recommend it as one of the tools to potential change agents. A shared understanding is also crucial to create a sense of urgency, develop a change vision and strategy, and communicate for understanding and buy-in (step 1, 3, and 4 of Kotter's leading change model).

Religious communities are purpose-driven networks. Our research shows that sustainability is a concern within these communities and that there exist shared motivations fuelling this concern. Tapping into these motivations and combining them with religious teachings about sustainability could provide a powerful story line to enable change. Complemented by the four sustainability principles, an effective change vision and strategy could be created.

Using this shared vision of sustainability a community can come together and co-create a multitude of actions aimed at bringing them closer to this vision (this process is called backcasting in the FSSD). To ensure all actions are strategic they should be examined in light of the following three prioritisation questions: does the action lead in the right direction, act as platform for future actions, and ensure that the ability to pursue future actions is not encumbered? Further prioritisation questions may be developed in line with the common vision.

Kotter (2008) also suggests to send people out into the world to learn what is going on and then share their experiences in their home communities. Developing a trusted ambassador of sustainability from within a religious

community may help to bridge the knowledge gap as well as potentially help create understanding in the secular world of science. This also taps into one of the strongest traditions within all religions: the power of story telling.

Finally, we found McKenzie-Mohr's community-based social marketing model and Kotter's eight steps for leading change helpful in structuring our insights.

5 Conclusion

"Leadership is stewardship [...] the purpose of influence is to speak up for those who have no influence."
— Rick Warren, Baptist pastor

Society is facing a sustainability challenge and all organisations and communities have a role to play in moving society towards sustainability. Religious communities are large purpose-driven networks and religious belief has a markedly positive effect on their motivation to move society towards sustainability. With the help of strategic sustainable development, the good will and efforts already flowing into more sustainable living of religious people can be made more strategic.

Due to the significant numbers of religious people in society, the transformational potential of more sustainable religious communities is enormous. An example of such a transformation is the idea of a carbon fast that spread from a single church in Duluth to many communities in the state of Minnesota and beyond within a few years reaching thousands of people.

Unlike many behaviour change initiatives that fail to result in much more than 10% long-term adoption rate, connecting sustainability with religious belief has the potential to generate lasting change and create powerful change agents. This is also something that warrants more thought by sustainability practitioners working in other fields: rather than working on the rational information campaign, how can we engage the target community on an personal, emotional, and value-based level?

Our research identified the current reality of Christianity and sustainability based on a small sample of diverse communities. And while it gives compelling reasons for sustainability to be a stronger theme within Christian communities, there is much research left to test how best to bring sustainability to the forefront in Christian and more generally in religious communities.

5.1 Suggestions for Future Research

There are three main themes for future research: (1) practical implementation of bringing SSD into Christian communities, (2) verifying

and deepening understanding of data, and (3) applying ideas from this thesis to the wider context.

5.1.1 Practicalities of implementing SSD

We have identified the need for education and willingness to learn in Christian communities. What strategy can be used to help leaders learn about sustainability? How could sustainability be best taught in churches? Should it be integrated into sermons and festivities? Could it be offered as part of bible study or other educational programs offered through the Church (e.g. child care, after-school programs)?

Once a reasonable level of sustainability understanding is established, the community can start building a common vision of the future and develop an action plan. The FSSD offers the ABCD process designed to do exactly this for organisations. Is there a need to modify the ABCD process or supplement it with other tools? How would an ABCD process tailored for religious communities look like?

The best intentions are no guarantee for success. What tools or methods can be used to rigorously evaluate progress? What would a follow-up study on e.g. the Gloria Dei community in Duluth, MN, reveal about the impact of the sustainability training they received a few years back?

5.1.2 Verifying and Extending Findings

In this thesis we focused on recent behaviour change theories by McKenzie-Mohr and Kotter. There are of course many other theories and it may prove interesting to examine alternatives theoretically or in practice via case studies with religious communities.

We have found that religious and secular motivations are difficult to separate. One way to circumvent this issue would be to have a secular control group. This would allow participants to simply state their motivation without worrying about whether it is religiously motivated. An alternative approach may be to dig into the extensive archive offered by the

Association of Religion Data Archives[22] to find examples of well-formed questions on determining "religiousness".

Our methods were designed to give a general overview of different religions but we received largely Christian data. What differences in awareness, motivation, and action are there between different branches of Christianity? While we collected demographic data to check for obvious distribution problems, we did not use the data to analyse differences related to age, sex, or gender. A study in this direction may uncover some significant discrepancies, which should be taken into account if the target group was better defined. Further more, we recognise that culture plays an important role in how religion is interpreted (Ramadan 2010) and hence studying this effect with respect to SSD may yield helpful information.

Lastly, while our attempts at using human needs to better understand motivations have not been very fruitful, a different methodology may well result in more interesting findings. In particular, the concept of Max-Neef's three contexts (personal, social group, environmental) may warrant more study.

5.1.3 Branching Out

Clearly understanding SSD in the context of religions other than Christianity is sure to prove an interesting research project. We are fascinated by the possibility of working with established interfaith organisations working on sustainability issues. The purpose of interfaith organisations is to establish relationships among various religious communities based on respect and trust. Hence, they are well placed as intervention points to help religious communities understand and move towards sustainability by providing training to religious leaders.

We were surprised by our unintended finding suggesting that some scientists may feel uncomfortable presenting to a religious community. What avenues can be explored to foster such collaborations and change this perception? Further more, it would be intriguing to understand whether the public expects religious communities to stick only to spiritual topics or whether it accepts that religion can also influence topics such as

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[22] http://www.thearda.com

sustainability, politics, and economy. There certainly are many public myths around religions that are worth examining (e.g. Hans Rosling's fascinating statistics on religion and babies[23]). We hope that through our research we have at least contributed to re-evaluating the often-held opinion that religions are not interested in sustainability and shun science.

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[23] http://www.ted.com/talks/hans_rosling_religions_and_babies.html

Epilogue – Changing Minds

"Have you changed minds?" is a common question we received whenever talking about our research. The answer is an unambiguous yes. We have received feedback from survey respondents, leaders and experts many of whom expressed gratefulness for bringing this topic to the table. We have the feeling that a simple conversation is often all that is needed for religious people to start reconnecting sustainability with their belief. For many it is such an obvious connection that they wondered afterwards why they haven't connected it previously.

> *"You mean, I can do sustainability as an extension of my faith, my core values?"*
> *—based on a story told by Peter Price-Thomas*

Recognising that this thesis provides only a limited insight into this diverse field we would like to continue this conversation and encourage people to share feedback and experiences in a dedicated online group on the LinkedIn platform:

LinkedIn Group: "Religion & Sustainability"
http://www.linkedin.com/groups?gid=4465045

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Appendix A: Pre-Study Participants

Experts

Experts opinions are integrated into the introduction, discussion and conclusion. They have significantly contributed to the entire research process, particular in the early stages of the literature review.

We contacted a number of experts leading to three interviews:

- Martin Palmer, Secretary General
  Alliance for Religions and Conservation (ARC), UK
- Peter Price-Thomas, interim CEO
  The Natural Step (TNS), UK
- Sam Ruben, assistant to the president
  United Religions Initiative (URI), USA

In addition, we had significant exchanges via email with two academic experts:

- Dr. Antje Jackelén,
  Adjunct Professor of Systematic Theology/Religion and Science, Lutheran School of Theology at Chicago, and Bishop of the Diocese of Lund, Sweden
- Dr. Richard Carp, Vice Provost for Undergraduate Academics at St. Mary's College of California, US

Pilot Interviews

Three pilot interviews (two with Johan Tyrberg, one with Paul Gitwaza) were conducted in order to help us phrase our research question, inform our interview, and survey questions.

Appendix B: Interview for Leaders

Introduce ourselves by name and country.

We are 3 students doing a masters in Strategic Leadership towards Sustainability at BTH in Sweden.

This interview is part of our data collection for our thesis. Our thesis topic is "How does religious motivation contribute to sustainability?"

We are required to record this interview. However, the recording will not be accessible to anyone outside of our research team and advisers. Do you give your permission for us to use quotes from this interview in our thesis report? (If not, may we cite your contribution - by name or anonymously?)

We expect this call to take 40 minutes. Is this fine for you?

I, <Name> will be the primary interviewer & <name> (and <name>) will be listening in, taking notes and may ask clarification questions.

Do you have any questions before we get started?

time estimate until start of interview: 4 mins

To answer SRQ1 & 2, we have developed the following interview questions:

*1. How do you define **sustainability**?*

what we want to know:

- what is the understanding of sustainability?
- inclusion of ecological (SP1-3) and social (SP4) aspects?
  - relevant for SP analysis

time estimate: 4 min

thank you very much, …

optional: *for the purpose of this thesis our definition of sustainability includes both social and environmental sustainability. Please keep this in mind when answering the rest of the interview.*

This ensures that irrespective of the interviewee's definition of sustainability subsequent answers will be given with a common definition of sustainability.

2. Do you carry **responsibility** *for moving towards sustainability because of your religious belief? Why?*

what we want to know:

- personal responsibility (duty, obligation, mandate) due to religious belief (i.e. external motivation)
- Abrahamic faiths include the idea of stewardship: a mandate by God to look after the creation
- non-Abrahamic: non-harm but not steward
- Universal ethic: Golden Rule?
- does a feeling of responsibility in the community leader translate into a higher influence on the community (due to authenticity, speaking from the heart, conviction)?

time estimate: 5 min

3. Based on your religious beliefs what are your **motivations** *for moving towards sustainability?*

what we want to know:

- the motivation (willingness, motive, incentive) is different from responsibility as it comes from inside.
- this may or may not be related to religious beliefs (e.g. providing a better place to live for my children) but we want to know the motivations based on belief.
- will this have an impact on the community due to authenticity, speaking from the heart, conviction?

time estimate: 5 min

*4. Can you give **examples** of what you are doing due to your faith to make you **personal life** more sustainable? We are interested in both your successful and less successful actions.*

note: take notes of activities for use in question 6...

follow-up question:

- *Can you think of why X has been (less) successful?*

what we want to know:

- what specific actions have you "done" to move towards sustainability?
- what worked and what didn't?
- suspected reasons for success or failure?
- does personal action have an impact on what is done to community and how community is reacting?

time estimate: 5+ min

*5. Now with respect to your **religious community**, can you give **examples** of what you are doing due to your faith to move towards sustainability?*
Again, we are interested in both your successful and less successful actions.

note: take notes of activities for use in question 6...

follow-up question:

- *Can you think of why X has been (less) successful?*

what we want to know:

- what specific actions have you "done" to move towards sustainability?
- what worked and what didn't?
- suspected reasons for success or failure?

time estimate: 5+ min

6. Relative to your faith, how do you rate the importance of each action?
We are using a scale from 1 (not relevant) to 5 (crucial). I will go through the list of actions you have given us to help you...

instructions: now read out actions one by one from list collected in question 4 and 5.

what we want to know:

- numerical data offers some quantitative analysis providing more data richness
- this may be comparable to community member data
- do actions of high "faith based" importance have higher success?

time estimate: 3 min

Closing…

Wow that was amazing. Thank you so much for your insights and time…

We are conscious of your time. We said the call would last around 40minutes. It is now <minutes>…

- *Would you like to add anything else?*
- *Can you recommend anyone else we should speak to? We are looking for more non-Christian leaders to broaden our sample.*
- *If we have follow-on questions, would you be available on email to answer them?*
- *We will send you an electronic copy of our thesis after it is published early June.*
- *Our final draft will be reviewed by an expert panel. Would you be interested in being part of our expert panel and give comments on the final draft (around May 7th).*

Appendix C: Online Survey

survey title:
How does religious belief help people to be more sustainable?

online survey platform provider:
http://www.surveymonkey.net

public web address (URL) of survey:
https://www.surveymonkey.com/s/religion-sustainability

1. Welcome! (page 1)

We are interested in how religious belief is helping people to lead more sustainable lives.

We would like to invite you to help us in our research by answering our 10-15 minute survey. We will collect some personal information (no name, address or contact details are required) and ask you about sustainability and your religious belief.

About our Research

In a nutshell we believe a big shift in behaviour is required to move society towards sustainability. This behaviour change could be forced by legislation but we imagine other motivators would work better. We are exploring religious communities because they are value-based networks and have been very effective at promoting behaviour change in the past.

About Us

We are Aniko Bunta (Romania), Oliver Mazimpaka (Rwanda), and Mischa Altmann (Austria). Together, we form a research team of three master students studying "strategic leadership towards sustainability" at BTH, Karlskrona, Sweden.

2. **Demographic Information** (page 2)

We do not collect your name or address and you do not have to give your email address. All information collected during this survey will be kept confidential. Only the research team will have access to your data.

Q1: Which category below includes your age?
- 17 or younger
- 18-20
- 21-29
- 30-39
- 40-49
- 50-59
- 60 or older

Q2: Are you male or female?
- Male
- Female

Q3: What country do you come from?
- open answer, single line text box

Thank you! If you like, you can give us your email address at the end of the survey to receive the results of our research.

Q4: What religion do you belong to?
- Baha'i
- Buddhism
- Christianity
- Daoism
- Hinduism
- Islam
- Jainism
- Judaism
- Shintoism
- Sikhism
- Zoroastrianism
- none (I do not consider myself religious)
- other
  - open answer, single line text box

Q5: Optional: Do you feel part of a particular religious community? If so, please identify it by name and city/town.

- open answer, single line text box

Q6: Do you consider yourself a members or leader of your religious community?

- I consider myself a member of my religious community.
- I consider myself a leader of my religious community.
- Not applicable / Other (please specify)
  - open answer, single line text box

3. Definition of Sustainability (page 3)

Q7: Optional: How would you define or describe sustainability in a few sentences?

- open answer, text box with multiple lines

4. Sustainability & Religious Belief (page 4)

For the purpose of this thesis our definition of sustainability includes both social and environmental sustainability. Please keep this in mind when answering the rest of the survey.

Q8: Do you carry responsibility for moving towards sustainability because of your religious belief? Why?

- open answer, text box with multiple lines

Q9: Based on your religious beliefs what are your motivations for moving towards sustainability?

- open answer, text box with multiple lines

Q10: Optional: Would you like to add anything else?

- open answer, text box with multiple lines

5. Sustainable Behaviour & Religious Belief (page 5)

Can you give examples of what you are doing due to your faith to make your personal life and religious community more sustainable? We are interested in both your successful and less successful actions.

To help you, we have some guiding themes which you can but don't need to use for inspiration: transport, waste, food, water, energy, re-use/shared use, family, volunteering, community, local neighbourhood

Our definition of sustainability includes both social and environmental sustainability. Please keep this in mind when answering the above question.

Q11: Theme: Transport

Examples might be: walking, cycling, using public transport, using car sharing or pooling, using a fuel efficient or electric car, going on holiday locally, minimising flying

- open answer, text box with multiple lines

Q12: Theme: Waste

Examples might be: minimising waste, recycling your waste, composting organic waste, minimising and double-sided printing

- open answer, text box with multiple lines

Q13: Theme: Food

Examples might be a preference for organic, local, seasonal, sustainably caught or farmed seafood, vegetarian, vegan, non-GMO food

- open answer, text box with multiple lines

Q14: Theme: Water

Examples might be: drinking tap water, having short showers, conserving water

- open answer, text box with multiple lines

Q15: Theme: Energy

Examples might be: using a green energy supplier, insulating your home, using energy efficient appliances, offsetting for my emissions

- open answer, text box with multiple lines

Q16: Theme: Re-use or shared use

Examples might be: using local libraries, renting films/music instead of buying them, giving away or sell items that are not used any more, repair broken items when feasible, use 2nd hand goods

- open answer, text box with multiple lines

Q17: Theme: Family

Examples might be: regular family meals

- open answer, text box with multiple lines

Q18: Theme: Volunteering & Community

Examples might be: knowing your neighbours, helping in school, neighbourhood clean-ups

- open answer, text box with multiple lines

Q19: Please feel free to add any other religiously motivated actions that make your (or your community's) life more sustainable.
- open answer, text box with multiple lines

6. Thank You! (page 6)

Q20: Do you give permission for us to quote you answers in our research?
- yes
- no

Q21: Optional: Do you have any comments or questions about our research?
- open answer, text box with multiple lines

Q22: Keeping in touch

If we have follow-on questions, would you be available on email to answer them?

- yes

- no

Would you like to receive our report when we finish our research?

- yes
- no

Please provide your email address if you responded yes above

- open answer, single line text box

Q23: Can you recommend anyone else we should speak to?
- open answer, single line text box

Thank you so much for your insights and time! Please select "submit" to finish the survey.

Post-submission Page (page 7)

Thank you very much!

Feel free to pass on this survey to friends and colleagues around the world! Use this link:

https://www.surveymonkey.com/s/religion-sustainability

warm regards,

Aniko, Oliver and Mischa
Masters in Strategic Leadership towards Sustainability
http://bth.se/msls

You can contact us by:
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