

Walter Leal Filho

Adriana Consorte McCrea *Editors*

Sustainability and the Humanities



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Editors

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Preface

There are strong links between sustainability and the humanities, which go well beyond the mere inclusion of the social sciences. Yet, the debate on the contribution of the humanities to a better understanding of sustainable development is not as intensive as it should be. There is also a paucity of publications which have specifically focused on exploring the links between sustainability and humanities. As a result, interesting opportunities are being missed, and a holistic discussion on the intellectual and moral aspects of sustainable development is not fully taking place.

It is against this background that the book ‘Sustainability and Humanities: linking social values, theology and spirituality towards sustainability’ has been produced. It contains a set of papers derived from the symposium ‘Sustainability and Humanities: linking social values, theology and spirituality towards sustainability’, which was organised by the Inter-University Sustainable Development Research Programme, the World Sustainable Development Research and Training Centre and Canterbury Christ Church University in Canterbury, England. The event gathered researchers in the field of humanities and sustainable development in the widest sense.

This book serves the purpose of showcasing experiences from research, field projects and best practice in the field of sustainability and humanities. Consistent with the need for more cross-sectoral interactions among the various stakeholders working in this field, the book aims to:

- i. provide research institutions, universities, NGOs and enterprises with an opportunity to display and present their works in the field of sustainability and humanities;
- ii. foster the exchange of information, ideas and experiences acquired in the execution of projects, especially successful initiatives and good practice from across the world;
- iii. introduce methodological approaches and experiences deriving from case studies and projects, which aim to show how sustainability and humanities may be better integrated.

Last but not least, a further aim of this book is to document and disseminate the wealth of experiences available today.

We thank the authors for their willingness to share their knowledge, know-how and experiences, as well as the many peer reviewers, which have helped us to ensure the quality of the manuscripts. We hope this publication provides a forum for the humanities to share ongoing practices as part of the overall debate on sustainable development in both teaching and research programmes and that, by doing so, it will contribute to the further development of this central topic.

Enjoy your reading!

Hamburg, Germany
Canterbury, UK
Autumn 2018/2019

Walter Leal Filho
Adriana Consorte McCrea

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The Role of Religion in Global Sustainability: A Study on Catalonia's Contribution to Sustainable Development Goals



Montserrat Gas-Aixendri and Sílvia Albareda-Tiana

Abstract In September 2015, the United Nations revised the *Millennium Development Goals* and set the global agenda for the next 15 years under a new title: “*Transforming our World: the 2030 Agenda for Sustainable Development*”. The harmful effects of climate change and other serious environmental problems are directly related to human problems like poverty and malnutrition, making a holistic approach to Sustainable Development (SD) necessary. Religious leaders from around the world have signed statements in favour of Sustainable Development Goals (SDGs) such as peace, climate justice or environmental protection. Many efforts have been made by religious institutions around the world to promote these and other aspects related to SD. This paper presents the findings of a case-study to explore the practical contribution of religious organisations to the SDGs in Catalonia (Spain) by means of qualitative and quantitative research. The results of this study show that religions actively contribute to SDGs solving human problems and that it can be a field of inter-religious dialogue.

Keywords Sustainable development goals · Practical contribution of religious organisations · Inter-religious dialogue · Catalonia · Case-study

1 Introduction

In September 2015, the United Nations (UN) revised the *Millennium Development Goals* and set the global agenda for the next 15 years under a new title: “*Transforming*

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our World: the 2030 Agenda for Sustainable Development (UN 2015). The adverse effects of climate change and other serious environmental problems are directly related to human problems like poverty reduction, which is why global cooperative efforts are necessary. There are no obvious synergies as of yet between economic, social and environmental progress. However, a clear consensus exists about the fact that those three dimensions need to grow together through SD (Sachs 2012). In order to achieve the SDGs, all the citizens of the world, and not just governments, need to contribute. Encouraging SDGs means that people and social groups with deep-rooted values and motivations of taking action, need to change their behaviour and citizen campaigns. However, these behavioural changes alone are not enough. In order to move towards a more sustainable future, in which the Earth is home to the entire human family, all social entities need to be involved.

Over the past decades, increasing concern about environmental degradation has been equalled by the interest in the relation of religion to sustainability. A well-known article by historian Lynn White, “The historical roots of our ecologic crisis” (1967), blames Judeo-Christian religions for environmental degradation. Despite his criticism, White considers a specific cultural-religious contribution to be the solution to environmental degradation. Other authors such as Gardner (2002), Tucker (2008), Wolf and Gjerris (2009), Narayanan (2013), Berry (2014) and Reuter (2015), later coincided in highlighting the contributions of religions to SD and climate change mitigation. The contribution of religions to SD was given unprecedented recognition in 2015 at the COP 21 Climate Change Conference held in Paris from 30 November to 11 December (World Council of Churches 2015).

The responsibility of religions towards healing the planet has not only been present in theory, by means of declarations of intent, but also in actions specifically contributing to SD or integral sustainability. Despite all this, the contributions religions make to integral development are hardly visible. In contrast, videos about terrorist attacks that have a religious connotation have saturated the media over the past few years. An important part of the scientific literature in this field has focused on the relation between religions and the environment (religious environmentalism) and on how religions have inspired this kind of environmental activism (Gardner 2006; Gottlieb 2006; Tucker 2003). Others have concentrated on the relation between religions and the social and economic aspects of human development, with particular reference to developing countries (Clarke et al. 2008; Boehle 2010; Jones and Petersen 2011; Haynes and Anja 2013; Tomalin 2015). However, there is a limited amount of literature that considers the relation between religions and the integral concept of SD, including the social, economic and environmental dimensions, as the 2030 Agenda for Sustainable Development (UN 2015) proposes.

When consulting the most used databases in research into social science (Web of Science and Scopus), it was found that there are no empirical studies trying to measure the specific contribution of religious entities to global sustainability. The closest example of a case study carried out in Catalonia is the work of Aguilar and Coscolla (2014), showing the contribution of the Catholic Church to social cohesion.

In a broader sense, the present paper examines the role of religious institutions with regard to sustainability in Catalonia as a case study, working towards the ultimate

Table 1 Interviews with number of leaders and websites of religions entities analysed

Religion	Religious entity	No of websites	Religious leader interviewed
Catholic Church	Barcelona Pastoral Delegation	217	Josep M. Jubany
	Caritas Catalonia		Carme Borbonès
	Unió de Religiosos in Catalonia		Lluís Serra
Protestant Churches	Evangelical Church	185	Guillem Correa
	Seventh day Adventist Church	9	Escola Urgell representative
Eastern Churches	Orthodox Church under the Serbian Patriarchate	7	Joan García Casanovas
	Coptic Church		Roes Ragai
Islam	Muslim Community of Catalonia	10	Mohamed El-Ghaidouni
	Islamic Council of Catalonia		Mohamed Halhoul
Jews	Jewish communities	11	Victor Sorensen
Mormons	Mormons	9	Josep Lluís Hernández i Carme Gutiérrez
Jehovah's Witnesses	Jehovah's Witnesses	1	Josep Martínez
Bahá'í Faith	Bahá'í Faith	4	Emilio Egea
Hinduism	Advaita	20	Bhakti Das
	Hare Krishna		Gundicha Das
Sikhism	Sikh community	1	Gagandeep Singh
Buddhism	Buddhists	24	Montse Castellà
Taoism	Taoists	1	Artur Mateu

goal of getting to know more about the contribution of religions to SDGs. The paper is based on an empirical study carried out between 2015 and 2016, using a mixed method, combining both quantitative and qualitative research as a methodology to study how the twelve religious bodies operating in Catalonia contribute to SDGs. The objective of this case study is to show the contribution of religious institutions to “integral SD”, by making it more visible. Despite having encountered certain difficulties when making generalizations, the study maintains that religions play an important role in the contribution to SDGs.

2 Background Theories

2.1 *The Concept of Sustainable Development*

The Brundtland report (1987) states that SD is “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs” (Brundtland 1987). This concept of development put an end to the confrontation between human development (Development) and the conservation of natural resources (Environment). It marked a turning point in the concept of human development and made it possible for agreements to be established between economy and ecology. Studying situations in a holistic manner is another innovation associated with the concept of SD. At all the international summits on SD and in their final documents (Rio 1992; Johannesburg 2002; Río 2012; New York 2015), the three dimensions of sustainability and their indivisible and integrated nature (UN 2012 and 2015) are mentioned explicitly.

The Interfaith Declaration on Climate Change, signed by 154 religious leaders, presented to the UN before the COP 21, also explicitly shows the interconnection between social, ecological and economic aspects of SD. For instance, the concept of “climate justice”, defended in the Interfaith Declaration, shows environmental aspects (climate) are related to social and economic aspects (justice) (World Council of Churches 2015).

2.2 *Methods*

The study of the contribution of religious entities to sustainability in Catalonia was conducted through empirical research, using a mixed-quantitative and qualitative-method of collecting data. On the one hand, the activities religious entities perform related to the indicators corresponding to SDGs (Table 2) were counted. The study is based on the information published in the websites of the religious entities in question. On the other hand, semi-structured in-depth interviews were done with the leaders of each religious community. The interviews were analysed with Atlas.ti, a qualitative data analysis computer programme, using the grounded theory.

The quantitative research was performed based on the database of religious entities provided by the Directorate-General of Religious Affairs of the Catalan Government (Direcció General d’ Afers Religiosos de la Generalitat de Catalunya—DGAR). This database contains information on the entities associated with minority religions. With respect to the Catholic Church, the great number of entities and activities made it impossible to analyse them in such a large-scale research study. According to data from 2013 consulted at the official webpage of the Directorate-General of Religious Affairs of the Catalan Government (DGAR 2013) there are a total of 7.958 religious centres in Catalonia, 84% of which are Catholic, thus totalling 6.685 Catholic cult centres. Catholic schools, social centres and health care centres should

also be included. In order to keep the scope of the research within reasonable limits, a basis of 217 entities, developed by Belzunegui (2016), was used. His work considers all the Catholic entities in Catalonia. After a rigorous screening process, the 217 most significant entities, the most socially active ones, were used as the basis of our study.

2.3 Determining the Items or Indicators Used (Quantitative Analysis)

In order to know the role of religions in global sustainability, the activities and services offered by religious entities included on their websites were classified associating them with the SDGs (UN 2015).

In order to systematically count the contributions of each religious entity to global sustainability, each activity present on the websites has been linked to the priority areas of each of the dimensions of SD according to the meanings.

2.4 In-Depth Interviews with Leaders of Religious Entities in Catalonia (Qualitative Analysis)

In order to know the contribution of religious entities to the SDGs, invisible on websites, in-depth interviews (semi-structured focused interviews) were done with leaders of each of the religious organisations present in Catalonia. The representatives of the 12 religious communities based in Catalonia represented the sample object of the study. The qualitative research was based on the analysis and codification of the 18 interviews done with key informants (religious leaders), selecting the 12 religious organisations in Catalonia as a sample.

The content of the interviews was recorded and transcribed onto text documents and later underwent a process of conceptualization using the Atlas.ti programme. The analysis performed with this computer programme consists of coding the answers to the interviews. It provides us with a quantitative content, as it counts the number of times a code appears. Coding involves classifying and arranging the free answers (or fragments of answers) into categories created either before or during the analysis, depending on the methodology used. It gathers ideas, concepts or important topics in accordance with the grounded theory. The codes used in this research are the SDGs.

In order to sort the codes (classified answers), we used Atlas.ti, which enabled creating concept maps, arranging the codes per previously determined families. These families are the three main dimensions of SD: the social, environmental or ecological and economic dimensions.

This technique was used to *map*, which includes families (dimensions) and categories (SDGs) is provided with textual content, using quotes mentioned in the

interviews that help clarify what the interviewees understand about the SDGs, associating them with the activities or priorities developed at the religious entities they represent.

The Table 1 contains the recollected interviews with leaders and the websites of religious entities that have been analysed.

3 Results and Discussion

The quantitative research was painstaking and was based on the database of entities provided by the Directorate General of Religious Affairs of the Catalan Government in November 2014. The contributions to the SDGs of 11 of the 12 religious organisations established in Catalonia were analysed (no information was found regarding activities performed in Catalonia on the website of the True and Living Church of Jesus Christ of Saints of the last Days). 707 institutional websites and *facebook* pages were analysed (217 catholic ones and 490 belonging to other religious entities) in total. They correspond to religious entities and centres, places of worship and training or social action centres. A total of 2478 activities related to the contribution to SDGs were included. The global results are found in Table 2 and Figs. 1 and 2.

The activity of a religious community is much more abundant than what can quantitatively be gathered on websites. The findings of the qualitative part of the research provide us with more information about what religious entities do or have the intention to do to promote SDGs than what the digital information, which has often not been updated, offers. The aim of the interviews was to clarify and explain the quantitative data. By analysing the interviews, we wanted to obtain further information

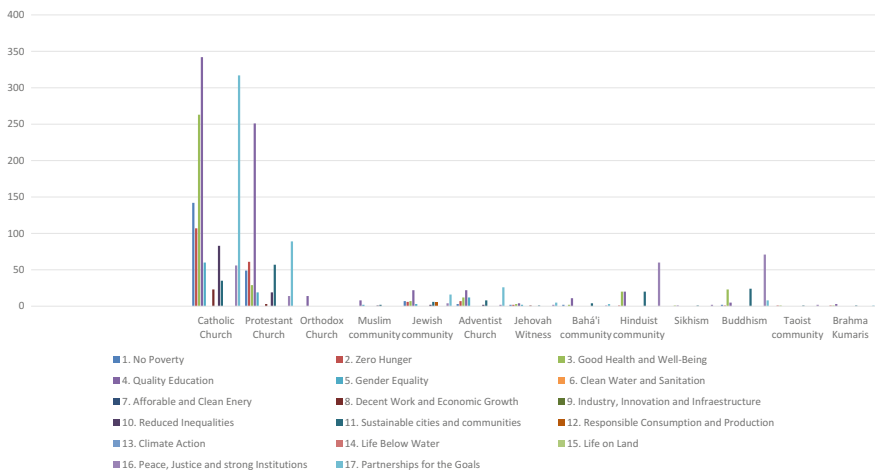


Fig. 1 Contribution to SDGs of each religious group

Table 2 Number of activities of religious institutions in Catalonia related to SDGs

Sustainable Development Goals	Catholic Church	Protestant Churches	Orthodox Church	Muslim communities	Jewish communities	Adventist Church	Jehovah's Witnesses	Bahá'í Faith	Hinduism	Sikhism	Buddhism	Taoism	Brahma Kumaris
1. No Poverty	142	49	0	0	7	3	2	2	0	0	2	0	0
2. Zero Hunger	107	61	0	0	6	7	2	0	1	0	1	1	1
3. Good Health and Well-Being	263	29	0	0	7	12	3	2	20	1	23	1	1
4. Quality Education	342	251	14	8	22	22	4	11	20	1	5	0	3
5. Gender Equality	60	19	0	2	3	12	2	0	0	0	0	0	0
6. Clean Water and Sanitation	0	0	0	0	0	0	0	0	0	0	0	0	0
7. Affordable and Clean Energy	0	0	0	0	0	0	0	0	0	0	0	0	0
8. Decent Work and Economic Growth	23	3	0	0	0	0	1	0	0	0	0	0	0
9. Industry, Innovation and Infrastructure	0	0	0	0	0	0	0	0	0	0	0	0	0

(continued)

Table 2 (continued)

Sustainable Development Goals	Catholic Church	Protestant Churches	Orthodox Church	Muslim communities	Jewish communities	Adventist Church	Jehovah's Witnesses	Bahá'í Faith	Hinduism	Sikhism	Buddhism	Taoism	Brahma Kumaris
10. Reduced Inequalities	83	19	0	1	2	2	0	0	0	0	0	0	0
11. Sustainable cities and communities	35	57	0	2	6	8	1	4	20	1	24	1	1
12. Responsible Consumption and Production	0	0	0	0	5	0	0	0	0	0	0	0	0
13. Climate Action	0	0	0	0	0	0	0	0	0	0	0	0	0
14. Life Below Water	0	0	0	0	0	0	0	0	0	0	0	0	0
15. Life on Land	0	0	0	0	0	0	0	0	0	0	0	0	0
16. Peace, Justice and strong Institutions	56	14	0	0	4	2	2	1	60	2	71	2	0
17. Partnerships for the Goals	317	89	0	0	16	26	5	3	0	0	8	0	1

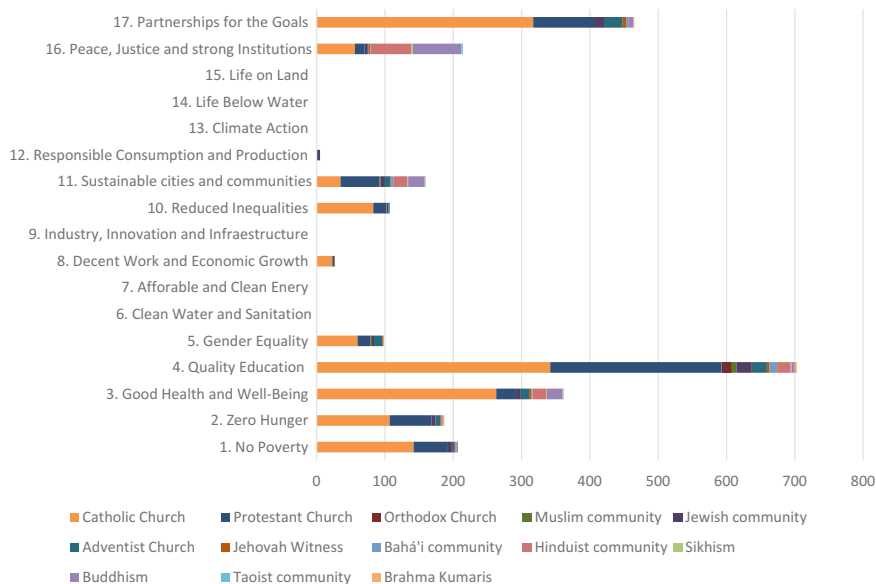


Fig. 2 Religious institutions contribution to SDGs

on the contributions religious entities make to SDGs that had not been included in research so far. More particularly: (1) provide an opportunity to talk about other activities the entities carry out and that are not visible on the website; (2) find out more about the religious motivations of the activities of the religious entities that contribute to a certain field of sustainability; (3) explain the interests and concerns of religions that have not been materialised in specific activities (especially those related to environmental SDGs, as Goal 13 “Take action to combat climate change and its impacts”; Goal 14 “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”, and Goal 15 “Combat desertification”); (4) explain how carrying out those activities for SDGs may lead to inter-religious dialogue.

As a result of analysing, categorising and coding the interview transcriptions, concept maps were created. The number of codes quantifies and the number of times said term or concept has been mentioned in an interview. The concept maps were obtained from each interview and serve to see the priorities of each religious organisation to the SDGs. Coding enables quantifying the number of times the religious leaders address each of the SDGs. However, due to the limited extension of this article, we are not able to present the content of the conceptual maps.

The double analysis of the results provides a considerable amount of processed, classified and quantified information, which enables to understand the role of religions in the Catalan society of the twenty-first century. The large number of activities associated with SDGs and the beliefs and motivations encountered in the different religions, offers a panoramic view and shows us which the points in common or

convergences are that exist between the different religious entities and their work towards the Agenda 2030 (UN 2015).

With respect to the concept of SD, the importance of Pope Francis' encyclical *Laudato si'* needs to be highlighted. It provides an in-depth analysis of this concept from a Christian viewpoint and calls it *integral ecology* (Francis 2015: 137–163) or sustainable integral development (Francis 2015: 13), stressing the interconnection between social, economic and environmental aspects (Catholic leader num. 1). Buddhism, for its part, provides the conceptual reflection of “cosmovision”, the perception that “everything is interrelated and interdependent, which helps understand SD (Buddhist leader).

The Christian religions are more inclined towards actions related to the socio-cultural dimension of SD, as the interviews with the representatives of the Catholic Church (Catholic leaders num. 2 and 3), the Protestant Churches (Protestant leader) and the Orthodox Churches (Orthodox leader) show. The representatives of the different branches of Christianity stand out because of the number of times they mention or use textual quotes related to social cohesion. The Catholic Church points out the fact that faith without works (of charity, of helping your neighbours, of solidarity) is a dead faith (Catholic leader num. 1). “The Church teaches us of the moral responsibility towards Creation, the importance of integral human development, and of the importance of subsidiarity in building institutions” (Sachs 2014). Jehovah's Witnesses stand out for their “true vocation of helping others”, which contains a clear Biblical foundation, the basic principle of which is “the love of God and love of others” (Jehovah's Witnesses leader). The commandment of Jesus of ‘loving God above all things and loving your neighbour as yourself’ lies at the basis of all Christian social work. Social work is essential “but as a result of feeling the need to help because we love others as Jesus loves them” (Orthodox leader). The Mormons highlight the fact that “when you are good to others, you are good to yourself” in this action of helping others (Mormon leaders).

Regarding the major social challenges, the results obtained through the qualitative analysis are in line with those obtained through quantitative analysis in the major social challenges. The Figs. 1 and 2 show that the greater contribution to the SDGs are: “Ensure inclusive and equitable quality education” (Goal 4); “Ensure healthy lives” (Goal 3); “End poverty in all its forms” (Goal 1) and “Promote peaceful and inclusive societies” (Goal 16).

The Catholic Church also underscores “the relation between religion, society and culture”, and valorises the contribution of religions to the cultural heritage of humanity (Catholic leader num. 3).

The Mormons and Jehovah's Witnesses, possibly because of their minority position in Catalonia, are more concerned about their relation with the society and the institutions. In other words, they use more textual quotes associated with their relation, connection or perception of social, political and media surroundings than the other religious institutions. It also needs to be mentioned that smaller communities perform actions at a more personal than social level. This aspect stands out in the interviews held with the representatives of the Taoist community and the Coptic Church. Certain communities, such as the Bahá'í Faith, Jehovah's Witnesses or the

Jewish communities, put a lot of emphasis on education, given the fact that in their body of doctrine of values and principles, spiritual and doctrinal training occupy a prominent position. The results from the qualitative analysis are in line with those obtained in the quantitative analysis regarding the contribution of the Bahá'í Faith to “Ensure inclusive and equitable quality education” (Goal 4). To the representative of the Bahá'í Faith, “personal and social transformations are parallel processes that are connected” (Bahá'í leader).

In this regard, it is interesting to highlight the entire section Pope Francis dedicates to education for sustainable development in *Laudato si* (Francis 2015: 202–246). A clear example is the *Laudato* schools, *Scholae Laudato*, where students of rural primary schools and secondary schools do agro-technical work together to raise awareness about and care for our common home. In the Islamic world, there are also concerted efforts underway to systematically incorporate ecology into Islamic education (Reuter 2015).

The concept of promoting human rights and peace shows convergences among almost all Christian religions, Jewish communities, Islam, Jehovah's Witnesses and the Bahá'í Faith, while this aspect does not appear as a priority in Eastern religions (Hinduism, Sikhism and Taoism). The Catholic Church reminds us that “Violence cannot be perpetrated in the name of God” and talks about the “the value of each person” (Catholic leader num. 3) in accordance with Pope Francis' words, that no one must use the name of God to commit violence (Francis 2014).

The Muslim communities express the need for union between the different religions so as to promote peace and also to “rescue the dignity of human beings and protect it against economic, political and geopolitical interests” (General Secretary of the Islamic Council of Catalonia). The Mormons explicitly highlight the role of the family when it comes to protecting individuals and their rights (Mormon leaders).

Points of convergence were found regarding promoting equality amongst the major religions present in Catalonia. The quantitative analysis only detects activities from Christian beliefs in this area, especially with women in disadvantaged situations (abused women, women forced into prostitution, etc.). The qualitative research highlights the biblical foundation of equality and non-discrimination, as all humans are created by God and all have the same dignity (Jehovah's Witnesses leader), but also the need to “treat every person equally and fairly, respecting their differences” (Catholic leader num. 3). In this regard, the social integration of immigrants and non-discrimination has been one of the concerns of the religious institutions in Catalonia for many years. The Catholic Church defines itself as “inclusive, not exclusive” (Catholic leader num. 1). The Mormons explicitly mention the aspect of universal brotherhood present in practically all religious sensitivities: “we are all brothers and sisters regardless of race, gender, origin, etc.” (Mormon leaders). With regard to Goal 3, “Ensure healthy lives”, most religious entities promote health in different ways (Figs. 1 and 2). Some promote it by caring for the sick and the elderly, providing help to alcoholics or drug addicts (Catholic Church and Protestant Churches) while the spiritual beliefs of Eastern origin promote healthy food and doing relaxing activities, pilates or yoga. The Christian religions have always considered looking after those who are sick or suffer physical pain as works of mercy recommended

by Jesus (Catholic leader num. 1; Protestant leader). Eastern religions encourage a healthy lifestyle. They consider health is closely related to what we eat and healing is based on our diet. They also associate a simple lifestyle with respect for our natural surroundings and this aspect is related to the environmental dimension. This is what the Hare Krishna community highlights (Hare Krishna leader).

Regarding Goal 12 “Ensure sustainable consumption and production patterns”, most religions promote sustainable consumption through austere behaviours, like avoiding unnecessary material goods and on configuring the relation of economy and ecology for a sustainable future (Tucker and Grim 2001), but in this research we do not find any activity related with this goal. These results do not necessarily mean that religious leaders do not consider this topic in their talks or publications.

The concern about reducing poverty (Goal 1), doing very specific actions, is presented in almost all the religious groups, as they help everybody regardless of their religion. In the quantitative research, this kind of activities is mainly visible in the Catholic Church (totalling 332 different activities) and in the Protestant Churches (129 activities). In the qualitative analysis, other religions clearly show this aspect. The Muslim community stresses the advice of “spending as little as possible” and says that “great spiritual works can be performed using minimum material resources” (Muslim leader num. 1). The Mormons emphasise that in order to reduce poverty people need to be taught how to be self-sufficient (Mormon leaders). The Hare Krishna follows the commandment of their founder telling them to lead a simple life and to avoid accumulating more than necessary. The Sikhs consider “all souls are equal” (Sikh leader). The Catholic Church reminds us of the importance of its social doctrine with respect to business ethics and of creating jobs as specific social contributions (Catholic leader num. 3). The authors that have studied the contributions made by religions towards a more sustainable world stress the vision of numerous religious encouraging a simple, non-consumer lifestyle, appreciating the beauty of the planet (Wolf and Gjerris 2009).

The reality that numerous religious organisations are made up of immigrants also became apparent. Their priority is to help newly arrived immigrants of their communities to integrate at all levels. This is clear in the interviews held with the representatives of the Muslim community (Muslim leader num. 1), of the Orthodox Church (Orthodox leader), the Coptic Church (Coptic leader) and the Taoists, which consists of Chinese people who came to live in Catalonia (Taoist leader). The Christian religions have an immediate awareness of the fact that the beliefs based on the Gospel are the ones that mainly move to action in the field of social cohesion and poverty reduction (Protestant leader). Other religious communities such as Buddhism (Buddhist leader) or Islam (Muslim leader num. 2) highlight the ethical and spiritual aspects of their religions to talk about social cohesion or sustainability. They connect them directly to what characterises their spiritual beliefs or references. Buddhists, Advaita Hinduists and Taoists stress the need of a personal “inner work” of each individual to overcome the crisis in the field of SD (Buddhist leader, Advaita Hinduists leader and Taoist leader), in line with Buddhist practice:

For a conscientious and mindful and compassionate way of life, one could cooperate in stemming the tide of destruction in one's limited way, living more simply, doing whatever is doable in terms of recycling, reusing things, and taking different steps in protecting 'the environment' (Habito 2007).

The Orthodox Churches underscore the need of "the inner experience of loving all things created" and "the capacity of human beings to enter into communion with everything that exists", a skill that needs to be worked on at a personal level (Orthodox leader).

As far as the environmental dimension of sustainability is concerned, the quantitative study shows that religious groups do not have any specific activity directly addressed to promote it (Fig. 1 and 2, regarding Goals 6, 7, 9, 13, 14 and 15). However, the qualitative research tells us that almost all the religious institutions make explicit reference to it and have a considerable interest in this particular dimension of sustainability. Religions see the environmental crisis as a phenomenon in which human beings have acted egotistically, destroying ecosystems without taking into account that it puts people's health at risk, "looking out for their own interests without thinking any further" (Orthodox leader). Technical solutions alone will be insufficient to stem the unravelling of the web of life (Tucker and Grim 2001). If the unsustainable situation of the planet is the consequence of a crisis of values (Berry 1999 and Francis 2015), SD will only be achieved providing profound values education and religions play a key role in this task (Narayanan 2013 and Haluza–DeLay 2014a, b). Religions value caring for the environment and are concerned about it. They commit themselves to taking measures that mitigate the effects of climate change, as set out in the declaration of religious leaders at the COP21 Climate Change Summit.

Our religious convictions, social codes and customs tell us about concern for the vulnerable: climate change is leading to unprecedented ecological degradation, affecting in particular the lives and livelihoods of the most vulnerable populations. It is an irrefutable moral duty (World Council of Churches 2015).

The starting point of the Judeo-Christian tradition is the creation of the world and caring for the planet is therefore a divine commandment: to Jewish communities the *tikkun olam* commandment is interpreted as the need to repair the world starting by oneself and then spreading its beneficial results to others creating a ripple effect (Jewish leader). The Orthodox Churches look for "the fulfilment of the experience of humans in communion with God and the whole creation", and this necessarily implies respecting and loving nature (Orthodox leader). The world surrounding us is the Creator's work, it is a gift from God to humanity and we have to respect it (Jehovah's Witnesses leader). All the interviews done with Jewish and Christian leaders manifest we should be expressing our gratitude to God for natural resources as a natural good that God makes available for our use and the use of other species and the theological imperative to take care of it (Shaefer 2013). The Buddhist community says "nature contains the elements we are made of" (Buddhist leader) and according to Hinduism "all kinds of life need to be respected" (Hare Krishna leader) and they recognise "there is interdependence of all living beings" (Advaita Hinduist leader). Islam highlights the fact that "only the necessary means from nature may be used to

advance towards God” (Muslim leader num. 1). To the Sikh community the life of any animal is important and that is the reason why they are vegetarians (Sikh leader). To the Taoists, the universe consists of “different forms of the same energy” (Taoist leader). Unfortunately, in Catalonia, this ecological concern related to all religious organisations has not yet been turned into specific actions and activities to improve the environmental dimension of sustainability. Several authors show how religion plays an influential role in promoting sustainable behaviour: “Religion also offers a means of experiencing a sustaining creative force, whether a creator deity, an awe-inspiring presence in nature, or simply the source of all life.” (Gardner 2002). The dialogue between science and religions also promotes greater cooperation to solve our planet’s environmental problem (Chuvieco et al. 2016).

The joint work of religions towards SDGs is equally highlighted: In Catalonia, only the Catholic and Protestant Churches have performed a specific task together through Caritas and *Iniciatives Solidàries* (a protestant NGO) so far. It is important for the Jewish communities to show that “the major religions can understand each other and send a message of shared values” (Jewish leader). Most interviewees stressed the task performed by the Stable Workgroup on Religions as an organisation that congregates all the different religions in Catalonia, not so much to talk about their respective beliefs but to help find solutions to daily problems and representing religion in front of society and government authorities (Protestant and Orthodox leaders). The Stable Workgroup on Religions (GTER—Grup de Treball Estable de Religions) encourages a good relation between all the religious communities in Catalonia. On September 21, 2016, on the occasion of the International Peace Day, the religions present in Catalonia represented by the GTER, signed a manifest to build a culture of peace and coexistence as a commitment to promote the SDGs.

4 Conclusions

All the religious entities analysed in this study perform activities, which improve human and social conditions towards a fairer and more egalitarian society. According to the mixed—quantitative and qualitative- research carried out, all the entities contribute with actions as promoting human rights in general, values education, promoting peace and security, amongst others. With respect to the economic dimension of sustainability, on the part of Catholic Church, Protestants, Jews and the Bahá’i Faith, there are contributions to mitigate extreme poverty situations helping with housing, food and/or clothing. Other religions or spiritual associations, such as Hinduism, undertake social initiatives to help economically disadvantaged people in India, but they lack presence and institutional development to do so in Catalonia.

Our quantitative research shows the contributions of religious entities related to environmental sustainability are not visible. When examining the websites of the entities (quantitative research), no initiatives are found concerning the sustainable use of natural resources or to stopping climate change and its effects.

The revision of the qualitative part of the research revealed that although there is a lack of specific activities announced on the websites, environmental concern exists in practically all the religious organisations and there are no major differences between the level of said concern in Western and Eastern religions. The religions of Eastern origin such as Hinduism, Sikhism, Buddhism and Taoism, show great respect for nature, which is considered sacred in a way. How they perceive interdependence between living beings and the abiotic environment is very clear. The Christian, Jewish and Islamic religions have a creationist vision of the world, which invites people to adopt a caring and grateful attitude and to use natural resources, which are considered to be a gift from the Creator, responsibly.

The results of this study shows that the 12 religions of the sample promote activities, which solve human problems like: reducing poverty (Goal 1); ending hunger (Goal 2), ensuring healthy lives (Goal 3), ensuring inclusive and equitable quality education (Goal 4), achieving gender equality (Goal 5), promoting decent work for all (Goal 8), reducing inequality (Goal 10), promoting peaceful and inclusive societies (Goal 16) and revitalizing the global partnership for sustainable development (Goal 17).

This research not confirm the thesis according to which Eastern religions are more concerned about the environment than Western religions, based on a creationist conception (Sarre 1995). The research does not support Lynn White's well-known thesis (1967) either. According to White's theory, creationist religions have a vision of dominion over the Earth that lies at the root of the current ecologic crisis. From the interviews, it is deduced that, to those religions, the dominion over the Earth does not mean one is allowed to exploit it.

In summary, all the religions based in Catalonia promote respectful attitudes towards the environment, but perhaps no initiatives in this regard have materialised as of yet because other entities, such as schools, NGOs and public authorities are developing them. Religions carry out other kinds of activities, of a social nature, to see to the needs of the most disadvantaged. It needs to be mentioned that the religious entities promote more sustainable attitudes through conferences, for instance, but this kind of activities does not appear on the entities' respective websites.

The activities performed by the different religious entities show a great number of similarities and convergences that contribute to promoting human rights, peace, gender equality, health and social cohesion, as we mentioned in the results section of this report. In many cases, they provide social services, essential in order to reach marginalised people or those at risk of social exclusion. Sharing initiatives and activities promoting a fairer and more inclusive society may be an opportunity for the entities and representatives of the different religions to meet and encourage dialogue. Working in SDGs is an opportunity of convergence between people of different religions and joint reflection on religious worldviews may provide guidance to and shed light on building a fairer, more peaceful and sustainable world.

The study—especially its ethnographic part— shows religious entities are often unaware of the fact they are contributing efficiently to SDGs through the numerous activities they promote. Over the past decades, several authors (Tucker 2008;

Narayanan 2013 and Berry 2014) have highlighted the importance of collaboration between civil and religious entities and the endeavour to improve sustainability.

The research carried out corroborates the hypothesis that religious entities do numerous activities to promote peace, social cohesion and sustainability. However, it also confirms they are hardly visible. Through research—in-depth interviews held with the representatives of different religious organisations—it has been possible to obtain a lot more information than what can be found on institutional websites, which means it is both important and necessary to contribute to making the activities visible.

4.1 Limitations of the Study and Future Perspectives

The study on the contribution of religions to SDGs has been possible with a sample of the 12 religions present in Catalonia. The limitations of time and budget have prevented an exhaustive study of the specific contribution of each of the religions to the SDGs. The quantitative analysis has been limited to the information found in a total of 499 websites of the religious entities, in which a total of 2478 activities linked to the SDGs have been identified. This is also a limitation, since not all religious entities still have complete and updated information about their activity on internet. On the other hand, it has not been possible to analyse all the religious entities that operate in Catalonia, but only those that appear in the registry of the Directorate General of Religious Affairs.

The interest of the study conducted during 2015 consisted in knowing the actions performed by the religious entities in Catalonia to contribute towards SDGs and making those actions more visible. A future research could also make visible best practices of religious organisations regarding sustainability and reflections on the beliefs and values those actions are based on may be shared. The human and environmental benefits of adopting sustainable behaviour may also be analysed. Future research might continue to make this task visible, and to reflect, share and spread the knowledge about the contribution that religions make to each specific goal of the Agenda 2030 (UN 2015).

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Myth, Cosmology and the Sacred: Transformative Learning as the Bridge Between Worlds



Angela Voss

Abstract Rice University religious studies professor Jeffrey Kripal has defined the humanities as ‘consciousness studying consciousness in the reflecting mirror of culture’ (2014: 368), and indeed he sees the role of intellectuals as a ‘collective prophet’ (2017: 302) who can potentially see behind the veil of our separatist, egoistic illusions and wake up an awareness of our common humanity. This paper focusses on how Kripal’s vision informs the Masters programme in Myth, Cosmology and the Sacred at Canterbury Christ Church University, for in our view, values of sustainability are intrinsically connected to understanding what it means to be a human being making meaning in the world. The MA subscribes to Kripal’s call for a broader perspective which goes beyond the ‘exterior’ world of empirical and historical information to reflect on the question of human cognition and experience—that is, on our *own* nature as interpreters of culture and creators of myth. The MA programme is situated within a transformative learning context, and here the programme director explains its rationale and ethos. Examples of pedagogical methods are described and student feedback included. With reference to key authors, the foundations of the programme in holistic and integrative models of knowing are discussed, together with the importance of calling on esoteric and wisdom traditions for hermeneutic frameworks. Such frameworks combine *mythopoetic* and spiritual insight with critical and reflexive understanding, and thus bridge the subject-object split of the Western Enlightenment which still dominates our intellectual discourse. Finally the programme is linked to sustainability values, and positioned in the context of a new vision of integrative learning for our times which fosters connections between humans, earth and cosmos.

Keywords Transformative · Myth · Creativity · Hermeneutic · Consciousness

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1 Introduction

The author has been programme director of the MA in Myth, Cosmology and the Sacred at Canterbury Christ Church University since September 2014. The programme is extremely popular, with currently (March 2018) 47 students registered over 2 years. The unique focus of the programme is the study of esoteric and spiritual traditions and practices, mythic and symbolic narratives and discourses of the paranormal and sacred through the lens of transformative learning methodologies, so that both ‘learning about’ and ‘learning from’ these so-called ‘non-rational’ knowledge bases are interwoven—a three-way interplay between cultural history, hermeneutics and reflexivity. The MA contributes to the development of holistic and integral thinking within the philosophy and practice of education, and is now at the heart of a growing community concerned with integrating holistic and spiritual dimensions of knowing into rigorously academic frameworks. The programme is situated at the cutting edge of contemporary initiatives which aim to raise consciousness around issues of sustainability and wisdom, initiatives which transpersonal psychologist Richard Tarnas calls ‘heroic communities’ (Tarnas 2013) as they deliberately foster values which run counter to mainstream materialist and bureaucratic thinking (Voss and Wilson 2017). The heroic stance defines a moral vision which fosters the individual’s courage to speak out for change, and in this sense, is in service to what Joanna Macy and Molly Brown have called the ‘Great Turning’ (in O’Sullivan 2012: 165). The Great Turning involves a necessary ‘shift in perception of reality, both cognitively and spiritually’ and requires creation of institutional forms rooted in deeply held values, which are ‘both very new and very ancient, linking back to rivers of ancestral wisdom’ (ibid.)

Reflexivity is central to our methodology, as we encourage students to turn the spotlight back on themselves as it were and critically assess their own assumptions, agendas, beliefs and understandings. For Jeffrey Kripal, reflexive ‘re-reading’ in the fields of religion, the sacred and anomalous experience requires ‘something more’ (2014: 367) than either faith or reason—a third position or ‘both-and’ mode of thinking in which the full spectrum of human experience can be put under examination in a new way, with more awareness of our biological, historical, social and economic (and I would add, epistemological) conditionings (Kripal 2014: 392). Kripal defines this as a ‘third classroom’ space in which binaries are transcended in a further epistemological move which he calls ‘gnostic’ (2007: 22–24; 2015). The author is in complete agreement with his view that

[There] are types of understanding that are at once passionate and critical, personal and objective, religious and academic. Such forms of knowledge are not simply academic, although they are that as well, and rigorously so. But they are also transformative, and sometimes soteriological. In a word, the knowledge of such a scholar approaches a kind of gnosis (Kripal 2001: 5).

The term ‘gnosis’ refers back to the underlying premises of Western esoteric philosophy, as well as depth psychology, both of which place supreme value on a model

of human consciousness which participates in, and mirrors, a greater whole—and may ultimately achieve union with this ‘one world’ or universal mind:

There is a dimension of human experience that is not external to us in the sense that it can be directly and tangibly grasped. Rather, it is within us, but the word ‘within’ must be understood metaphorically. It reflects a depth in us as human beings and also a depth of the universe. Perceiving one, we perceive the other. (Progoff 1973: 13)

This statement suggests that human beings’ inner worlds correspond to how they perceive their outer worlds, and indeed play a vital role in creating their perceptions of what is real and true. The MA makes extensive reference to these holistic metaphors that underpin pre-Enlightenment philosophy (e.g. Platonic, neoplatonic, esoteric), as they illuminate the challenges that the over-dominance of the rational, critical mind may bring to our sense of the sacred, the mythopoetic and the imaginal (Corbin 1976). In this we find inspiration in both Iain McGilchrist (2009) and Kripal (2001, 2007, 2014), whose work promotes the role of the *metaphoric* in transcending the literality that so pervades our culture.

This is the ethos which underlies the MA, to support both a critical, analytic approach to the curriculum, *and* a hermeneutic one of meaning-making and reflection (Struck 2004: 3). Here are some of the ways in which this is achieved.

2 Pedagogy

The pedagogy of the programme is grounded in both entering and understanding *mythopoesis*, defined by educator L. M. English as ‘the ground of our being, which moves us out into the world of human experience’ (2010: 170). She adds that to be mythopoetic is to be ‘spiritually grounded’, and that a spiritually grounded teacher engages with tradition but also sees how our many forms of traditional wisdom have been subject to cultural overlay and interpretation. The MA’s integrative approach is achieved through applying both reflexive and critical methodological frameworks to a mythopoetic epistemology through a variety of teaching methods and assignments.

The MA team¹ has a broad and deep knowledge of classical philosophy, Western esoteric and wisdom traditions and practices, theology, music, art and culture, hermeneutics, ancient and modern divinatory practices, ‘new age’ culture (including studies of the paranormal), and reflexive research practice. We are not interested in a traditional ‘etic’ academic approach to teaching these rich subjects, but wholeheartedly believe in the power, and necessity, of ‘soul-learning’ in tandem with critical discernment (Dirkx 1997; Hunt 1998; Tisdell 2008; Willis et al. 2009). This requires a continual moving back and forth between subject matter and personal meaning, and in this sense, we are ‘both extending knowledge, and illuminating self’ (Moustakas, 1990: 11). We appeal to students’ own deep sense of connectivity and relationship with whatever they feel, or intuit to be ‘the bigger picture’, and engage them in a

¹Currently Dr Angela Voss, Dr Geoffrey Cornelius, Dr Simon Wilson, Dr Wilma Fraser, Louise Livingstone and John Chacksfield (research students).

critical exploration of their own mythic narratives, assumptions, and ways of learning through a variety of reflexive and creative techniques which stimulate and encourage different modes of knowing. These include lecture and seminar format (involving critical debate and argument based on texts, theories, traditions and practices); class and small group discussion and reflection on specific questions related to personal histories or cultural/social/global concerns, personal reflective journaling and sharing, creative project preparation, performance and reflection, creative workshops, and critical essay and dissertation writing. We pay particular attention to how each individual student learns, using intuitive techniques and exercises (e.g. in Anderson and Braud 2011; Fabbri and Lunari 2010), creative collage, and active imagination techniques (Angelo 2004). Students reflect on their learning processes in their Learning Journals, which they share with their peers, and in their Creative Project Review. The four formal essays and dissertation provide the opportunity to engage more fully with the course material through historical, cultural and textual research in an area of their choice.

The MA has always been resistant to an instrumental or consumer approach to education, and one of its challenges is how to marry an imaginative, integrative and often deeply personal set of values to a systematised agenda of aims and outcomes which is often counter-intuitive with respect to the kind of open-ended enquiry the approach entails. In terms of Kripal's model, we encourage an 'initiatory' approach to learning which values leaping into the unknown over consuming neatly packaged facts (Kripal 2014: xii). It is not easy to make a stand against the current model of higher education, where 'one size fits all' and where aims and outcomes take precedence over the unique relationship between each student and each tutor. Indeed we are not so concerned with 'evidence-informed' approaches as with authenticity of voice, responding to student interest, passion and enthusiasm with our own love for our subjects, and we aim to kindle their desire for learning (Voss 2009, 2017). Drawing on interdisciplinary scholarship that promotes these qualities (in religion, philosophy, esoteric traditions, consciousness studies as well as transformative learning literature), we aim to create a soulful learning environment where critical thinking serves a deep sense of the mythic, the imaginal, the intuitive ground of knowledge (McGilchrist 2009).

Our learning community is diverse, the age range extending from 23 to 76. Most students are mature professionals returning to study for personal growth and professional enhancement—very few, if any, are concerned about the MA as leading to a specific career. In this sense, the programme is an example of education for its own sake, embracing the values of traditional adult education where developing deeper self-knowledge is understood as an enhancement to any career. As examples of intuition-led learning, we cultivate research skills through various exercises including meditation on inner 'adversaries and allies', working with 'metaphors of knowledge' cards to generate reflection on the research question, and active imagination visualisation of key source material (Anderson and Braud 2011; Fabbri and Lunari 2010). Here are some of the students' responses to these exercises:

- 'I think the divination exercise was very useful, by presenting a mirror to our question about the dissertation. It is a very imaginative way to engage with the subject matter, a perfect illustration of the ethos of this MA.'
- 'Teaching methods of allowing space for intuitive exercises are very effective. I enjoy the balance between theory and the imaginal. It opens the door for you to also guide yourself to the answers and material being taught. I always enjoy the structure of the day as well. It feels like a safe space to learn and explore.'
- 'My experience of today's seminar was positive and encouraging. I enjoyed the 'embodied' methods used to tap into creative and reflexive ways of approaching the material. Angela's method and delivery of teaching was upbeat and engaging, and also encouraging and open.'
- 'A very refreshing way to approach a process of entering into dissertation working. What could be taken as a very dry and laboured process was entered into in an engaging and provocative way which has given me much to contemplate as I begin to plan my work'.
- 'Allowing space for different points of view or approaches and opinions to be expressed and integrated. Showing a deep knowledge of the subjects we are dealing with. Allowing space for discussion. Use of interesting and engaging materials. Showing personal involvement in the topics/subjects. Appropriate use of examples to explain ideas. I'm quite happy and satisfied.'
- 'Before the lecture, I had a lot of anxiety and pressure about my dissertation, but the lecture today helped me to reduce my fear and connect my heart to explore possible topics. Going back to my own experience and my images is an amazing way to find the passion to write my dissertation, which would make that activity joy rather than suffering. Finding the topic from my own heart could help me to deepen my self-knowledge and understanding of my topic.'

3 Transformative Learning

The programme is situated firmly within the framework of the particular branch of transformative learning defined by John Dirkx (1997) as 'soul work' (as opposed to the social reform dimension initiated by Paulo Freire and others). Essentially, contemporary educational theorists in this field emphasise an integral approach which acknowledges the severe limitations of traditional 'objectivity' by prioritising the subjective life of the learner. As Arthur Zajonc and Parker Palmer point out:

Contrary to the objectivist myth that has dominated higher education, the knower cannot be separated from the known for the sake of so-called objectivity. Given what we now understand about the mutually influential relationship of the knower and the known, objectivism is no longer a viable way to frame knowing, teaching or learning, or the true meaning of objectivity, for that matter. (Zajonc, Stribner and Palmer 2010: 27)

We also support the view of educationalist and poet Peter Abbs, that education should cultivate 'wholeness of being' through including all elements of the human

psyche: ‘thought, feelings, sensation, intuition, imagination and instinct’ (Abbs 1996: 42). For Abbs, the arts are best equipped to contribute to this process, and working experientially with music and image is an integral part of our programme.

We draw on the intuitive and heuristic methods of inquiry mentioned above, whilst adapting them to the contexts of our course material, much of which is historical, cultural and metaphysical. In this way, we build bridges between *methods* and *content*. To apply methods of transformative learning (self-reflection, auto/biographical narrative, mythopoetic and creative forms, artwork and performance) to the subject matter of wisdom and spiritual narratives, traditions and practices, allows students to deeply connect their learning with their own lives, professions and intimate concerns. ‘Method is enacted metaphor’ states depth psychologist Robert Romanyshyn (2013: 212), and another important mentor for us is the transpersonal psychologist Rosemarie Anderson, who defines such intuitive inquiry as ‘an epistemology of the heart that joins intuition to intellectual precision in a hermeneutical process of interpretation’ (Anderson 2004: 308). The rationale for such an approach is rooted in McGilchrist’s research on the appropriate relationship of these two forms of human knowing, characterised as brain hemispheric functions. McGilchrist’s seminal 2009 book *The Master and his Emissary*, provides a cultural context for the vital necessity of the restoration of myth and metaphor in our cognitive repertoire. He describes a healthy human mind as being able to take a stand beyond the dichotomies of ‘reason’ and ‘intuition’ (characterised by the metaphors of left and right brain hemispheres) and consciously create a relationship between them which is mutually supportive and nourishing. The most important factor, however, lies in the balance of power, for McGilchrist demonstrates what two thousand years of esoteric wisdom has always known—that rational thinking is rightfully the *servant* of a much deeper, broader and imaginal understanding of reality, and ultimately it must honour its master. In a healthy co-operative function,

what is offered by the right hemisphere to the left hemisphere is offered back again and taken up into a synthesis involving both hemispheres. This must be true of the processes of creativity, of the understanding of works of art, of the development of the religious sense. In each there is a progress from an intuitive apprehension of whatever it may be, via a more formal process of enrichment through conscious, detailed analytic understanding, to a new, enhanced intuitive understanding of this whole, now transformed by the process that it has undergone (2009: 206).

4 The Curriculum

The mediator between modes of knowing is identified as the imagination (McGilchrist 2009: 199), and an aspect of our unique approach is therefore based on the power of the creative imagination to straddle the worlds of intuitive insight, and ‘meaning-making’ which involves critical reflection and discernment. Creative activities (such as drawing in Canterbury Cathedral, psychogeographical walking,

collage and drama) are always followed by critical reflection on learning processes. Here are four examples of creative workshops:²



Creative Workshop 1: *Learning through art*—A project aimed to illustrate the processes of Renaissance natural magic through making talismans. In this workshop, participants experimented with creating images related to their own astrological birthcharts, having studied the neoplatonic principles of sympathetic resonance through the treatise of Marsilio Ficino, *How to fit your life to the Heavens* of 1489. This enabled them to gain insights about aspects of themselves they wished to develop or heal.



²All photographs are author's own with permission from participants.

Creative Workshop 2: *Learning through myth*—A project aimed at entering into the drama of the ancient mystery traditions to understand the role of mythic ritual. Here, participants re-enacted the myth of Demeter and Persephone using a contemporary play written by one of the students. This enabled them to enter the emotional dimensions of the story and gain insight into the central purpose of the mystery rite—to create a cathartic experience of the universal meaning of the myth and to gain a deeper understanding of the soteriological aspects of the ritual itself.



Creative Workshop 3: *Learning through active imagination*—discussing experiences of active imagination through drawing in the Cathedral. In this workshop, the participants study Jungian theories of active imagination (Chodorow 1997) and then find an image in the cathedral which ‘speaks’ to them in order to construct an inner dialogue and observe any insights which arise. They may draw, paint or write poetry about this experience and reflect on its capacity to reveal ‘unconscious’ elements of the psyche.



Creative Workshop 4: *Learning through embodiment*—recreating Botticelli’s *Primavera* painting to understand its symbolism. A primary emphasis of the MA is on

restoring a 'symbolic attitude' by encouraging the intuition and expression of deeper meanings in symbolic and sacred texts and images. Here, participants create a tableau of Botticelli's painting and discuss their embodied reactions to the characters, prior to studying the neoplatonic and mythic symbolism underlying its original creation.

The Creative Project assignment includes a creative production (non-assessed), which is then subject to a critical Review which evaluates the production in terms of process, reflexivity, theory and new insights (Barrett and Bolt 2007). Examples of projects include paintings, poetry, ritual enactments, sculpture, storytelling, tapestry, collage and fiction. Many of them have a strong emphasis on sustainability and education, for example, 'Bringing Feminine Wisdom into Secondary Religious Education' involved the devising of a syllabus for the secondary school RE curriculum which highlights female wisdom in a variety of religious traditions and therefore draws attention to the current over-emphasis on patriarchal themes. 'The Gordian Knot Oracle', created by a student who is a professional homeopath, used a hermeneutic framework drawn from the theological 'four senses of interpretation' to aid in homeopathic consultations. The student devised a method for her clients to understand the underlying allegorical, symbolic and potentially spiritual factors contributing to their health issues. As a final example, 'The Mighty Oak Tree' is a book for junior school children (key stage 2) which explores the oak tree through multiple perspectives—botanical, mythic and experiential—in order to introduce children to a variety of ways of understanding and participating in the natural world.



In the Learning Journal Write-up, students' ongoing sharing of personal reflections on the course material is organised into a thematic submission, and the dissertation may be written on a relevant topic of the student's choice. The taught syllabus includes coverage of broad topics which offer students a panorama of themes from which to select essay topics, for instance mythic thinking and the Platonic tradition; theories and methodological approaches for the study of the sacred; history, theory and practice of the symbolic imagination; divinatory and oracular traditions, and the relationship of spirit and psyche (including rituals of initiation, sacred geography and mythic landscape, paranormal experience and theories of the unconscious). Students are encouraged to approach subjects generally considered 'taboo' in modern

society, such as spiritualism and afterlife studies, divinatory and magical practices, and instances of paranormal or anomalous encounters or events. Following Kripal (2010), we hold that a new methodology of the imagination is required to enter these topics in the light of the extraordinary capacities of human mind, which appears to participate in a wider, broader and more mysterious field of consciousness than that of our consensus reality.

The success of the programme in promoting values of transformation is reflected in the comments of the programme's external examiner:

The entire programme is an instance of innovation. There is much talk in educational theory of transformative education. This course gets closer to the reality of that concept than perhaps any other I have seen. Within the programme I would again mention as instances of especially good practice: (1) the quantity and quality of feedback on assessed work; (2) the pervasive application of principles of transformative learning, and the variety of teaching and assessment methods involved in this, including some highly innovative essay questions; and (3) the particular way in which the Creative Portfolio Review and the Learning Journal have been designed to enable both creative expression/exploration and robust assessment; and I would add (4) the overall holistic design of the course, in which the different modules cumulatively reinforce one another and build capacity for undertaking the dissertation.³

At this point I would like to include some testimonials from past students on their learning experiences, to demonstrate how forms of transformation have occurred in practice.

5 Student Testimonials

- 'The MA ... works on several levels to raise awareness and provide opportunities for self-revelation. The MA offers a grand feast of ideas, images, music and sacred experiences to support different ways of knowing and foster an integrated intuitive intellect. I am also experiencing the joy of creative empowerment and look forward to the creative project. This MA certainly opens the door for potential psycho-spiritual transformation!'
- 'More than an educational experience the MA has been a journey for me. It has opened so many new pathways, that I hardly know where to go from here: the possibilities seem endless.'
- 'Angela, Wilma and Geoffrey did a fantastic job of structuring the programme content and of helping us as students to immerse ourselves fully in it to great transformational effect—a model for adult education.'
- 'Angela and Geoffrey were wonderful teachers and guides; their support helped me to learn more deeply than I thought possible and to examine the course content in new and creative ways for my learning benefit. This course was truly amazing—transformational, life-changing, inspirational and a joy to attend. I look forward to being an active member of the alumni group.'

³External Examiner's Report, November 2015.

- ‘The quality of the teaching of this MA convinced me to enter postgraduate research with the same teachers at CCCU. The learning process of the MA was truly transformative, generating an understanding in depth while retaining a clear overview over a vast field of knowledge.’
- ‘The content proved to be as broad as it was wide, enabling, in my impression, all the individuals in the cohort to pursue in depth their particular bent of the programme. This in turn enriched my experience through seeing the material through the eyes of the others.’
- ‘MA has been a life changing experience. It has introduced me on a deep level into the study matter.’

6 Sustainability

In our view, sustainability is not just about creating a new vision for environmental concerns and the health of our planet, but must include a new vision for cognitive health through revisioning educational principles to include the full spectrum of human ways of knowing. This includes the imaginal, the enchanted, the magical, the mysterious and the ineffable—qualities evoked by dream, by myth, by symbol, facets of human experience long rejected by the supremacy of rational knowing in our schools and academies (Voss and Wilson 2017: 15). For Plato, the philosophical path (towards a love of wisdom, or *Sophia*) was instigated by awe, when looking up at the canopy of stars above our heads, because the desire to know was intimately connected to the desire to return to the heavens. Desire, from the latin *de-sidere*, means ‘from the star’, a beautiful evocation of our natural affinity with the cosmos that gave us birth. To evoke this deep emotion means to evoke a sense of love and protection for our natural and cosmic environment which reaches far deeper than mere ethical or moral obligation or duty. But it needs to be taken seriously as a primary mode of human cognition, not a sentimental ‘add-on’ to our all-powerful rational minds. There is a deep sense of continuity and interplay in pre-modern conceptions of the cosmos in which the soul or life-principle pervades the entire creation from transcendent intelligences to the stones under our feet, a continuity which was ruptured in Enlightenment cognitive dualism. It is our view that such a holistic vision needs to be reclaimed, but in a new way. The contemporary philosopher Joseph Needleman points to the value of understanding the ancient model as a *symbolic* evocation, seen through a different mode of consciousness. In this way, it reveals the cosmos as what ancient writers call the higher part of the soul, which transcends and yet encompasses the more limited realm of human thought. We return to the esoteric way of seeing, where external reality is also internal, where the human soul is a microcosm with its own internal ‘spheres’ of being which ‘need to be peeled back, or broken through one by one along the path of inner growth, until an individual touches in himself the fundamental intelligent force in the cosmos.’ (Needleman 2003: 21).

In short, we return to the world of imagination, a world where nature is seen as having far more than instrumental or aesthetic value. It is seen as a sacred domain, the

expression of a divine creative principle, to be honoured, contemplated and nurtured. A contemporary movement which is concerned with articulating the unity of humans and cosmos is ‘Green Hermeticism’ (Lamborn et al. 2007), which understands the essence of humans and nature as a ‘primal revelation’ (34) in which all elements of creation reflect an underlying divine principle. Nature in this sense is an extension of consciousness (116) to which we are intimately related—but through an ‘intelligence of the heart’ (117) rather than our rational minds, which tend towards analysis, division and objectification.

This view does not need to be confined to esoteric philosophy; for instance Edward O’Sullivan talks about the importance of an integral development within education which ‘links the creative evolutionary processes of the universe, the planet, the earth community, the human community, and the personal world’ (O’Sullivan 2012: 170). He contributes to a growing scientific understanding that consciousness is not generated by the human brain, but is a universal force in which we participate together with all other life forms. This ‘filter theory’ of consciousness (see Kripal 2014: 390–2) gives rise to the possibility of a true growth in awareness and perception of our place in a vast web of being, and our responsibility to the whole. As O’Sullivan says,

[Integral development] must be understood as a dynamic wholeness, where wholeness encompasses the entire universe and vital consciousness resides both within us and at the same time all around us in the world. The endpoint of all this moves toward a deep personal planetary consciousness that one can identify, at a personal level, as ecological selfhood.

Another important writer who straddles the disciplines of philosophy and science is David Fideler, who in his *Restoring the Soul of the World* (2014) calls not for sustainability, but for ‘ecological restoration and regeneration’ (236) to repair the damage already done to planetary biosystems for future generations. He too calls on the wisdom of the ancient world for whom nature possessed ‘a sacramental, living dimension’ (84), before the primacy of the transcendent, spiritual realm took root via Western Christianity (84–5). In the author’s view, it is vital to reconnect to an animistic sensibility if we are to heal the split which became extreme in Cartesian philosophy—for ‘Descartes would not tolerate the idea of living nature, cosmic sympathies, or vital resonances between spirit and matter’ (Fideler 2014: 117). As McGilchrist would say, the ‘restoration’ is also that of ‘right hemisphere’ knowing, which can see the whole as well as the parts, and which engages the imagination in the act of apprehending reality. This act engages the whole being in the full presence of life, rather than representing it, second hand, as a mental concept.

7 Conclusion

What might be the limitations of the MA’s approach? As with any programme of study, its qualities derive from the strengths and weaknesses of its tutors and researchers, and it might be argued that the core ethos of the tutor team goes against the grain of much contemporary thinking about the function of education in terms of

employability and training, as well as challenging the relativism of postmodern value systems. We do not have expertise in the areas of social science, social justice, politics, equality and diversity or teacher education, and therefore cannot offer a comprehensive view of how our visions for change might be concretely implemented within policy-making structures. However, our Learning Journal method, and our creative workshops which are deliberately designed to foster integration between the ‘two sides of the brain’ and encourage lateral thinking, would enhance *any* educational environment and stimulate imaginative engagement with a wide range of curricula.

The author hopes to have demonstrated that connecting to the imagination as an interior journey of discovery (and re-merging with an enhanced critical awareness) has a profound effect in developing human beings’ relationship to their wider community and the world, and will necessarily inform any social action they undertake. Perhaps most importantly, restoring a hermeneutic of the symbolic in education [i.e. cultivating Jung’s ‘symbolic attitude’ (Jung 1977)] could lead to a reevaluation of therapies and practices which are often condemned or ridiculed by a mainstream consensus, yet which hold profound potential for healing self and others. These might include practices of alternative medicine, astrology and other forms of divination which restore an imaginal connection to the cosmos and establish the role of intuition and ‘sixth sense’ as a basis for rational explication and interpretation (Cornelius 2003, 2010). The author of this paper has been both an academic and astrologer for thirty years, and has experienced on innumerable occasions how interpreting the world *as metaphor* can result in insights which awaken both a deep sense of the sacred, and of participation in a shared moral responsibility to raise conscious awareness of the dangers of literalism, which often result in conflict and deadlock if not violence and destruction.

The modern ‘new age’ movement, in all its facets, is certainly a response to the alienation and mechanisation of the natural world, the problem is that so much of it is also alienated from deep intellectual engagement and communal moral responsibility. On a final note then, our MA programme seeks to understand the impulse behind the growing desire to engage with ‘spirituality’, and to consider what can be gained from the powerful metaphors of our pre-modern traditions and philosophies in the service of O’Sullivan’s ‘ecological selfhood’ and Fiedler’s ‘restoring the soul of the world’. We believe that inner transformation and the cultivation of wisdom naturally results in a growing sense of responsibility to our mother planet as we are all participating in some ‘other’ greater than ourselves. It is this ‘other’ which sustains all living things and which human beings, at their highest potential, may also recognise as residing at the core of their own souls.

To end on an optimistic note, there are a growing number of educational initiatives in the UK with similar concerns, recognising the vital importance of revisioning academic perspectives for a sustainable future. These include the postgraduate programmes in Holistic Science, Myth and Ecology and Ecology and Spirituality at Schumacher College, Devon; the transformative learning programmes of the Aleph Trust; the courses in Transpersonal Psychology at Leeds Beckett and Northampton Universities, the Sophia Centre at the University of Wales, and the postgraduate practice-based programme at the Prince’s School of Traditional Arts. Here at Can-

terbury Christ Church, a BSc programme in Human Development: Mind, Body and Spirit is due to recruit for September 2018. All these initiatives signal a growing demand from students of all ages for a more interdisciplinary and holistic approach to the full spectrum of human ways of knowing, and therefore contribute to the academic vision of a sustainable future.

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‘Enabling Transformative Urban Development for Integral Sustainability: A Case for Tapping the Potential of Sri Aurobindo’s Philosophy in Planning Practice and Theory’



Christoph Woiwode and Lalit Kishor Bhati

Abstract With Habitat III the UN decided on a New Urban Agenda to address social, economic, and environmental challenges of the twenty-first century. In spite of significant criticism, this programme of action remains largely without a profound revision of current approaches that would question and change the direction of urban development more radically. This paper approaches the inner dimensions of urban development towards sustainability from an integral perspective, for this permits an explicit consideration of spirituality in the urban context. By foregrounding cultural and human conditions of inner change within an urban(ising) context, this perspective intertwines the humanities with the complex challenges of sustainable urban development. Based on Sri Aurobindo’s teachings, it opens an entry point to inform a drastically different praxis and theorisation of urban transformation. Sri Aurobindo may be seen as a multi-disciplinary thinker on spirituality, philosophy and values change who had the unique gift to bridge the western scientific tradition with his Indian spiritual heritage. This can be related to contemporary neo-integrative and similar theories that accommodate spirituality in their understanding of global challenges. On this basis, the article further discusses in the final section contemporary urban planning theory—which has been somewhat naïve and negligent in exploring the vast potential of spirituality, yet could provide a very subtle, humane and converging framework with which population could relate to. By doing so, this paper contributes to the wider debate of global urbanization and sustainable development.

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One hears tell that humanity has always been in crisis but that it has always found means to escape. Formerly, that affirmation was true. Today, it amounts to a lie, because for the first time in its history humanity has the possibility of complete self-destruction, with no possibility of survival. This potential self-destruction of our species has a triple dimension: material, biological, and spiritual. (Nicolescu 2002: 6–7)

1 Sri Aurobindo, Global Crises and Urbanization

‘At present mankind is undergoing an evolutionary crisis in which is concealed a choice of its destiny; for a stage has been reached in which the human mind has achieved in certain directions an enormous development while in others it stands arrested and bewildered and can no longer find its way’ (Sri Aurobindo 2005: 1090).

Written by Sri Aurobindo between 1914 and 1919, this statement does not seem to have lost its actuality. In his principal work of philosophy ‘The Life Divine’, Sri Aurobindo presents his thesis on the salience of consciousness evolution as he recognizes a crisis of humanity. Nearly a hundred years later, contemporary scholars have similarly identified a multi-dimensional crisis or a ‘crisis of crises: many breakdowns happening simultaneously throughout our entire environmental and socioeconomic system, and on a worldwide scale’ (Tibbs, cited in Brown 2006: 368) that affects core areas of human existence across society, environment, economics and culture (e.g. Randers (2012) Scharmer (2009) but also Vedantic scholar David Frawley (2006) and Pope Francis (2015) in his encyclical letter *Laudato si*).

As a consequence, there is an increasing interest in existential notions of the ultimate reality and the meaning of our human existence which is visible in a resurgence of religion and spirituality. Thus Hartwig and Morgan (2012: 1) note

The contemporary concept of spirituality is one that exceeds its origins. [...] it has become an expanded concept. In its most interesting incarnations it addresses in various ways the fundamental human need to find meaning in reality, to connect emotions and reason, to find value in being and to discern connections through experience. [...] These have become urgent questions because humans have proved themselves an intelligent species that has been content to live in a systematically stupid way. That stupidity has extended from the reproduction of economic poverty in an age of techno-scientific abundance to the construction of ways of living that are personally and collectively corrosive as well as environmentally destructive. Rejecting this impoverished thinking is leading many to turn to a wide range of sources that claim that reality is in some sense ‘enchanted’. [...] All emphasize that how we live is a practical problem that in turn is indicative of, and should be guided by, relations to ultimate reality.

On the one hand, Sri Aurobindo’s philosophy connects and informs contemporary (neo-)integrative theories and thought, while on the other hand, due to its forward looking perspective of wo/man as an active agent in this transformation his theory that is firmly rooted in his own spiritual experience, is also of interest to futures studies

since he presents an evolutionary vision of humankind. In this essay we emphasize these aspects of change, evolution, transformation, and how they may be achieved based on Sri Aurobindo's teachings with a view to sustainable urban development.

Our approach to spirituality and sustainability for transformative urban development is integral, which in the broadest meaning refers to an ideal of not excluding any kind of knowledge humankind has at its disposal in our times. Sri Aurobindo is one of the first modern (twentieth century) thinkers who crossed this bridge by bringing together ideas of scientific evolution of the West with the philosophical traditions of consciousness and spiritual development of India. Accordingly, this paper builds on previous conceptually oriented studies in this area centring on the nexus of spirituality, the urban condition, climate change and sustainability (Woiwode 2012, 2013a, b, 2015, 2016) as well as an engagement of both the authors in the township of Auroville in South India, where especially one of us (Bhati) has extensive practical application in the field. From this context arise also the limitations of this study that is foremost not an empirically grounded but an explorative study discussing the potential of Sri Aurobindo's teachings and philosophy for a culturally driven sustainability transition. There has been the argument that Sri Aurobindo's is not a religiously neutral philosophy (McIntosh 2007), which would prevent many from accepting it as a theoretical model applicable in other cultural contexts. Neo-integrative approaches, being much more aware of this shortcoming, attempt to conceptualize a secular spirituality.

The idea of the evolution of consciousness, including the notion of a pro-active human guided 'development of consciousness', is at the core of Sri Aurobindo's philosophy and spirituality. Yet it is also key to the sustainability transformation of individuals and collectives (societies) if we want to perform a profound cultural paradigm shift that will take us far beyond current notions of sustainable development. From Aurobindo's perspective, humankind is no longer able to cope with the dramatic development of outer life without an inner change. By virtue of this realization, he departs fundamentally from traditional paths of yoga,¹ for his integral yoga "... aims at not only the liberation of the individual soul but also the transformation of earthly life" (Dalal 2012: xv) in form of a life divine.

Cities and human settlements are the cradle of civilisation. They also seem the largest systems mankind has ever created. Cities are not only the providing platform of different possibilities, facilities to support human life and activities, they also act as generators of dialogue. They symbolize and support human aspiration to come together and forge a collective living experience. This process of a continuously urbanizing world appears to be an unstoppable chain reaction which is evolutionary in nature, a feature of urbanization and cities noted already a hundred years ago by urbanist and planner Patrick Geddes, a contemporary of Sri Aurobindo, who also happened to have lived in India.

Historically, cities have been coming into existence to fulfil and serve the purposes of 'spirit and need of the time'. But a city, at any given time, holds and shares an accumulative, holonic experience of transcending and evolving towards new futures.

¹The literal meaning of *yoga* is 'union', generally understood as the union of the individual soul with the universal self.

Cities may be seen as the real-life labs on super macro-level, operating with wide ranging and self-evolving principles of ‘diversity, freedom, exchange, creation, innovation, convergence’. Unknowingly or knowingly, they may act as a base platform for people to create and foster Human Unity through the dense and complex layers of diversity.

In this paper, we explore Sri Aurobindo’s wide ranging spiritual experiences and teachings, philosophy and psychology to understand inner transformation and its potential for urban sustainability planning. We look at him as one extraordinary thinker with a social and political vision that is as timely today as it was then, with tremendous potential to inform theories of change and transformative action towards sustainability. From his point of view of inner transformation, even though the pathway of change towards sustainable societies begins essentially with a cognitive challenge comprising values, worldviews, attitudes and behaviours, it cannot end there. It must progress further into the deeper realms of human consciousness. These dimensions of human life profoundly inform how we perceive the world and our environment. Environmental humanities thus are well placed to investigate cultural-spiritual framings of change and how these relate to sustainability. Therefore, we review the concept of sustainability at the outset, followed by a cursory outline of Sri Aurobindo’s teachings and philosophy, then relating Integral Yoga to contemporary integral theories and scholars, to finally discuss contemporary directions of urban planning and development.

2 Sustainability Revisited

Contemporary notions of sustainability are largely of socio-technical nature, including socioeconomic systems. This is exemplary in both most recent global policy frameworks relevant to our topic, the ‘2030 Agenda for Sustainable Development’ comprising 17 Sustainable Development Goals (SDGs) adopted in September 2015 (United Nations 2015), and the ‘New Urban Agenda’ adopted by the United Nations in October 2016 (United Nations 2017). Most of these technical policy documents fall short of devising visions and action for profound systems changes including mental shifts. Instead they ignore the cognitive and psychological aspects and challenges of genuine transformation and hence the depth as well as the complexity of cultural change in terms of values, worldviews, ethics, and the groundings these aspects of human culture have in religion and spirituality of human existence.

In contrast, there exists a significantly growing body of literature (and praxis!) exploring complex links between spirituality, inner transition, ecology and sustainability which still remains on the margins of academic debates—in Europe²—as it is not widespread and generally accepted by most scholars and academics concerned

²It is important to mention that in India for example, academic culture appears much more open to allow for such interaction of the (natural) sciences and technology with religious and spiritual thought.

with sustainable development (Capra and Luisi 2014; Dhiman and Marques 2016; Gardner 2002). In spite of this reserved attitude, it appears that scholars from various disciplines venture into these waters as they gradually experience the limits of the scientific approaches to problem solving, education and learning sensing that religion, spirituality and practices of inner human development do have the potential to contribute to the sustainability transition more profoundly (Oekom Verlag 2016; Smith 2009; Wamsler et al. 2017).

A great transformation and the transition to sustainable societies require a dramatic shift in worldview and values. Many approaches safely remain within the social sciences (WBGU 2011) with hardly any consideration of the inner dimensions of change demonstrating the limited and narrow-minded scope of many scholars in the 'West' or Western educated. In contrast, Integral Theory based on Ken Wilber's work aims to generate a comprehensive approach to sustainable development (Brown 2006) and related issues like climate change (O'Brien 2009) that is more wholistically taking into account diverse worldviews as well as the exterior and interior dimensions of existence as an intrinsic part of development. This truly novel, if not revolutionary framework, if adapted more broadly, can inspire urban planning and development practices (Woiwode 2012, 2013a, 2016) to deliberately include and explicitly work with 'interiority'—feelings, beliefs, worldviews, spirituality—towards a sustainable world. It considers personal transformation as a dynamic, ongoing process of consciousness development, while at the same time working at the collective level of worldview changes.

Ghisi (2008) skilfully presents a future vision of the world by outlining elements of a sustainability transition based on what he calls a 'transmodern, planetary knowledge society'. He argues for a profound paradigm shift towards 'transmodernity'. By claiming that the modernity paradigm is dead he observes that 'the human race is climbing to new levels of consciousness', directly relying on Sri Aurobindo's and the Mother's assessment of humanity. If one wanted to reframe the concept of sustainability in the light of Aurobindo's teachings, 'human unity' or more generally the unity of all being with its interdependent material-physical and non-physical realms would be at the centre. In the following sections we shall attempt to highlight this notion in relation to several other of his ideas such as evolution, consciousness and transformation.

3 Sri Aurobindo's Ideals of a Divine Life and Human Unity

Sri Aurobindo (1872–1950) may be considered a revolutionary and political leader during India's struggle for independence, a yogi and sage, poet, literary critic, political and social theorist, and philosopher. Curiously, due to spending his entire youth from the age of 7–20 in England where he received a comprehensive education at Cambridge before returning to India in 1892, he was an 'accomplished Westerner' (Satprem 2003). Against this background, Aurobindo made a novel effort to understand the traditional wisdom of the Indian spiritual and philosophical thinking from

an evolutionary perspective (Combs 1996: 145). For this reason we will also assess in the next section how Aurobindo can be situated within a lineage of thinkers of the philosophy of evolution (Hemsell 2014) and early proponents of the integral paradigm (McIntosh 2007).

3.1 Meaning of ‘Integrality’

In ‘The Life Divine’ Sri Aurobindo presents a theory of spiritual evolution and suggests that the present crisis of humanity will lead to a spiritual transformation of the human being and the advent of a divine life upon earth. Principally, Aurobindo advances an integrated understanding of material and spiritual transformation of humankind in which both inner growth and outward improvement are inevitably interlinked. Connected to this notion he proposes a theory of the evolution of human society arguing that the ideal of human unity will be inevitably realized (Chimni 2013: 130–131). This future vision of humanity is important, for many challenges related to the sustainable survival of humanity in the twenty-first century, especially climate change, require a long-term perspective of human and global development.

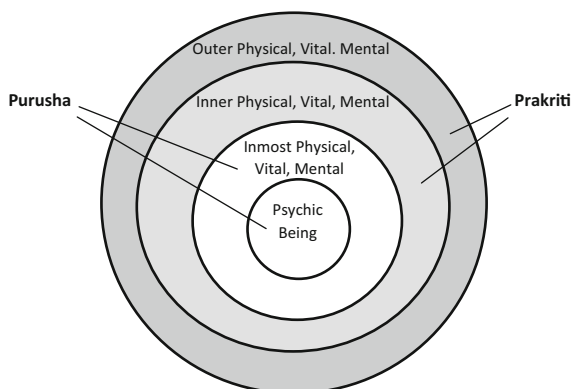
The fundamental difference between Sri Aurobindo’s integral yoga (*purna yoga*³) and other yogas can be seen in the spiritual goal. Other methods of yoga aim to experience an ascending force which is called *kundalini* in India. This force rises from the base of the spine (one of the *chakras*⁴) till it reaches the top of the head: ‘This difference in direction of the current, ascending or descending, has to do with a difference in goal which we can hardly overemphasize. The traditional yogas and, we suppose, the religious disciplines of the West aim essentially at liberating the consciousness: the whole being reaches upward in an ascending aspiration, seeking to break through appearances and to emerge above [...]. On the other hand, *Sri Aurobindo’s goal* [...] is not only to ascend, but to descend, not only to dart up into eternal Peace, but transform Life and Matter [...]. To experience the descending current is to experience the transforming Force’ (Satprem 2003: 51; emphasis added).

Aurobindo calls this the ‘consciousness-force’, in traditional Indian terms *chit-agni* (consciousness-heat/flame/energy) or *chit-tapas*. While we may speak of various forces (inner, mental vital, material, etc.), there is only one ‘Force’ in the world, a single current that flows through us and through all things. ‘It is the fundamental substance of the universe, *Consciousness-Force, Chit-Agni*’ (Satprem 2003: 72), which represents the notion or knowledge of the ‘Unity of Being/Existence’. Based on his spiritual experience, Sri Aurobindo teaches that the sum of all lives represents a growth of consciousness which culminates in a fulfilment on earth, i.e. an evolution of consciousness is taking place behind the evolution of species, ‘...and this spiritual

³Literally ‘full yoga’.

⁴*Chakras* are energy centres located along the spine until just above the head. There are seven main energy centres which are connected through the flow of energy, the bottom ones are of more physical nature while the top ones reach towards the spiritual realms.

Fig. 1 The concentric system of the being (Dalal 2012: xx)

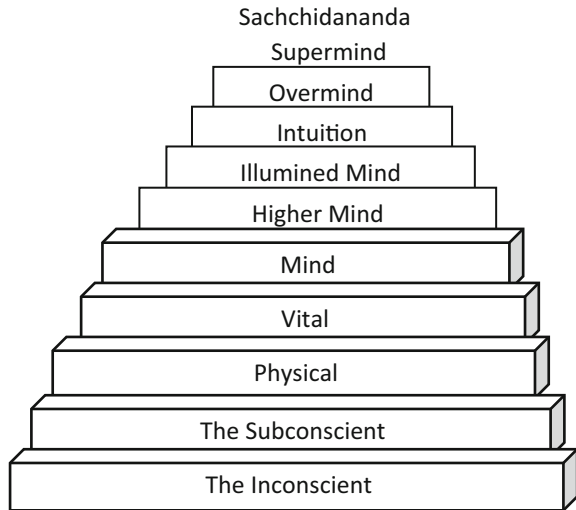


evolution must result in an individual and collective realization on earth' (Satprem 2003: 104).

This evolution of consciousness is intimately connected to our being, which can be described as planes of consciousness. Dalal (2012: xix–xxxv) outlines Sri Aurobindo's (2012: 84) two systems in the organization of the being, '...one is concentric, a series of rings or sheaths with the psychic at the centre; another is vertical, an ascension and descent, like a flight of steps, a series of superimposed planes with the Supermind-Overmind as the crucial nodus of the transition beyond the human into the Divine' (Figs. 1 and 2). In the concentric system, the outer being and the inner being behind it constitute our phenomenal or instrumental being and are said to belong to nature (*prakriti* in Sanskrit). Each sheath has three corresponding parts—physical, vital, mental. The inmost being is the *purusha*, the true being. In the *purusha*, there is an inmost mental, an inmost vital and an inmost physical and, forming the very core, the psychic being or soul, which is referred to as the inmost being. The vertical system is like a staircase, consisting of various levels, planes or gradations of consciousness ranging from the lowest—the Inconscient—to the highest—*Sachchidananda*.

No one else than Sri Aurobindo can better express as to how these two systems interact: 'First, there must be a conversion inwards, a going within to find the inmost psychic being and bring it out to the front, disclosing at the same time the inner mind, inner vital, inner physical parts of the nature. Next, there must be an ascension, a series of conversions upwards and a turning down to convert the lower parts. [...] Going upwards, one passes beyond the human mind and at each stage of the ascent there is a conversion into a new consciousness and an infusion of this new consciousness into the whole of the nature.' He then goes on to describe the various upward stages of consciousness to continue 'But the last conversion is the supramental, for once there, once the nature is supramentalised, we are beyond the Ignorance and conversion of consciousness is no longer needed, though a farther divine progression, even an infinite development is still possible' (Sri Aurobindo 2012: 84–85).

Fig. 2 The vertical system—Levels of consciousness (Dalal 2012: xxi)



According to Aurobindo, evolution is not a process of ‘becoming more saintly or intelligent, but in becoming more conscious’ (Satprem 2003: 110). Satprem further comments: ‘Yoga is precisely that point of our development when we pass from the endless meanderings of natural evolution to a conscious and guided evolution: it is a process of *concentrated evolution*’ (Satprem 2003: 107). These are essential statements with respect to the way a sustainability transition from the local to the global, planetary level may be performed, for this process of evolution is virtually considered a development process that can be steered, proactively, in a specific direction through an effort of inner growth and the development of consciousness. This ‘naturalization’ of the beyond—if the supraphysical became our normal physical as part of everyday life on earth—is called ‘spiritual realism’ by Sri Aurobindo (Satprem 2003: 146).

3.2 Meaning of ‘Transformation’

‘...to hope for a true change of human life without a change of human nature is an irrational and unspiritual proposition; it is to ask for something unnatural and unreal, an impossible miracle’ (Sri Aurobindo 2005: 1096).

The process of transformation, propelled by the development of consciousness, is really to be seen in a long term, evolutionary perspective; it is to occur gradually in decades or even in centuries in order to shift humanity to new stages of consciousness. For both Sri Aurobindo and the Mother, his spiritual companion, it means ‘changing the very nature of man and his physical conditioning; it does not mean a mastery, but

really transformation.⁵ Moreover, if we want a realization for the whole earth, this new principle of existence, which Sri Aurobindo calls supramental, must *establish* itself permanently among us, in a few individuals first, then, its influence spreading, in all those who are ready...’ (original emph.; Satprem 2003: 181).

Following from this, another pivotal aspect is the insight of an innate interdependence of individual and collective transformation, one cannot take place without the other: ‘[...] Sri Aurobindo and the Mother were going to realize that the transformation is not solely an individual problem, but a terrestrial one, and that no individual transformation is possible (or at least complete) without a minimum of collective transformation. [...] To our outer, superficial vision, the transformation seems to be a problem of an exclusively material order, because we always put the cart before the horse, but in reality all difficulties are inner and psychological’ (Satprem 2003: 327).

Given these statements, Aurobindo outlines a theory of change that is congruent with contemporary agent based notions of social change in the social sciences which suggest that social pioneers spearhead innovative social practices towards sustainability transition (e.g. WBGU 2011). Interestingly, according to Sri Aurobindo the individual must not subordinate itself to the collectivity because it is the most progressive individuals that change and move societies forward. However, this requires a certain freedom of such individuals to advance without being held back. As the individual advances spiritually there is a gradual realization of the unity with the collective and the omnipresent around; this signifies the merger of the ego with the (universal) Self.

3.3 *Evolution and Involution*

In agreement with his integral perspective, Aurobindo understands the evolutionary process as twofold, an evolution of forms (outward), and an evolution of the soul (inward). The whole evolution can be described as a journey of the consciousness-force (*chit-agni*) in four movements: involution, devolution, involution, evolution (Satprem 2003: 284). Without involution, however, no evolution would be possible, for an evolution to take place, there must be something already inherently contained. Sri Aurobindo contends this inherent force is the consciousness-force pushing from within, contained in matter as the potential to evolve: ‘In a sense, *the whole of creation may be said to be a movement between two involutions*, Spirit in which all is involved and out of which all evolves downward to the other pole of Matter, Matter in which also all is involved and out of which all evolves upward to the other pole of Spirit’ (Sri Aurobindo 2005: 137; emphasis added).

With the notion of involution Aurobindo essentially considers the idea of potential, namely that from the beginning the highest order of the cosmos (in his view the

⁵See the brief discussion on the epistemology of transformation as ‘meta-morphosis’ in Woiwode 2015.

divine spark) is rolled up and hidden in the stuff of matter itself and is latent in all life (Combs 1996: 147). As Odin states: “Cosmologically, involution signifies world creation, the self-projection of Spirit into inconscient matter (*prakṛti*), which is in fact ‘veiled spirit’ and ‘secret God’; whereas evolution is the reverse of creation, the return voyage of Spirit back into itself” (Odin 2013: 188).

As we have seen so far, the idea of evolution is crucial for the very notion of transformative change through the progressive development of consciousness, whose highest stages are already potentially involved in every individual human being. Such a view then, is the base for an argument of pro-active individual and collective change to address and respond to the multiple global crises. For a better understanding how this is embedded in contemporary thinking and scholarship, we will turn now to a very brief overview of neo-integrative frameworks.

4 Integral Yoga and Neo-Integrative Theories

The integral ‘movement’ is essentially a Western effort to overcome the schism of science and religion/spirituality (Raman 2009, Wilber 2001), as such Aurobindo came from a very different vantage point as the Indian civilizations have never performed this split. Rather, Indian thought has been integrative in terms of non-dualistic thinking (*Advaita* Vedanta) but also through its various philosophical schools which allowed all kinds of thinking including atheistic and agnostic ideas through the millennia.

Nonetheless, Sri Aurobindo and his teachings of integral yoga can be situated in a lineage of precursors of the modern integral paradigm. McIntosh (2007) provides a good introduction to many influential founders of integral philosophy, some of them contemporaries of Aurobindo. According to MacIntosh, this lineage goes as far back as to such diverse thinkers like Hegel (1770–1831), Bergson (1859–1941), Whitehead (1861–1947), Teilhard de Chardin (1881–1955), and Gebser (1905–1973) who all contributed to this emerging canon of integral philosophy. The other line of integral developmentalism identified by McIntosh is rooted in the social sciences, particularly psychology, comprising the work of Baldwin (1861–1934), Piaget (1896–1980), Graves (1914–86), and Habermas (born 1929). Naturally, this list is not conclusive, and there are others like Rudolf Steiner which have hitherto remained largely undiscovered in Anglo-Saxon discourse (Gidley 2007). To some extent cross-fertilization occurred as several of these thinkers have drawn from each other, especially Gebser refers to Sri Aurobindo’s work, while Sri Aurobindo seems to have been inspired by Hegel.

Presently, the search and efforts to leverage a paradigm shift towards an integral worldview is characterized by considerable conceptual overlaps and links between the terminologies used. Due to the existing flux, there are close links to other concepts like meta-theory, (w)holism, and transdisciplinarity (Benedikter and Molz 2012; Wallis 2010; Woiwode 2013b). Transdisciplinarity is also linked to an integral and meta-theoretical discourse. Nicolescu (2002) suggests the term transdisciplinarity can be

used as a philosophy (a stance, placing it in the larger context of our existence), an epistemology (integration and unity of knowledge, non-dualism) and a methodology (resolving practical issues in problem-oriented scientific research, particularly sustainability studies).

Similarly to Aurobindo's Integral Yoga, current integralism has a 'political agenda' in terms of its concern with inclusion and progress and being a response to forms of exclusion and oppression: 'That re-integration [...] is one that crosses over into the realm of civil society networks. It is here that responses to conformity, fundamentalism and also absolute difference and conflict are turning to forms of neo-integration within ideas of mutual recognition, human dignity, social justice, emancipation and so forth' (Morgan and Hartwig 2012: 4). Typically, scholars and thinkers of the integral paradigm and related are all part of and contributing to the 'spiritual turn' in sociology and related disciplines by promoting the re-introduction of spirituality in scholarship and academia.

Ken Wilber (2000, 2006) is the most prominent contemporary integral thinker who has devised an 'integral philosophy's twenty-first-century synthesis', for he '[...] has effectively updated evolutionary philosophy by skilfully incorporating many of the significant advances in science and philosophy that emerged during the last quarter of the twentieth century' (McIntosh 2007: 191). Reynolds (2004: 9) points out how significant Sri Aurobindo's teachings were during the early stages of Wilber's work in the 1970s: '... the evolutionary theorist who exerted the most profound influence on Wilber at this time was the great synthesizer of Eastern philosophy and Western science, Sri Aurobindo, especially his incomparable opus *The Life Divine*'. While it is not possible here to outline Wilber's Integral Theory and AQAL model introduced first in his seminal work 'Sex, Ecology, Spirituality: The Spirit of Evolution', we want to highlight the work of two other scholars who have made significant advances in integral thinking. They are of particular interest since both have been engaging with Indian perennial philosophies and spiritual traditions.

Roy Bhaskar has, over several decades, invented Critical Realism (1978) and progressively driven forward by his last renovation, the Philosophy of MetaReality (2002, 2012), a spiritual turn in the social sciences as a response to the manifold challenges in the world—social, economically and environmentally (Bhaskar et al. 2010). Bhaskar wants to develop and promote a notion of spirituality that appeals to both believers and non-believers, conceptualizing spirituality as 'to do with transcendence and as such it is concerned with unity, wholeness, completion and fullness but also at-homeness. [...] So the central qualities are unity and wholeness, and this unity and wholeness takes the form of a real, differentiated and developing wholeness. This developing aspect means that what we are concerned with is a state of unfolding, of becoming, of evolving. Because it is concerned with wholeness it also has to do with connecting and therefore interconnecting, and since to be concerned with wholeness and connecting is to be concerned with love, transcendence (and therefore spirituality) also has to do with love, which is the chief binding, uniting and connecting force of the universe' (Bhaskar with Hartwig 2012: 187–188).

Similarly, Giri tells us '[...] my quest...is a humble striving towards a new art of integration and politics and spirituality of liberation: individual, social as well

as planetary’ (Giri 2013: 6). Being an anthropologist and social scientist he is well versed with the Western academic perspective remarkably able to integrate these theorists with the perennial thought of India by drawing from modern sages and twentieth-century Indian philosophers like Sri Aurobindo, Vivekananda, Daya Krishna or Krishnamurty, thus skilfully crafting an innovative and novel approach to critical contemporary sociology. ‘Practical spirituality’ (Giri 2013: 249, and forthcoming) is then introduced to support human liberation by transforming dualities through reconstituting the Self, transcendence and society.

We gain from the above discussion an exceptional set of concepts and ideas that point towards the rise of a new paradigm. This novel vocabulary can serve as a basis for informing urban development planning in the direction of incorporating the non-physical, interior dimensions of the built environment and urban life.

5 Directions Towards Transformative Urban Development

5.1 *Urban Planning and Integralism*

Spatial and urban planning in particular is concerned with understanding, organizing and structuring our built environment in relation to and the context of social, cultural, political, geographical and historical issues, among many other spheres. Problem solution and conflict resolution capacity is thus central to planning practice and theory. This said, any set of problems or crises leads or should lead toward a rethinking of our planning concepts, approaches and instruments. Throughout the past decades we witness a continuous accumulation of issues at the global level, expressed especially in recognizing global climate change and the emergence of sustainable urban development (UN-Habitat 2009). These debates have led to an increasing critique of prevalent planning methods, practice, theories and the training of planners as to how such complex, interconnected, and elusive subjects could be adequately addressed.

This situation has also inspired us to investigate into other themes such as meta-theorizing, transdisciplinarity, and integral thinking, all of which being essentially concerned with the unity of knowledge, the synthesis of knowledge, ontologies and epistemologies. In a world where data, information, and knowledge are easily available and produced at an ever accelerating rate, specialization and disciplinary knowledge—as important as it is—leads currently into a fragmented hyper-specialization and particularism characterized by atomized, often disconnected knowledge systems. The planning discipline—if we may consider it in singular—is not one of the first suspects to be viewed as hyper-specialized. On the contrary, interdisciplinarity belongs to its ingrained signifiers, and yet in this paper we argue for the need to look beyond it more into how varying types of knowledge—including interior dimensions of existence such as spirituality and consciousness—can be incorporated, better synergized and generated around complex problems.

'Connectedness' emerges as one of the central concepts in this respect and maybe identified in relation to three themes: first, in relation to global issues and problems humanity currently faces (we notice that in the past 50–100 years humanity has become irreversibly connected politically, economically and culturally at a global scale); second, as interrelatedness/interdependence in the 'new' sciences (particularly quantum physics, the neuro- and life sciences); and thirdly, as an ever present idea within the ancient wisdom traditions of 'perennial philosophies' (Confucianism, Hinduism, Buddhism). Hence, we may argue, a search for more integral perspectives or the unity of knowledge and existence, what Vedic philosophy terms '*advaita*'—non-dualism—has become increasingly urgent being discussed in some academic circles (e.g. Poonamallee 2010). In planning theory this has not much been addressed as yet even though some of these new theoretical frameworks are applied by individuals (Banai 1995; McLennan 2011; Hamilton 2008; Reich 2002).

Obviously, applying an integral framework to the city has the potential of tremendously re-directing the approach to sustainable urban development. This field of research and application is just emerging. It certainly poses a challenge but also an opportunity, particularly with its stance of integrating spirituality with the scientific method. Nonetheless, the existential threat of climate change already encourages urban researchers to highlight the importance of spirituality if we want to address the issue seriously. In Patrick Geddes we find a sort of prototype of urban integralism at the turn of the twentieth century. He was open to comparatively multiple perspectives of his time, being 'clearly interested in matters of the spirit, as it pertained to cities, in their evolution. [...] Spirit, or the spiritual, is not something that Geddes dwells in isolation, in an explicit deliberative way. It is more part and parcel of a larger whole, or wholeness—of interrelationships or combinations—that commands his concern and attention' (Wight 2015: 5).

Encouraging is currently the growing public interest, awareness and emergent body of literature on the interface of urbanization/the city and spirituality/religion. As noted, the spiritual turn in combination with an evolving 'new spirituality' has seen many publications in urban studies and related disciplines together with a return of religion to public life described by Habermas (2006) as postsecularism (Anhorn 2006; Beaumont and Baker 2011; Daffara 2011; Fingerhuth 2004; Hamilton 2008; Hegner and Margy 2016; Inayatullah 2011; MetroZones 2011; Sandercock 2006). Sandercock and Senbel provide a succinct reasoning of the importance of spirituality for planning as meaning making in space: "[It] is about a different way of seeing planning, at the heart of which is the place of spirit and of the sacred in the everyday struggle to make meaning of our lives, make better places and create a better world. The intent here is to recognize that spirituality is embedded in planning work, whether we care to name it or not. But there may be some real purpose in naming it. It would mean a different way of seeing ourselves, representing ourselves to the world, and it would necessarily lead to different ways of teaching, which we might begin to think of as 'educating the heart'" (Sandercock and Senbel 2011: 100).

5.2 *Co-evolution and City Consciousness*

‘Co-evolution’ of the physical, especially the built environment and non-physical aspects of the urban is a core principle of integral thinking. Very much in the spirit of Geddes, Daffara (2011), by building on the work of integralists and consciousness studies, highlights the relation of cities as human habitats with levels of consciousness. The underpinning notion is the proposition ‘that civilisations’ construction of the city is their manifestation of a deeper construction of collective consciousness and spirit’ (Daffara 2011: 683). Arguably, the transformation of the city as a catalyst towards the development of global consciousness necessitates integrating matter, body, mind and spirit in social action. Anhorn (2005), Fingerhuth (2004, 2012) and Hamilton (2008, 2012) arrive at similar conclusions, all primarily using integral theory and spiral dynamics (Beck and Cowan 1996).

Futurist Inayatullah (2011) outlines six emerging issues of cities futures of which the shift from an essentially secular space to ‘the city as a spiritual node in planetary consciousness’ is ‘perhaps the most challenging emerging issue. The evolving trend is that of city planning focused on sustainability via the triple bottomline—prosperity, environmental sustainability and social justice—with the emerging issue (20 years forward) of the quadruple bottom line adding spirituality as the organizing and the depth factor. Spirituality could even become the fourth bottom line; thus understood, it is about designing cities so they produce environments to lead to a sense of awe, of Shanti and Ananda, of deep reflection on our role and purpose in life. Moving further down the line, this is the notion that the city, and the thoughts of its inhabitants, are becoming part of a noetic transformation of our collective consciousness’ (Inayatullah 2011: 657). This represents an assessment of future trends towards a new paradigm congruent with other futurists who envisage more spiritual (Western) societies where the search for meaning in life is becoming a powerful driver and the spiritual is increasingly expressed in new religiosity and self-development with the development of consciousness becoming a goal in life itself (Severn and Andersen in Randers 2012: 224; 316).

5.3 *Urban Transformation and Transdisciplinarity*

In Sri Aurobindo’s work, individual and collective development of consciousness as well as the interrelationship of the inner and outer worlds are central principles to enable the transformation of humanity.

For the authors of the WBGU (2011) flagship report transformation and transdisciplinarity are intertwined, and ‘Transformative Governance of Urbanization’ is identified as one of three ‘key transformation fields’ with global relevance. Transdisciplinarity is framed as a methodology of including more comprehensively diverse types of knowledge: ‘Firstly, it means increasing the social relevance of research questions through the involvement of stakeholders in setting research goals. Second,

it also applies to the involvement of stakeholders in the actual research process, i.e. the combination of scientific and practical knowledge (for example local, traditional or indigenous knowledge)' (WBGU 2011, p. 323).

Urban complexity is reflected in the multifaceted change processes taking place in cities ranging from spatial, ecological, economic and political to social transformation (WBGU 2016). Typically, these spheres are interconnected, but the last one relating to the values sphere of urban lifestyles and consumption patterns is drawing our particular interest here: 'understanding urban metabolism is essential in order to identify the drivers and causes relating to the size of the ecological footprint of cities. [...] this perspective is extended by the addition of socio-cultural and psychological factors that have an important influence on materials and material flows in the urban metabolism' (WBGU 2016: 93). While in developed countries the differences between rural and urban lifestyles are minimal, in the developing world, especially in emerging economies, more distinct urban lifestyle trends are discernible characterized by 'consumerism', level of motorization and the 'nutrition transition', the change in eating habits from a vegetable-based diet to more energy-rich, high-carbohydrate and animal products. The urban transformation of countries like India will reinforce these processes in the decades ahead unless there is an equal attention to accelerate significant changes in mindset and consciousness. Fortunately, we also observe 'global knowledge mobilities' (Hackenbroch and Woiwode 2016) that foster postmaterialist-ecological values.

Another WBGU report (2014) on climate protection and citizen movements elaborates on a methodology to facilitate transformative urban change through 'real-life experiments' and 'living labs', which are "an important starting point for transformative science in order to drive transformation processes forward in a scientifically initiated way and at the same time to gain a better knowledge of precisely these transformation processes. A living lab is defined here as a societal context in which researchers carry out interventions in the sense of 'real-life experiments' in order to learn about social dynamics and processes" (WBGU 2014: 88). While the report recognizes the potential of religious communities to 'influence the structure of values in a society' (WBGU 2014: 90), the authors appear to be unaware of the significance of postsecular spirituality and neo-integrative thought both of which may not be rooted in any religion or specific theology but with effective impact on people's worldview and consumption patterns as suggested by the research of Paul Ray on the emergence of the 'cultural creatives' and Inglehardt's longitudinal World Values Survey.

Nonetheless, transdisciplinary, transformative sustainability research and action through such urban 'real world labs' do have the potential to raise the flag for deliberately incorporating spirituality as a facet of personal and collective change. Naturally, from the very beginning Auroville was conceived by the Mother on the basis of Sri Aurobindo's teachings as an experiment with unending education thus reflecting exactly this very requirement of human transformation. Sri Aurobindo and the Mother did not envision the formation of a new religion or sect: 'They worked to transform the world and effect the next stage in the evolution of humankind by bringing down to Earth the power of a higher consciousness that they termed the Supermind. Their spiritual vision thus encompasses all humanity, and the Sri Aurobindo Ashram

and Auroville are regarded as experiments in collective living that can perhaps help humankind in its evolutionary March' (Mohanty 2004: 4). Hence Auroville may be seen as *the* prototype of real world labs. Living labs seem to have a similar understanding of co-creating in an evolutionary manner city futures that may emerge, even though they usually do not work at such deep (trans-)personal psychological levels like Integral Yoga or integral theorists.

However, increasingly scholars and practitioners alike recognize the importance of this 'blind spot' (Scharmer 2009). Theory U is designed as a 'social technology' with a set of concrete methods to facilitate profound change 'from the heart'. Based on Wilber's Integral Theory, Hochachka (2008) developed a framework for community development to work with interiority using 'emerging tools for personal, collective and systemic transformation, by including the areas of **Personal** (psychology and worldviews), **Interpersonal** (traditions, customs and social norms), and **Practical** (social, political, economic and ecological systems)' (Hochachka 2005: 2; orig. emphasis). In particular, the personal dimension is widely neglected in urban development processes, even though it may hold the key to fundamental interior change in behaviour and attitude of urban residents. Apparently, this can only be better integrated by devising training of professional planners and urban professionals with an adequate set of skills (Wamsler et al. 2017; Wight 2011).

6 Conclusion

Environmental humanities offer a diverse range of perspectives and ideas that are often entirely neglected or take a backseat in urban development. Three key points may be drawn from this paper. First, how Aurobindo's philosophy and related neo-integrative theories introduce a set of novel concepts in understanding and conceptualizing the urban. Second, in which way these call for a radical revision of planning theory and practice, and may influence the formation of integral urban sustainability and transformative urban development. And third, the benefits of holding on to spirituality as a core concept to be considered in urban development.

First, we may summarily conclude the following meanings of 'integral' in Sri Aurobindo's thought

1. Ascend and descend (experiencing the universal consciousness-force from base to top and top to base)
2. Evolution and involution
3. Respecting and acknowledging the inner and outer worlds of being (spirit and terrestrial reality—physical materiality)
4. Scientific truth and the (divine) spiritual truth (integrating Eastern perennial wisdom traditions with modern science: Darwin, Einstein, Bohm, etc.).

Urban development and cities should be seen in the big picture as an evolutionary force that can decisively influence and contribute to a cultural paradigm shift and human development by progression in collective consciousness. The relevance of Sri

Aurobindo's concepts and neo-integrative thought for urban planning is discernible in the new vocabulary foregrounding (practical) spirituality, transcendence, consciousness, Self, duality/non-duality, wholeness, transformation, and the complex of emancipation/liberation/enchantment/self-realization in the face of social and global crises.

Second, against this background, the need for driving urban planning practice and theory to their current limits becomes apparent. Integral urban sustainability and transformative urban development situates classical issues of social inclusion, poverty alleviation, inequality, oppression and social justice within a larger scheme of meaning making. Such making of sense of individual life, social relations and planetary development is embedded in notions of postmateriality with an attempt of making the spiritual dimension of human existence explicit (opposing the 'atheistic secularism of postmodern deconstruction') while arguing for an integral interaction with science. Integralism also regards the role of civil society as one of the driving factors which views the individual and collective transformative struggle (Philosophy of metaReality) as a notion of emancipator politics.

Thirdly, spirituality brings into the process a particular awareness and dimensions of relationality, connectedness, and interdependence with regard to people, place, space and the built and natural environment. Moreover, spirituality as a source of deliberately unlocking one's personal and the collective inner resources brings to bear intuition, sensing, compassion and love to an otherwise techno-political process of transformation. As suggested by Bhaskar (2002), it may support the creation of transcendence between actors and stakeholders, residents and professional planners, administrators and business people, civil society and academia as an everyday life experience of non-duality/unity.

For both future research and practice, the above points hold impressive challenges, since the role, the relationship of these concepts and how to incorporate them within a participatory development process will be crucial. It will require transdisciplinary, experimental research by including stakeholders from academia, the business and civil society sector as well as local government.

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Sustainability, the Image of God and the Person of Christ: An Exploration of the Role of the Hypostatic Union for the Sustainability Project



David O. Brown

Abstract The question of sustainability naturally provokes ideas of new way of acting and human interaction with the wider global community that seeks to reduce or completely remove all negative impact on that global community. Any question of new human action and interaction requires a new way of thinking about humanity and humanity's relationship with the wider global community. An answer to this question from a theological perspective needs to begin with a discussion of the doctrine of being created in the image of God. This discussion will focus on the role of dominion. When considered within the context of neo-Darwinism it will be shown that there are potential problems with this idea of the image of God that provoke misuse of the environment rather than responsible use. As Christ is the image of God, this leads to a discussion of the person of Christ. Again, the neo-Darwinian context leads to a significant re-interpretation of the traditional doctrine that seeks to include all creatures and not just humanity. This means that Christ must be the 'God-creature' rather than the 'God-man'. Taken together, these considerations lead to a theological position that necessitates a way of human interaction with the global community that cultivates sustainability.

Keywords Christology · Image · Hypostatic union · Sustainability · Neo-Darwinism

1 Introduction

It seems obvious that sustainability (by which is understood the ability of humanity [or creatures]¹ to live without causing damage to the environment) requires a new way of acting. It is less obvious, although still just as important, that sustainability requires a new way of thinking that grounds new action. The sustainability project

¹By creatures is meant any 'thing' that is created.

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will not succeed unless humanity conceive of the world, and humanity's place in that world and its relationship to it, in a new way. Powell, thus, writes that:

Ethics is not simply reducible to practice. It includes also our conception of the world and our practical orientation to it. (Powell 2003, p. 168)

This paper will explore the theological conceptions that shape a practical sustainability.

Much of the theological literature that attempts to engage with sustainability over the past 20–30 years occurs within the context of commentary on Teilhard de Chardin, such as *Teilhard in the Twenty-First Century* (Fabel & St. John 2003), or Franciscan theology, such as Leonardo Boff's *Cry of the Earth, Cry of the Poor*. Whilst both approaches have their individual nuances there are two themes that they have in common: the unity of creation and the primacy of Christ. This means that there is a fundamental and inherent unity between all creatures and this unity is based on the role of Christ.

This paper is considered to be a contribution to this trend. More specifically, the research that led to this paper concentrated on neo-Darwinism and Christology. For a number of reasons (for example, the distortion of the neo-Darwinian rejection of directed or 'teleological' evolutionary change) theological attempts at conversation with neo-Darwinism have fallen short. For theological conversations with evolution to be meaningful, it must take seriously the conclusions that neo-Darwinists reach (as it is the theory that enjoys most support among scientists). In allowing neo-Darwinism more room to shape Christology, interesting new avenues can be opened up. Much like the work on Teilhard mentioned above, these new avenues have considerable implications for sustainability. This paper will consider these implications.

Whilst there are other important areas of engagement, such as ecclesiology and soteriology, the scope of this paper is confined to Christology. More specifically it will show that there are important connections between Christology and sustainability. It will show that, whilst the need for sustainable action may be obvious, a Christology that takes seriously the new place of humanity in the universe that neo-Darwinism suggests provides a framework upon which the practical aspects of the sustainability project can be worked through. This paper will not comment on these practical aspects; rather, it is concerned with the interactions between sustainability and theology that ground and support these aspects.

This paper will begin with a criticism of traditional understandings of the image of God, specifically from a neo-Darwinian perspective. This focuses on a rejection of dualism and the idea of a distinct human nature. The paper will then move on to discuss the implications this has for the hypostatic union of Christ (i.e. the two natures in the one divine person). If what it means to be human is nuanced in the light of neo-Darwinism, then what it means for Christ to become human must also be nuanced. Finally, the ways in which this can inform and support sustainability will be considered.

2 Opening Axioms

Any question of sustainability, broadly conceived, implicitly makes two assumptions that it is helpful to explicitly articulate.

First, it is assumed that there is a problem to begin with. This problem claims that the current trajectory of human activity will eventually reach a point whereby, at the very least, human life will be unsustainable and become extinct. At the very worst, this current trajectory will reach a point where *all* life will become unsustainable and extinct. In popular culture, assuming there is a problem takes the form of accepting such things as the reality of global warming.

Second, and following on from the previous assumption, any question of sustainability assumes that a solution is possible. What this means, specifically, is that it is entirely *possible* for humanity to exist on this planet in such a way that no damage is done and that humanity can share in the mutual flourishing of nature. This means that humanity is not alien to the world, but is truly a product and integral part of it. Sue Watt, for example, writes that:

Northern White [Rhinos] have been brought to the verge of extinction not by natural evolutionary causes but by human greed. (Watt 2016, p. 32)

This separation of human act from natural act must be incorrect. If humanity is not an alien species, and is itself a product of ‘natural evolutionary causes’, then human greed must be a part of natural evolutionary causes.

The point is that the problem of sustainability cannot be dismissed on the basis of humanity’s transcendence of the world. If humanity is truly a part of the universe, then a solution must be possible. Assuming that there is both a problem and a solution makes important claims about humanity’s place in the universe that, as will be seen below, neo-Darwinism picks up on.

3 The Image of God

Any theological question of human relationship with the rest of creation naturally begins with the doctrine of the image of God. In the book of Genesis, the authors describe the creation of the world, creatures and humanity. Whilst explicit references to the image of God in the Bible are sparse, the opening chapters of Genesis provide the classic reference. The Genesis author writes:

Then God said, ‘let us make humankind in our image, according to our likeness; and let them have dominion over the fish of the sea, and over the birds of the air, and over all the wild animals of the earth and over every creeping thing that creeps upon the earth. So God created humankind in his image, in the image of God he created them; male and female he created them. (Gen. 1.26–7, NRSV)

What actually constitutes the image of God has been the subject of much speculation over the centuries with no clear answer being agreed upon. There is not the room

to go into detail regarding what these speculations are. It is enough to recognize that over the course of theological history many different speculations have been made, from intelligence, rationality, freedom, or the possession of a soul. However, the ongoing research into evolution and biology has shown that all of these proposed capacities for the image of God are found in non-human animals to some degree. These capacities cannot be the image of God *if* the image is used to *distinguish* humanity from the rest of creation.

However, the Bible itself offers one suggestion as to what constitutes the image of God. It is not a ‘capacity’ as such, but the charge to have dominion over non-human creatures. Dearman writes that:

In spite of the labour expended on the subject, it is not at all clear what the (priestly?) writer intended by the claim that humankind is created in the divine image. The primary contextual clue is God’s blessing in [Gen] 1.28-9, a blessing that humankind should procreate and rule over other creatures (cf. Ps. 8). (Dearman 2002, p. 39)

Humanity is like God, not in the possession of some capacity such as intelligence, but in its ‘mimicking’ God’s rule over creation. Just as God rules over humanity, so humanity rules over creatures. Powell notes that:

The creation in the image of God is associated with the command to humans to have dominion over all of the rest of creation. (Powell 2003, p. 140)

To be created in the image of God means to have dominion over the rest of creation. This can be manifested in different ways. It can be manifested as a responsibility to the rest of creation. The book of Proverbs, for example, claims that:

The righteous care for the needs of their animals, but the kindest acts of the wicked are cruel. (Prov. 12.10, NRSV)

In this respect, being created in the image of God requires a responsibility to care for the rest of creation. However, other interpretations understand dominion to be more like that of a dictatorship; humanity has the freedom to use the rest of creation to further its own needs. This could be argued as the interpretation of Genesis 9, which claims that:

The fear and dread of you shall rest on every bird of the air, on everything that creeps on the ground, and on all the fish of the sea; into your hand they are delivered. Every moving thing that lives shall be food for you; and just as I gave you the green plants, I give you everything. (Gen. 9.2-3, NRSV)

This is contrasted with the claim in the following verses that the killing of human life carries a capital punishment; human life is sacred, non-human life is for the sole benefit of humanity.

The appeal to dominion as the basis for a sustainability project, then, is ultimately inappropriate as it is susceptible to misinterpretation. Responsibility for the rest of creation might be one way of understanding humanity’s role in the world, but this is not the only way to understand it. Dominion as a basis of sustainability is not an unshakeable foundation and leaves the scope for abuse.

Some of this abuse can even be masqueraded by a superficial responsibility, such that the looking after the planet is only a good insofar as it benefits humanity. As Anthony Hoekema writes:

[Dominion] includes holding property, tilling the soil, growing fruit trees, mining coal, and drilling for oil not for personal aggrandizement but in a responsible way, for the benefit and welfare of one's fellowmen. (Hoekema 1994, p. 88)

Not only would such things as mining and drilling be worrying for a sustainability project, but, according to Hoekema this is done, not for the global community, but for the benefit of 'fellow *man*'. The care that humanity shows to the global community can be widely interpreted to imply almost anything, most of which do not share an outlook with a sustainability project. In other words, even when responsibility is appealed to as an interpretation of dominion, this does not always imply looking after creation for its own sake, simply because that is a noble endeavour, but looking after creation for humanity's sake; dominion of responsibility is not to improve the lives of creatures, but to improve the prospects of humanity.

However, perhaps no theologian is quite so explicit of the problems with the paradigm of dominion as Leonardo Boff. The Brazilian Franciscan, who was instrumental in the development of Liberation Theology, writes that:

We are hostages to a paradigm that places us – against the thrust of the universe – *over* things instead of being *with* them in the great cosmic community. (Boff 1997, p. xii)

By viewing humanity as having dominion—regardless of the responsibility that this may or may not provoke—necessarily places them *over* instead of *with* the wider global community; a paradigm that legitimates the use of nature for the furtherance of human ends. The problem is not with interpretations of dominion; it is with the whole paradigm of dominion itself.

a. *Dualism*

From a Biblical perspective, the question of humanity being made in the image of God is about human relationship with God, namely, humanity enjoy a close relationship with God that is manifested in imitating God in some way, i.e. dominion. However, precisely because this is an exclusive relationship (i.e. it is only humanity) this naturally becomes a question of human relationship with non-human creatures; humanity has an inherent worth that non-human creatures do not. More generally, the image of God becomes descriptive of humanity's relationship with the wider world through exclusion.

This tension between humanity and the non-human world is exacerbated by cosmological dualism. The use of the possession of a soul as a way of explaining human likeness to God has already been noted as being one of the suggestions posited as representing the image of God. By claiming that humanity has a spiritual dimension that non-human creatures do not possess necessarily excludes those non-human creatures from communion with God and also denies that those creatures have any inherent worth or value. Pointing to the moral implications of anthropological dualism, Stephen Post perfectly illustrates this problem. Post argues that without the

belief that humans possess an immaterial soul—which imbues its possessor with value—care for the sick, the disabled, and the poor would have no moral basis. He writes that:

The purported moral significance of having an immaterial immortal soul is that it ensures the moral commitment of a good society to protect all human beings, based not on their varied and unreliable capacities but on the basis of basic human equality. (Post 1998, p. 202)

The implications of this view for sustainability are obvious. If those suffering from dementia still possess an inherent worth based on their possession of a soul—such that there is a responsibility and obligation to care for them—then those creatures who do not possess a soul do not possess any inherent value and do not command the same moral obligation. Instead, their worth is only judged by their usefulness to humanity. This, it has already been suggested, leads to a view of human relationship with non-human creatures where responsibility can easily turn into abuse. Regardless of how much humanity may or may not have been charged with dominion over creation, if humanity exclusively possesses a soul then the responsible dimensions of dominion are irrelevant.

This dimension of dualism, which imbues humanity with inherent value and the rest of creation only with relative worth, is also noted by others. Powell, for example, writes that:

In other, more dualistic conceptions, the universe is something alien, something important mainly as the arena of human activities and something available for exploitation. (Powell 2003, p. 149)

Graham Parkes also evidences this problem, writing that:

The fact that we talk, in English, of ‘nature’ and of ‘human nature’ might suggest that the latter is to be understood within the larger context of the natural world as a whole; but this way of understanding it has generally not been the way that philosophical and religious views of the human nature relationship has taken in the west...intrinsic to this worldview [i.e. western dualism, from Plato, through Descartes and Newton to modern capitalism] is the *separateness* of humans from natural phenomena, as well as our putative superiority to them, which combine to sanction a condescending attitude toward nature as ‘other’ and inferior, and ultimately suited for domination and exploitation by humans (Parkes 1997, pp. 149–50)

There is the hint here of what Sue Watt was criticized for above: humanity is alien to the rest of creation, which therefore does not possess any value.

The appeal to a soul, then, is tantamount to the rejection of the worth of non-human creatures. From the perspective of Platonic dualism, this rejection of worth is further nuanced by the claim that the task of the philosopher is to *escape* the material world altogether. Admittedly, this Platonic form of dualism does not particularly lend itself to Christian theology (despite the prevalence of Platonism in early Christian theology), nevertheless, if the appeal to dualism leads to a hope of escape from materiality, then this is not particularly conducive to a worldview that puts value in sustainability.

Pointing to the opening axioms above, the dualist might even deny that there is a problem in the first place. The assumption that there is a problem leads to the

conclusion that this whole paradigm is outdated. A new paradigm is needed, a need that is supported and deepened by the neo-Darwinian synthesis.

b. *No Human Nature*

Neo-Darwinism is instrumental in rejecting cosmological dualism. The sole sufficiency of blind natural selection of accidental genetic mutation to explain the emergence of every manifestation of life on the planet means that nothing else, including the soul, is needed. Thus, by rejecting dualism, the problems dualism presents for establishing a sustainability project are no longer an issue. However, neo-Darwinism makes another important claim that contributes to the framework of sustainability, namely, the rejection of human nature. One of the important consequences of the neo-Darwinian synthesis is that there cannot be anything so concrete as a human nature, as apposed to, and in contrast with, other created natures. Or, to put it differently, human nature is only an arbitrary quantitative distinction from other creatures.

The reason for this rejection of nature is due to the prominence of accumulation for neo-Darwinism. Without going into too much technical detail, evolutionary change occurs as the result of the accumulation of small, individually insignificant, errors in genetic replication. All evolutionary change can be explained by the ‘slow’ accumulation of these errors, which are subsequently blindly selected due to any survival or reproductive advantage they may accidentally confer on the individual. Or, as Darwin put it, ‘*natura non facit saltum*’: nature makes no leaps (Darwin 2009, p. 177). Regardless of what else is said regarding evolution, it is the centrality of accumulation that is crucial; without it the whole neo-Darwinian synthesis collapses. Importantly, if this is the sole reason for all evolutionary change, then this must mean that there is a genealogical link between all life on earth. This was precisely the conclusion that Darwin himself made in *Origin of Species*. Darwin writes that:

Numberless intermediate varieties, linking most closely all the species of the same group together, must assuredly have existed...Extinction has only separated groups: it has by no means made them; for if every form which has ever lived on this earth were suddenly to reappear, [it] would be quite impossible to give definitions by which each group could be distinguished from other groups, as all would blend together by steps as fine as those between the finest existing varieties...As all the organic beings, extinct and recent, which have ever lived on this earth have to be classed together, and as all have been connected by the finest gradations, the best, or indeed, if our collections were nearly perfect, the only possible arrangement, would be genealogical. (Darwin 2009, p. 165, p. 378, p. 392)

Darwin claims that were the fossil record complete, it would be impossible to demarcate and distinguish between species. In fact, the only difference that could ever be detected is between *individual* creatures, not groups or species.

This means that human nature, as a set of characteristics or way of ‘being’, that distinguishes humans from other creatures, cannot possibly exist, as this would transgress the most important and crucial element of neo-Darwinism. If nature makes no leaps, and all evolutionary change is small accumulations, then there can be no taxonomic point, both today and/or in the past, at which it can be decidedly true that

one individual is not a human and their progeny is. There is nothing, no characteristic or capacity that humanity possesses exclusively, and this means that there cannot be an over-arching category that describes all humans. This means that there is a quantitative difference between all creatures rather than a qualitative difference.

For Theodosius Dobzhansky, this leads to the postulation of a potentially infinite number of human natures. He writes that:

There are valid reasons to think that there is no single human nature; there are as many human natures as there are men. (Dobzhansky 1973, p. 105)

This means that one human individual is as different, ontologically, from another human as it is from a non-human. Of course, an equally valid response, focusing on the similarities rather than the differences, is to postulate, not as many natures as there are creatures, but one ‘nature’ in which all creatures participate. Dobzhansky is correct that the arbitrariness of any judgment on what constitutes a distinction between human and non-human creatures leads to the conclusion that each individual creature must be unique (i.e. it is a rejection of Platonic universals), but the emphasis is misplaced. This aspect of Darwinism does not argue for the *exclusion* of all creatures, but the *inclusion* of all creatures.

With the rejection of, not just a distinct *human* nature, but *any* distinct creaturely nature, comes one of the most important implications of neo-Darwinism: humanity cannot be considered an improvement upon other creatures (at least not in an objective sense). This has an important theological consequence: humanity can no longer claim a privilege in, or monopoly on, divine influence. This includes the Christ-event.

4 The Person of Christ

Thus far, this paper has concluded that the traditional notion of being created in the image of God has serious problems in terms of supporting a sustainability project. Whilst the traditional intentions may be well meaning, ultimately viewing humanity as *over* creation is always going to be open to abuse. As Rouner so dramatically puts it:

We will stop our present rape of nature only when we recognize that we are all fellow creatures of the natural world. (Rouner 1997, p. 9)

There is another way of understanding being created in the image of God that helps this recognition. If Paul is correct that Christ is the ‘image of the invisible God’ (Col. 1.15, NRSV) then being made in the image of God is to be made in Christ, ‘in [whom] all things in heaven and on earth were created’ (Col. 1.16, NRSV).

Whilst this can provoke a number of implications, the one that will be suggested here is that Christ’s humanity will necessarily need to be rejected. Christ no longer came from heaven to assume a *human* nature, but to assume a *created* nature; the incarnation is not addressed solely to humanity but to all creatures. Humanity is no

longer imbued with intrinsic value and worth at the expense of other creatures, so humanity is no longer the sole beneficiary of the incarnation.

This essay is not concerned with the *reason* for the incarnation (and there is not the room to delve into the theology behind it), however, a wider, more inclusive Christology must be concluded. This wider inclusive theology takes the Scotist approach to the incarnation that gives a positive answer to the classic question of whether God would have become incarnate if Adam had never sinned. One of the reasons that necessitates such a positive answer to the question is the rejection of the historical accuracy of the Genesis narrative regarding the Fall made necessary by neo-Darwinism. The incarnation is no longer viewed in the narrow, exclusive context of a response to human sin, but is understood in the wider, inclusive (and more primary) context of God's act of creation.

The essential point is that Christ cannot assume a *human* nature that does not also include all creatures and thus all creatures are created in the image of God—all creatures have intrinsic value and worth—and what God achieves through the incarnation is equally relevant to all creatures. Thus, if Christ needed to be truly human for humanity to be the beneficiary of his bestowal of grace, then the rejection of a distinction between human and non-human means all creatures now become the beneficiaries.

Gregory of Nazianzus can help to elucidate this view in his criticism of the Apollinarians. Gregory of Nazianzus is supremely important in the development of Christological doctrine and, perhaps, no Christological formula is more important than his:

For that which he has not assumed he has not healed; but that which is united to his Godhead is also saved. (Gregory of Nazianzus 1954, p. 218)

The immediate context of this claim is Christ's possession of a human mind (if Christ was not *fully* human then *full* humanity was not saved), however, it is easy to see the wider implications. If there are no qualitative differences between humans and non-humans—so that Christ did not assume a human nature, but assumed a created one—then non-human creatures must also be addressed in the incarnation. Gregory continues:

If [Christ's] soul should be that of a horse or an ox, or some other of the brute creation...this, then, would be what he saves; and I have been deceived by the truth, and led to boast of an honour which had been bestowed upon another. (Gregory of Nazianzus 1954, p. 218–9)

If all humanity is addressed through the assumption, then all creatures must now be addressed as well, as there is no satisfactory way to exclude them. Gregory's reasoning, for him, would mean that non-humans are *excluded*; for the neo-Darwinist, Gregory's reasoning means that non-humans are *included*.

The same conclusion can be inferred from Marc Cortez's question. He asks:

In what sense can we say that [Christ] reveals what it means to be human? In taking this approach, do we not run the risk of associating the human with being male? Or, at the very least, do we not marginalize what it means to be female if we say that all humanity can be adequately revealed through the male form of humanity?. (Cortez 2015, pp. 16–7)

If Cortez's question is valid then, taking into consideration Gregory's formula, since Christ did not assume a feminine body, females are not addressed and do not benefit from the incarnation. No theologian would seriously consider the inference that feminism must reject the incarnation. The answer to the question is that the emphasis is not on Christ's maleness but on his humanness. Christ does not assume a *male* human nature but a human nature; the fact of Christ's maleness is irrelevant and accidental. The neo-Darwinist would criticize Cortez for not going far enough. In the same way that affirming Christ's masculinity does not exclude non-males from the Christ-event, so affirming Christ's humanity does not exclude non-humans from the Christ-event. The rejection of an ontological and qualitative difference between human and non-human creatures, necessitated by the neo-Darwinian synthesis, is crucial to this interpretation.

Robinson can help to qualify this claim that the male human first century Palestinian rabbi can be descriptive of all creatures. He writes that:

To be a 'universal man' is not to have every human quality, but to be the sort of person of whom we recognize *in* the individual that which transcends the individual. We see in him what *each* of us could be – in his own unique way. What attracts and judges us is not the man who has everything – that merely oppresses us – but the man in whom we can glimpse a vision of the essential. (Robinson 1973, p. 73)

This means that Christ can be the image of the invisible God (Col 1.15, NRSV), in which and through which all *creatures* are created, without compromising the unique and particular male humanity in which that image was manifested. If there is no human nature, and all creatures are equal in front of God, then all creatures are created in the image of God, who all find their ontological grounding in Christ. As Maloney writes:

[Christ] is the Logos, the image according to which not only man but all creation is fashioned. (Maloney 1968, p. 7)

Humanity does not have dominion over creatures because humanity is no longer 'better' than non-humanity, who are also assumed by Christ and imbued with value.

It is interesting to note here that if Dobzhansky is correct that there were as many natures as there were creatures, then Christ would not be relevant to anyone. It is essential that Christ shares in the nature of those to whom his incarnation is addressed otherwise the fruits of his incarnation are ineffective. If, on the other hand, there is one 'nature' that characterizes, not just what it means to be human, but what it means to be created then all creatures are addressed in the incarnation. Humanity no longer has a monopoly on divine influence.

a. *Sustainability and Morality*

Most importantly, this interpretation of the hypostatic union leads to a cosmology in which humanity is not understood as *over* creation, but must be considered *with* it. This, it has been suggested, is the basis for a successful sustainability project. Resting sustainability on the idea of being created in the image of God as dominion is like the man who built his house on sand or the seed sown on shallow ground or among the thorns. It allows for human responsibility in caring

for creatures, but this is only because of a deeper and more damaging arrogance of humanity in condescendingly placing themselves above and over the rest of creation. Ultimately, whilst it may permit a degree of sustainability, it is always open to abuse.

The same can be said of Neo-Darwinism. It is common, especially among those who seek to discredit neo-Darwinism, to criticize it on the basis of moral neutrality or, even worse, the moral depravity of it. Thus, some critics focus on the characterization of Darwinism as 'red in tooth and claw', meaning that creatures are only interested in their own self-preservation in direct competition with other creatures. The same criticism is often made of Dawkins' claim of the selfish gene. Yet, both criticisms are made on the basis of misunderstandings of what the original intentions of those claims were.²

Post also supported dualism on the basis of moral superiority. He claims that only the dualist can imbue all human life with the inherent value necessary for ethical treatment of the sick and disabled in society. This has already been shown to be incorrect. Thus, whilst these criticisms are made with noble intentions, ultimately they misrepresent the implications of these ideas. A materialist, neo-Darwinian position is criticized on moral grounds but, actually, it allows for a superior, inclusive morality. Only when humanity is viewed as occupying an equal (but not the same) role in the universe with the rest of creation can any truly sustainable relationship be cultivated.

By understanding all creatures to be addressed in the incarnation there can be no doubt that all creatures are imbued with inherent worth and value. The whole universe is created in the image and likeness of God, and the whole universe can function as a sustainable whole. The moral implications of this are wide and varied and cannot be sufficiently dealt with in such a short space. The question of what does it mean for chimpanzees, humanity's closest living cousins, to imitate Christ (i.e. morality) is already a huge question, let alone dolphins, elephants, and magpies, all of which evidence seems to suggest have a degree of self-consciousness. This is without even considering what it could possibly mean for plants and oceans. A few comments will be offered.

To begin with, it must be assumed that non-human creatures can exhibit moral behaviour. Celia Deane-Drummond (referencing Marc Berkoff) writes:

We do not have to ascribe to animals far-fetched capacities to reach the conclusion that they can make moral decisions in certain circumstances. (Deane-Drummond 2009, p. 161)

It is important not to anthropomorphize that moral capacity. What it means for humans to imitate Christ is not the same as it is for non-humans. However, widening what it means to contribute to sustainability must not be made so general and

²In the case of 'red in tooth and claw', whilst the 'evolutionary arms race' is a real phenomenon, the competition over sexual partners is much more important and has a far greater impact on evolution; Darwinism is more primarily about reproductive advantage. In the case of Dawkins' selfish gene, the term selfish here does not refer to conscious mistreatment of others for self-preservation or self-advancement, but refers to the copying fidelity of the gene; the gene is selfish because it does not 'want' to mutate.

all-inclusive that it becomes practically meaningless. A human morality and sustainability must not be forced on non-humans, but what it means for humanity to imitate Christ must contain a kernel of what it means for others. Again there is not the time to explore this, but love would certainly have to be central. Interestingly, this means that the Sermon on the Mount, for example, must be seen as having as many consequences for non-humans as it does for humans. The forests and oceans are humanity's neighbours.

Deane-Drummond continues:

Could we also say that animal behaviour can equally express a form of immorality that is related to their capacity for flourishing? Is there a sense in which dolphins, for example, could 'sin' inasmuch as they fail to realize their flourishing, becoming addicted to destructive behaviour patterns, rejecting their responsibilities as parents, and so on? (Deane-Drummond 2009, pp. 162)

If the sort of capacities that allow for human failure that lead to destructive (i.e. unsustainable) behaviour are found in other non-human creatures, as Deane-Drummond proposes, then it falls on these creatures to contribute to the sustainability project. Robert Cummings Neville suggests just this. He writes that:

Humans share normative responsibilities with a wider community than the human commonly defined, and that common definition is based on conditions that are evolving. When it comes to our responsibility to 'save the earth', 'we' might mean 'us and the dolphins'. (Cummings Neville 1997, pp. 106–7)

It is the argument of this paper that understanding the hypostatic union in such a way that includes other, non-humans provides an outlook that allows for just such an appreciation of the value and possible impact of non-humans. As Boff was so clear, humanity must work *with* creation not *over* it. It is anthropocentric and perhaps even arrogant and patronizing to claim that only humanity can look after this planet; human dominion is rejected. The sustainability project must not involve humanity intervening and arrogantly assuming they have all the solutions to all problems; this only leads to further problems. The sustainability project must involve working with creation, recognizing that there is just as much worth in other non-human creatures, who are also addressed by the incarnation, who benefit from it just as much, and who can offer just as much as humanity.

5 Conclusion

This paper has hopefully shown that sustainability is not only a *response* to the perceived problem of damaging human activity, it is, perhaps even primarily, an ontological result of being created in the image of Christ, especially in the context of neo-Darwinism. It has been argued that the traditional notion of the image of God is unreliable as a framework for sustainable action as it allows for potential exploitation. A neo-Darwinian re-interpretation fares far better, and is far more inclusive.

Humanity is no longer unique, no longer the crown of creation, and is no longer solely responsible for 'looking after' the Earth. Moreover, to think in those terms becomes arrogant and at odds with current understanding about humanity's place in the universe. Seeing the place of humanity through the lens of the hypostatic union shows that human action cannot be controlling *over* other creatures, it must be synergistic *with* other creatures, because all creatures are equal in the eyes of God.

Of course, a purely Christological approach to sustainability leaves some questions unanswered. It ignores, for example, the question of sin, which might be used as a way to explain why sustainability has become a problem to begin with. A Christological approach also fails to take into consideration the role of the Holy Spirit, which, more often than not, is understood as God's continual 'sustaining' and perfecting of the universe. The consequences of this more inclusive Christology need to be further explored within the context of the work of the Spirit and the role that sin plays in marring the relationships that such an inclusive Christology has suggested and the consequences this has for a continuing engagement with sustainability.

That tension between Holy Spirit and sin sits within the wider tension of divine and created activity. The divine act of Christ has already been discussed in terms of what it reveals about human activity but God's direct contribution (if it can be put in that way) has not been touched upon. The assumption that sustainability is a uniquely human endeavour has already been heavily criticized, yet what role God plays has, to a certain extent, been neglected. A wider reaching theological sustainability must include how this Christology fits into this larger scheme.

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David Brown completed a Ph.D. in 2016, submitting a thesis entitled *Christ and Evolution: A Re-interpretation of the Christology of Teilhard de Chardin After Neo-Darwinism*. Following this, David has continued to research the theological and Christological implications of neo-Darwinism, and the relationship between science and religion.

Re-Coupling Nature and Culture: How Can Primary Teacher Educators Enable Pre-service Teachers and Their Pupils to Breathe Life Back into Humanity's Tin Forests?



Deborah Myers

Abstract Meeker (1972) has long observed the tendency of Western democracies to separate culture from nature in order to dominate it. West Out of the Shadow: Ecopsychology, Story and Encounters with the land. (Under the Sign of Nature: Explorations in Ecocriticism), Charlottesville and London, University of Virginia Press, (2007) asserts it is the estrangement of culture from nature that contributes to a separation between the conscious reason and the unconscious psyche, leading to an alienation of individuals from their environment. The long-term consequences of such detachment lie in wait for future generations of the Earth's children. This paper reports the findings of a case study to explore how pre-service teachers' conceptualisations of Education for Sustainable Development were mediated using the picture book *The Tin Forest* (Ward and Anderson in *The Tin Forest*, New York, Templar Publishing 2001) and the dramatic inquiry pedagogy *The Mantle of the Expert* (Bolton and Heathcote in *So You Want to Use Role Play? A New Approach in How to Plan*, Stoke-on-Trent, Trentham 1999) to contextualize a programme of cross-curricular teaching interventions facilitating links between sustainability, the humanities and arts, within a series of science workshops. Findings indicate when teacher educators model to pre-service teachers the use of a cross-curricular approach to pedagogical design (Brown and Edelson in *Teaching As Design: Can we better understand the ways in which teachers use materials so we can better design materials to support their changes in practice?* Evanston, IL, The Center for Learning Technologies in Urban Schools 2003) and curriculum-making they demonstrate there are multiple ways of knowing and presenting curricular content to facilitate a diversity of responses from pupils as artists, poets, creative writers, makers, musicians, dancers, scientists, mathematicians, stewards and guardians.

Keywords Cross-curricular · Education for sustainable development
Pedagogical design

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1 Background

‘Culture shapes the way we see the world.’

Preface, World Culture Report,
UNESCO Publishing, Paris, 1999.

West (2007) asserts it is the estrangement of culture from nature that contributes to a separation between the conscious reason and the unconscious psyche, resulting in a decreased capacity to access parts of the psyche not valued in a capitalistic culture—leading to an alienation of individuals from their environment. The de-coupling of nature and culture leads to a growing lack of awareness of the tensions operating through interplay of three competing dimensions: environmental, social and economic, fuelled by the consumption patterns of societies, largely in the global North (Paris Climate Summit, 2015) that deplete the Earth’s natural capital (Constanza and Daly, 1992). The long-term consequences of such detachment lie in wait for future generations of the Earth’s children unless the potential of education to recouple connection between the natural world and culture is embraced by elementary and primary teacher educators working in institutions of Higher Education.

Mula et al. (2017, p. 1) assert the development of initiatives to transform societal attitudes towards more sustainable lifestyles, consumption and productivity ‘*must prioritise the education of educators—building their understanding of sustainability as well as their ability to transform curriculum and wider opportunities.*’ Preparing Pre-service Teachers (PST’s) to teach about Education for Sustainable Development (ESD) using cross-curricular approaches to curriculum design could provide a mechanism through which to facilitate pupils’ participation in democratic decision-making and problem-solving leading to mitigation of the consequences of unsustainable development (Filho et al. 2010).

In this paper, I report how primary PST’s conceptualisations of ESD were mediated by a programme of cross-curricular teaching interventions linking sustainability, the humanities, arts and sciences to enable PST’s and their future pupils to re-discover a relationship to nature that acknowledges society’s responsibilities for stewardship of the Earth’s natural resources, requiring recognition of the tensions generated by competing environmental, social and economic needs.

2 Primary Teacher Education in England

In England there are currently a variety of pathways to Qualified Teacher Status (QTS) in primary and Early Years education including school-based training routes and courses of initial teacher education in Higher Education Institutions (HEI’s). PST’s enrolled on courses of initial teacher education within HEI’s are required to study a range of modules including professional studies and subject disciplines and to successfully complete a number of practicums in learning settings including maintained schools, academies, multi-academy trusts (MAT’s) to demonstrate developing

competences in the Teachers' Standards (TS) (Department for Education 2011) regulatory framework governing the teaching profession, guided by a school mentor and a university Link Tutor.

The regulatory framework governing the teaching profession in England acknowledges the importance of teachers' roles in planning engaging curricular experiences (DfE 2011: Teachers' Standard 4) and the expectation that they '*contribute to the design and provision of an engaging curriculum within the relevant subject area(s)*' (DfE 2011: Teachers' Standard 4f). Heywood et al. (2012) maintain PST's become enculturated into ways of organizing learning and undertaking curriculum planning and delivery when joining professional communities of practice on entry to their placement schools. Teacher educators can facilitate the development of PST's pedagogical repertoires by modelling pedagogical design enabling them to teach creatively and for creativity (Jeffrey and Craft, 2004) through their '*imaginative and innovative arrangements of curricula*' (Dezuanni and Jetnikoff, 2011, p 264). For example, contextualizing learning for pupils so that it is relevant to their own lives is a key feature of effective teaching. However, within schools the organization of the primary curriculum through subject boundaries and the increasing emphasis given to assessment and testing in the last decades of the twentieth century may have exacerbated the separation of children's real-life and school experiences (Dewey 1916; Harlen and Deakin-Crick, 2004) resulting in the decontextualisation of learning. In his reconceptualisation of the primary curriculum Alexander (2012, cited in Heywood et al. 2012, p 98) envisaged '*the identification of an essential core from a broad range of disciplines*' to facilitate integration of sciences, arts and humanities providing a model of a curriculum that recognizes the interdependence of subjects while offering manifold opportunities to contextualize learning for pupils. Beyond school walls children encounter the world holistically; by creating opportunities to model to PST's the use of a cross-curricular approach to pedagogical design and curriculum-making teacher educators can demonstrate the interdependence of subjects, presenting curricular content so that learning is also contextualized and experienced holistically. For example, a focus on place-based learning enables teacher educators to demonstrate and PST's to experience there are multiple ways of knowing and responding to a local environment, as an artist, poet, creative writer, maker, musician, dancer, scientist, mathematician, steward and guardian.

Place is a complex conception, simultaneously occupying physical, temporal and continually changing space (Fig. 1) (Scoffham and Barnes, 2017, p. 225).

Places hold significance spiritually, culturally and economically to different groups of people at various times in history. Valuing or not valuing the natural capital of a place results from the confluent influences of the individual's social and cultural networks and the tension between their perceived needs and the need to protect environmental resources to restore and rebuild natural capital for future generations. PST's can raise pupils' awareness that people alter and degrade the world—its climate, atmosphere and ecology by continuing to consume its limited resources such as fossil fuels, by littering, using cars and through deforestation and land clearance in order to manufacture goods. Each individual develops their own unique connectedness to places locally, nationally and internationally with respect

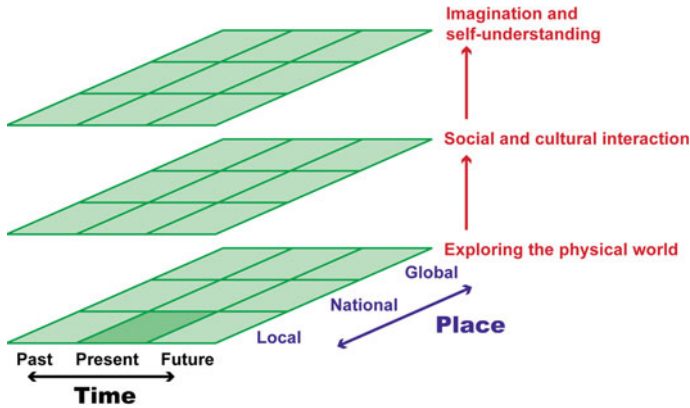


Fig. 1 The complexity of place. Reproduced with permission from Scoffham and Barnes (2017, p. 225)

to their cultural backgrounds, beliefs, attitudes and values. Since pre-history the oral tradition of story-telling has been used as an instrument of socialization and as the prime mechanism for the trans-generational sharing and transmission of culture, values and beliefs. Children’s Literature, through the sharing of stories, is currently central to the delivery of the English curriculum and may provide a medium through which to introduce young readers to contemporary environmental and cultural concerns about human consumption and production in a safe emotional space (Stephens 1992):

Through reading in particular, pupils have a chance to develop culturally, emotionally, intellectually, socially and spiritually. Literature, especially, plays a key role in such development (DfE, 2013, p. 13).

Burke and Cutter-Mackenzie (2010 p. 315) carried out a survey of 100 picture books that explore environment and place and identified four emerging environmental themes (Fig. 2).

This conceptual framework could provides a useful tool to enable PST’s to map the environmental issues in a selection of picture books for young children in order to support pedagogical design and curriculum-making through the identification and contextualization of a variety of cross-curricular inquiries. Moreover, in providing such learning opportunities PST’s could facilitate the reconnection of their future pupils to their environments.

2.1 The Teaching Programme

Prior to the introduction of the new National Curriculum (DfE, 2011) a team of teacher educators designed a module *Student Enquiry: Creativity and the Core Cur-*

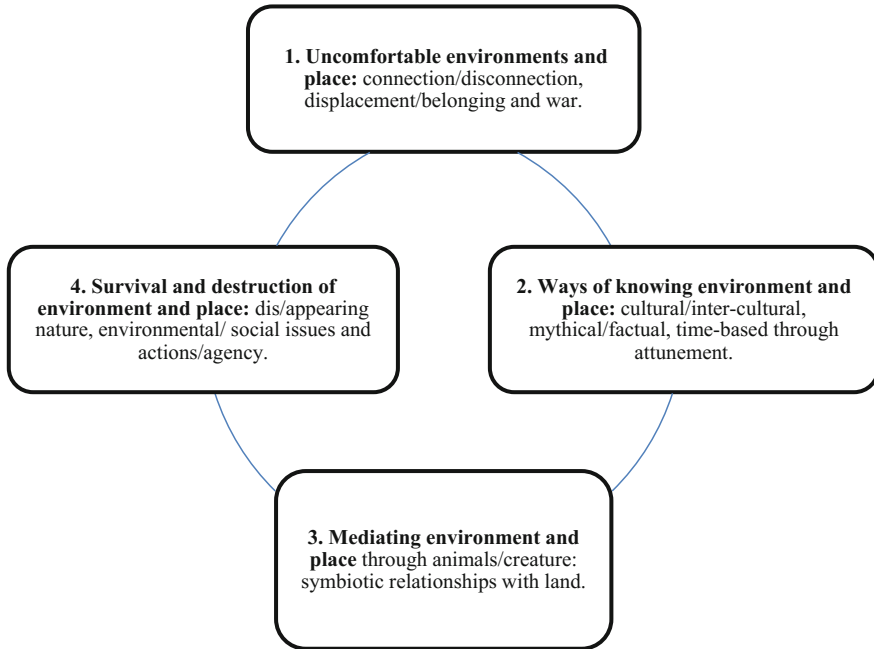


Fig. 2 Themes addressed in a selection of picture-books exploring environment and place (Burke and Cutter-MacKenzie 2010)

riculum to develop third year under-graduate PST’s competences in cross-curricular planning, pedagogical design and creative curriculum-making based upon Alexander’s (2010) curricular model of an essential core of interdependent disciplines. The module incorporated an introductory conference including keynote lectures and workshops that drew on the expertise of practitioners who were successfully using a cross-curricular approach to enrich curricular provision and assessment in their schools. Two off-site visits were organized to differing environments including a coastal setting and a forest to contextualize a dramatic inquiry about a natural disaster and to introduce simple techniques of habitat mapping to appreciate the natural capital of these environments. Workshops were designed in which cross-curricular inquiries were modelled to PST’s for subsequent adaptation and emulation in school-based placements.

The module was introduced to PST’s via the student conference to explain the purpose of the teaching programme in preparing PST’s to design a cross-curricular scheme of work for delivery over at least four weeks of their final placements. PST’s were not required to undertake inter-disciplinary syntheses across subjects to identify integrated learning goals but to identify over-arching learning goals (Heywood et al. 2012; Stein et al. 2008). While tutors on the teaching programme provided opportunities to model how to design and plan a cross-curricular scheme of work the actual focus of PST’s schemes of work would be determined by the requirements

of the placement school staff and the curriculum planning in place at the time of the practicum. PST's would be required to teach, assess and evaluate the effectiveness of their schemes of work in enabling them to meet support children to make progress in each area of learning and to reflect on the experience of teaching using a cross-curricular approach. These reflections would be used to provide an evidence base to inform the development of the student enquiry assessments, consisting of an individual written assignment and a group presentation.

3 Research Design

A small-scale research study ran in parallel with the module drawing on volunteers because the decision to take part was optional. The purpose of the study was to capture PST's conceptualisations of ESD before and after a programme of teaching interventions. A critical realist epistemological perspective was adopted reflected in the use of mixed methodological tools to provide personal and contextual foci of analysis.

3.1 *The Research Process*

In developing the rationale for the use of Children's Literature and the dramatic pedagogical approach *The Mantle of the Expert* (Bolton and Heathcote, 1999) to integrate the humanities within the science workshops I drew upon experiences gained in my previous role as a teaching Head. While working in this role I designed a cross-curricular scheme of work that brought to life the story of '*The Tin Forest*' resulting in the construction of multiple outdoor learning environments—including a Roman Apothecary garden and a fairytale willow village—in which to facilitate cross-curricular working and to develop an inquiry-based curriculum positioning teachers and learners as knowledge-makers engaged in collaborative curriculum-making (Siegal, 1995; Priestley, 2012). This scheme of work informed the development of a project that earned a finalist place in the Rolls-Royce Science Prize in 2007–2008 during the UN's decade of Education for Sustainable Development (DESD 2005–2014). Aspects of this project were shared with PST's during the science workshops on habitat mapping, re-cycling and shelter building enabling explorations of themes of sustainable development, interdependence of plants and animals in ecosystems and the application of knowledge and skills about forces and materials in relation to developing survival shelters in hostile environments. PST's were also able to see how children had responded to the outdoor learning environment as poets, artists, musicians, historians, explorers, scientists and creative writers.

4 Data Collection

4.1 Pre- and Post-teaching Intervention Questionnaires

Questionnaires were issued to PST's before and after a programme of teaching interventions to evaluate their experiences of ESD in placement schools.

4.2 Vocabulary of Sustainable Development Pre- and Post-teaching Interventions

Each PST was asked to generate five words they associated with the theme of Sustainable Development before and after the programme of teaching interventions to monitor the change in their conceptualization of sustainable development through the growth of their vocabulary about the subject.

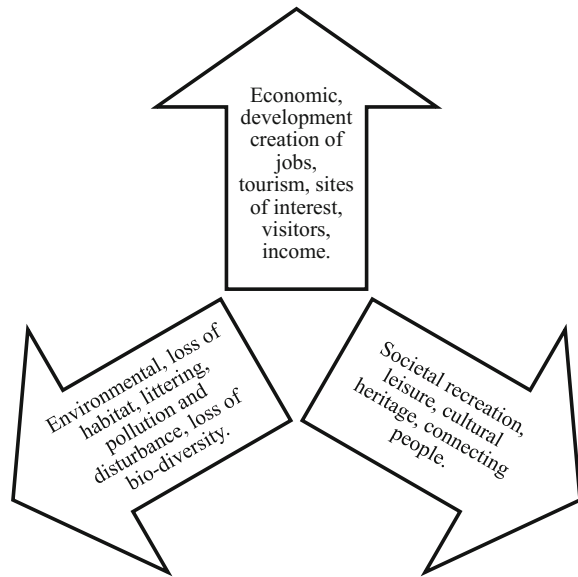
4.3 Focus Group Discussion

A focus group was organized to enable PST's to reflect on how their conceptualisations of ESD were developing as a result of the programme of teaching interventions, and to enable them to talk through their ideas others.

5 Ethical Considerations

Ethical issues were involved in this study because research was undertaken with students enrolled on a course of initial teacher education. Module tutors occupy positions of authority and power with respect to individual students, supervising them on placements and marking an allocation of assignments. Opie (2004: 30) acknowledges a potential ethical issue that arise due to such an imbalance of social power between researchers' and their participants and advisers researchers to remain '*...mindful to use that power responsibly and ethically*'. An 'ethics checklist' was compiled in accordance with British Educational Research Association (BERA) guidelines before beginning the study. Moreover, participation in this study was optional and voluntary to avoid adding to students' workload. The purpose of this study was shared with those students interested in participating in research, as agreement and enthusiasm to participate were important. Information and consent forms were provided together with explanations of how data would be collected, stored and used. Assurances were given that anonymity and confidentiality of participants would be

Fig. 3 The tension between interplay of societal and economic needs and the need for environmental protection



maintained throughout the study and that participants could withdraw without penalty at any point.

6 Teaching Interventions

Learning Beyond Classroom Boundaries: Coastal Setting and a Natural Disaster

PST's and their teacher educators visited a coastal setting and on a stormy windswept beach they collectively re-enacted a natural disaster—engulfment by a tsunami—with the subsequent loss all services and sources of help. PST's were tasked to create shelters in which to survive drawing on the natural and man-made materials they could salvage. PST's were physically, cognitively and emotionally challenged while working collaboratively to construct shelters. Their immersion in 'flow' experiences is characteristic of deep learning (Csikszentmihalyi, 1997).

PST's were able to explore the habitats in the dunes and inter-tidal zone and to identify the risks to species due to habitat loss from sea level rise, development and habitat degradation from recreational disturbance and to consider whether such loss is acceptable in order to develop the local economy to provide jobs and recreational facilities. These activities enabled PST's to experience the interplay of competing needs: the need for jobs and development of the local economy, the need for leisure and recreational facilities and the need to protect the environment (Fig. 3).

PST's were invited to respond to their experiences at the coastal setting and individually, in pairs and in groups they used creative writing, poetry, art, music and prayer as a way of responding.

7 Learning Beyond Classroom Boundaries: Forest—Habitat Mapping

'Planet Earth and its eco-systems are our common home.'

Point 59 Incheon Declaration

PST's and their teacher educators visited a local forest to carry out habitat mapping, observing the bio-diversity of plants and animals and their interdependence and to consider the ways in which the forest was used to support the local economy through the creation of jobs and its economic development in supporting healthy lifestyles, recreational facilities. Identification of species of trees, plants, birds, small mammals and amphibians including newts was facilitated using guides from the Field Studies Council and the habitats were mapped using hoops, quadrats and transects running from sunny to shady areas.

8 Science Workshop 1: Contextualizing ESD Using Children's Literature and the Mantle of the Expert

On campus a definition of Sustainable Development was shared and deconstructed by groups of PST's:

Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs. (World Commission on Environment and Development 1987)

8.1 Literary Inquiry

The picture book *The Tin Forest* (Ward and Anderson, 2001) was read aloud to PST's. This story is an allegory in which omniscient narrator focalisation allows readers to observe the negative impact of unsustainable consumption and production on the environment. The main character, an old man, lives in a small house '*near nowhere and close to forgotten that was filled with the things no one wanted [...] that looked out on other people's rubbish*' (p. 2). He spends his days trying to '*tidy away the rubbish, sifting and sorting, burning and burying*' (p. 4).

The conceptual framework developed by Burke and Cutter-Mackenzie (2010) (Fig. 1) was used, as an analytical tool by groups of PST's to deconstruct the envi-

ronmental themes in the story. The author and illustrator interweave all four environmental themes identified in Fig. 1 enabling the introduction of contemporary environmental and cultural concerns about human consumption and production to a young readership.

8.2 Uncomfortable Environments and Place

PST's recognized the story immediately invites readers to explore the values they hold regarding the environment by prompting a range of questions. For example, where has all the rubbish come from? Does it matter that all the rubbish has ended up in one place? Does the rubbish dump represent the many regional landfill sites that people prefer to ignore and forget? The barren grey landscape represents the main character's social isolation and disconnection from nature and society. The juxtaposition of grey and colourful images provides readers with a glimpse of a biologically diverse world he would prefer to inhabit, accessible to him only through his dreams.

8.3 Ways of Knowing Environment and Place

PST's were able to observe synchronous cycles flowing through the narrative including biological time represented by the interdependence of the life cycles of plants, birds and animals that could prompt a study of seasonal changes including dormancy, germination, growth, flowering, reproduction, death and decomposition. Superimposed upon these biological cycles are those cycles of cultural progression, regression and deconstruction that lead to regeneration and reconstruction exemplified by humanity's patterns of consumption: using, re-using, re-cycling and creating something new.

8.4 Mediating Environment and Place

'Under the old man's hand a forest emerged' (Ward and Anderson, 2001, p. 13). A longing to restore the present state of dissatisfaction with self and with the surroundings is triggered by the main character reading books about nature—provoking a sense of nostalgia, a memory of how things were and could be again, prompting action as the main character seeks to return their world to a past, natural state, to re-instate connection with nature and to develop sustaining relationships. PST's observed the old man using his hands to transform his dismal environment facilitating reconnection with the dynamic and restorative energies of nature.

8.5 *Survival and Destruction of Environment and Place*

The primordial power of nature is operationalised with help from humanity and a barren landscape is transformed into a rich ecosystem as the old man's dream of a living jungle is thus brought to life as a real forest begins to grow through his tin forest. The growth and development of the jungle provides visual solace and nourishment that restores the old man's soul, nurtures his spirit and re-shapes his destiny as he enjoys connectivity to all forms of living creatures.

PST's identified the use of visual metaphors as key symbols in enabling them to deconstruct the text. Kirmayer (1993) observes the recognition of symbols of healing in texts requires readers to actively participate in interplay between three concepts of myth, (narrative of self), archetype, (the bodily given), and metaphor, (linking narrative and bodily given). In the picture book visual metaphors link the personal interior world—through stimulation of the senses—to the external, physical world, in which language is used to objectify and define experience. The metaphor of personal and environmental transformation as the means of representing, contrasting and '*restoring broken wholeness by recollecting something lost, past or eroded by reconciling it in our experience of the present with a vision of what it should be,*' (van Manen, 1990, p. 153) was used to provide symbols of healing—of the human psyche and of the damaged environment to rebuild natural capital. As the main character cultivates greater connectivity with the natural world he is revealed to be the creator of a special place, a place of spiritual solace that nourishes the psyche, reminiscent of the Garden of Eden.

The story provides both PST's with an example of how individuals can act as change agents taking greater responsibility for shaping their destiny through direct action as social actors reflecting and analysing what has and what is happening within their own communities. Group discussions enabled them to explore how they could use the story to engage pupils with the concepts of responsible citizenship and stewardship, sustainable change, recognition of the needs and rights of future generations, interdependence, diversity, quality of life, equity and justice in consideration of a cultural shift from consumerism.

8.6 *Dramatic Inquiry*

PST's were introduced to the pedagogical strategy *The Mantle of the Expert* in which participants act as experts to contextualize science inquiries. They investigated issues of sustainable development including collecting samples of stream water to test using the OPAL survey resources, purifying contaminated water, sorting litter (plastics, paper, metals) investigating the drainage of soil samples, examining leaf litter for stages of decomposition, assisting the processes of composting, re-cycling materials.

Table 1 A selection of cross-curricular tasks designed to survey the perspectives of woodland creatures about damage to their habitats

Habitat Mapping and Protecting the Environment from Non-sustainable Development The Tin Forest (Story) PST Preparation to teach Sustainable Development		
EYFS	KS1	KS2
Sensory trails in the environment	Mapping habitats using hoops in sunny and shady areas of the woodland	Mapping habitats using quadrats and transects
Collecting leaves, sorting and classifying by shape and colour		
Pond dipping. Observational drawing, sorting, classifying and identification of plants and animals using guides		Opal Water Quality Survey
	Construction of habitats-in-boxes with puppet predator-prey puppets to stimulate creative writing and play-scripts	‘Pleased to eat you!’ Interdependence—food chains
	Predator-prey healthy eating party	Hedgerow Detectives—Who Eats Who?
	Posters banning humans from the woods for bad behaviour	Creative writing: Seed poetry in motion. Posters banning humans from the woods
	Development of an environmental code of conduct for humans	News report of woodland creatures perspectives of human activities on their habitats

9 Science Workshop 2: Habitat Mapping

PST’s participated in a carousel of creative tasks to develop their habitat mapping findings (Table 1).

10 Science Workshop 3: Hostile Environment Shelter Building

PST’s were required to construct shelters for a creature that is now stranded in an environment to which it is no longer adapted, using natural materials to meet a rubric of scientific success criteria. The first step was to consider why and how a creature that was previously perfectly adapted to the conditions in its environment was now vulnerable because its adaptive traits were deleterious to its survival. Many children and adults hold the preconception that plants and animals have the capacity to change

in response to a transformative event, need or threat to survival in their habitat (Allen, 2014). In later years they may come to understand the mechanisms of differential survival and reproduction operating within populations of plant and animal species in which there exists variation in adaptive traits enabling evolution and adaptation over generations. This task illustrates sudden changes in environmental conditions due to climate change actually interfere with the mechanisms of natural selection and evolution resulting in loss of species and disruption to the food chain.

11 Curricular Responses to the Teaching Programme

At the end of this session PST's were invited to work in groups of four to create a cross-curricular scheme of work to teach Key Stage 2 pupils about sustainable development drawing on the pedagogies that were modelled as starting points. PST's integrated learning objectives from different curricular subjects to produce a coherent unit of work on ESD demonstrating the interdependence and inter-connectedness of subjects this approach also enables the environment to be encountered in a holistic way, facilitating a diversity of authentic responses from both PST's and their young pupils: as artists, poets, creative writers, makers, musicians, dancers, scientists, mathematicians, protectors, stewards and guardians (Table 2).

PST's pedagogical designs for this learning-in-nature initiative facilitated the development of trans-disciplinary, immersive learning experiences from three value positions familiar within Early Years education: individualism, community and collectivism (Alexander, 2010).

12 Results

Thirty-five respondents ($N = 35$) participated in the research study.

Pre-Teaching Intervention Questionnaires:

Q1 In placement schools how is the curriculum delivered?

Table 3 Pre-service teachers' experiences of curriculum delivery during primary school placements.

PST's observed the primary curriculum to be delivered mainly as discrete subjects.

Q2 Have you observed ESD being taught?

PST's were asked to report their observations of how ESD is taught and delivered in their placement schools. Where it was taught it was delivered through a topic theme.

Q3 Which of these operational practices did you observe in placement schools?

Table 2 A selection of creative writing tasks designed to survey the views of woodland creatures and insects about the destruction of their habitats through time

Response to the environment as	EYFS	KS1	KS2
Writer poet	Animal passports	Animal Diaries	Seed poetry in motion
		Woodland News Reports	Personification of the Seasons
	Animal puppets	Food chain puppets and play-scripts.	Preparation for Children’s Climate Change Conference in role as animals: polar bear, sea-snail, and mosquito squadron
	Looking after wildlife	Woodland puppets to explore predator-prey relationships	
Artist	Painting and drawing found materials in the environment	Nature’s seasonal colour palettes. Camouflaged animals and sea creatures in their habitats using water colours, pastels, collage and shading to reflect refract and scatter light	
		Painting using berries, seeds and plants	
	Investigating colours, shapes and textures in nature	Artists: Andy Goldsworthy: environmental art. William Morris: illustrations of nature.	
Musician	Painting and drawing indoors and outdoors with musical accompaniment.	Music of the ocean The Storm	Music of the forest
Dance	Mini beast boogie	The Four Seasons in the Woodland	Belladonna: dance of the deadly nightshades
Maker	Den building Fairytale Willow Village	Eco-boxes: woodland, pond, inter-tidal zone habitats Constructing malevolent plants	
Historian	Toys and playground games in the past	How we used to live in the past	Forest settlements
			Tales of the Old Oak Tree (One thousand years observing history)
			Land use through time.
Geographer/ Explorer			Mapping the forest
			Mapping the beach and dunes

(continued)

Table 2 (continued)

			The Uses of Plants by Ancient Communities: food, drinks, fuel, medicines, building materials, weapons, tools, writing materials, textiles, dyes, paints
Scientist	Collecting evidence of seasonal changes	Identifying and classifying plants and animals. Mapping habitats using hoops in sunny and shady areas of the woodland	Habitats
			Animal and plant adaptations.
	Mapping habitats using quadrats and transects.		
	Opal Water Quality Survey		
	Bio-diversity of creatures in leaf litter, the woodland, pond and campus grounds		
Nocturnal animals	Observing leaf shapes and their specialized adaptations: cactus spines, drip-tip		
Animals and plants in the world around us	Pond dipping. Observational drawing, sorting, classifying and identification of plants and animals using guides	The creation of bottle gardens to mimic the four levels: the forest floor, the understory, the canopy and the emergent layers using cress, tomato and bean seeds	
Growing plants. Caring for animals and nature	Hedgerow detectives		
Gardener	Growing flowers, fruits and vegetables.	Growing Sensory and Apothecary gardens. Sharing harvest with our local community	
Growing gardens for learning: fruits of the forest: fruits of the forest	Creating fruit smoothies	Monitoring plants and animals in different habitats	

(continued)

Table 2 (continued)

Mathematician	Quantifying observations in the natural environment through counting, comparing, ordering, ranking, measuring changes to enable children to work scientifically and to generate evidence based explanations and arguments		
Protector/Guardian/ Steward	Woodland Buddy Patrols	Woodland Council	Council of the Trees
		Posters banning humans from the woods for bad behaviour	Development of an environmental code of conduct for humans
Mitigating damage to the environment	Sorting litter derived from packaging: paper, card, plastics		
	Observing stages of decomposition in leaf litter		
	Composting processes and campaign		
	Re-cycling paper: creating writing paper, bags and papier-mâché containers; testing the strength of different papers		

Table 3 Pre-service teachers' experiences of curriculum delivery during primary school placements

National Curriculum Subject	22
Cross-curricular theme	8
Commercial Scheme of Work	8

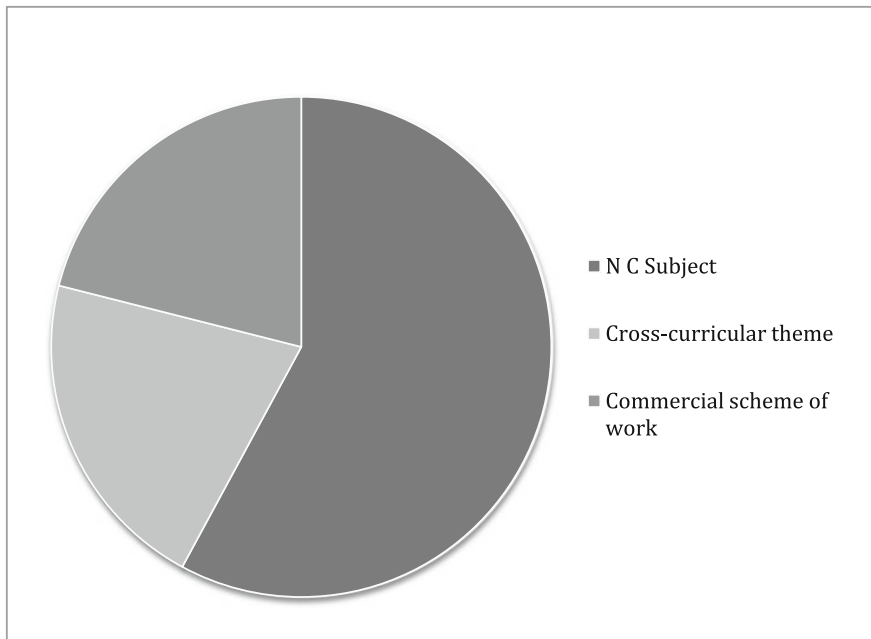
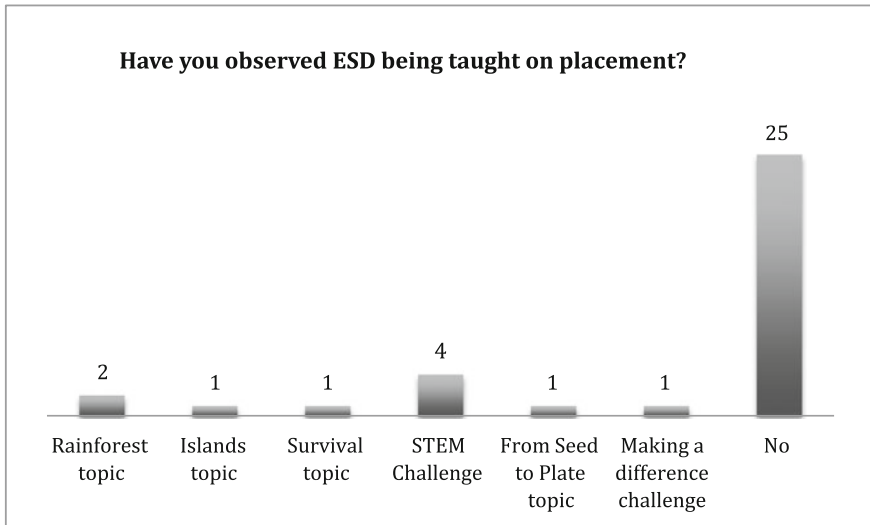


Table 4 PST’s observations of how ESD is taught in their placement primary schools

YES	Rainforest topic	2
	Islands topic	1
	Survival topic	1
	STEM Challenge	4
	From seed to plate topic	1
	Making a difference challenge	1
NO		20



In line with local authority policies on sustainable development and working practices schools have adopted sustainable operational practices. PST’s reported observing many of these sustainable working practices in their placement schools.

Table 5 Pre-service teachers’ observations of sustainable operational practices in their placement schools.

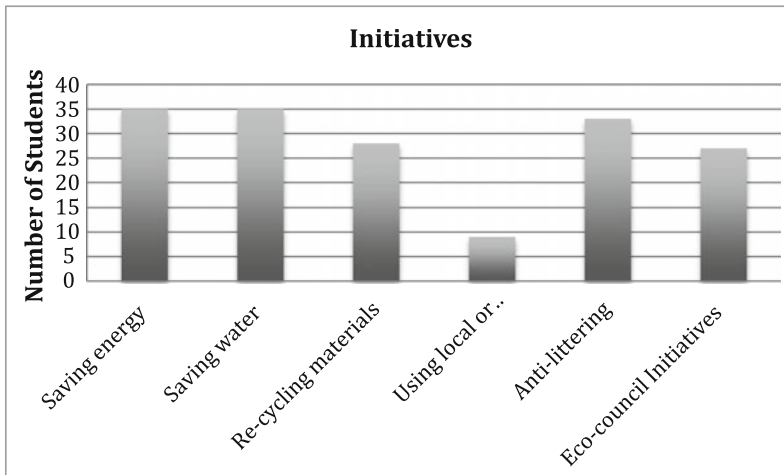
Vocabulary Generation and Frequency

Each PST generated five words they linked with the term sustainable development. These words were coded and classified according to whether they corresponded to the environmental, social or economic dimension of sustainable development (Table 6).

Wordles were created to enable the vocabulary generated before (Fig. 4) and after (Fig. 5) the teaching interventions to be visualized.

Table 5 Pre-service teachers’ observations of sustainable operational practices in their placement schools

Operational Procedure	Number of PST’s observing practice
Saving Energy	35
Saving water	35
Re-cycling materials	28
Using local or fair-trade produce	9
Anti-littering campaigns	33
Eco-council initiatives	27



Before the teaching programme PST’s demonstrated a narrower vocabulary based on their awareness of environmental damage such as climate change and social initiatives including re-cycling and saving energy to mitigate such damage. After the teaching programme and visits to a coastal setting and a forest in which they mapped habitats, PST’s vocabulary indicated greater awareness of the effects of damage to ecosystems and disruption of food chains and depletion of resources.

13 Post-teaching Intervention Questionnaire

Qi Should ESD be taught in primary schools? Explain your answer (Table 7).

All PST’s expressed the view that ESD should be taught in primary schools.

Qii How could ESD be taught in primary schools? (Table 8).

Table 6 A comparison of the vocabulary PST’s linked to notions of sustainable development before and after the teaching intervention

<i>Pre-teaching Intervention</i>					
Environmental	Frequency	Social	Frequency	Economic	Frequency
Climate change	35	Damage	20	Energy	32
Environment	5	Destruction	11	Buildings	3
Flooding	18	Re-cycling	35		
Ozone Layer	6				
<i>Post-teaching Intervention</i>					
Environmental	Frequency	Social	Frequency	Economic	Frequency
Acid rain	1	Damage	1	Agriculture	1
Bio-diversity	30	Destruction	1	Development	3
Climate change	35	Protection	10	Energy	10
Deforestation	5	Re-cycling	16	Shortages	11
Drought	2	Responsibility	13	Urbanisation	3
Eco-systems	15			Population	8
Flooding	1				
Habitats	2				
Nature	2				
Ozone layer	2				
Pollution	2				
Rainforest					

PST’s largely identified the use of cross-curricular approaches as a valuable way to teach ESD to primary pupils.

Focus Group

Initial stimulus question: Which aspects of the teaching programme were helpful in enabling you to develop greater understanding about sustainable development?

Student A: I found the story helpful in relating the fieldwork to the issues. I think it would be an ideal way to introduce children to these issues.

Student B: Yes, but actually making the habitats in boxes with the predator-prey puppets was a good way to get the views of the animals about what’s actually happening in the habitats. I’d never have thought of making habitat characters.

Student E: No I would never have thought of using puppets to give different points of view but I could see it working with children.

Student C: You could use them to hold debates—different viewpoints. The thing is the teacher has to help the children make the links to the teaching and the issue.

Table 7 Should ESD be taught in primary schools?

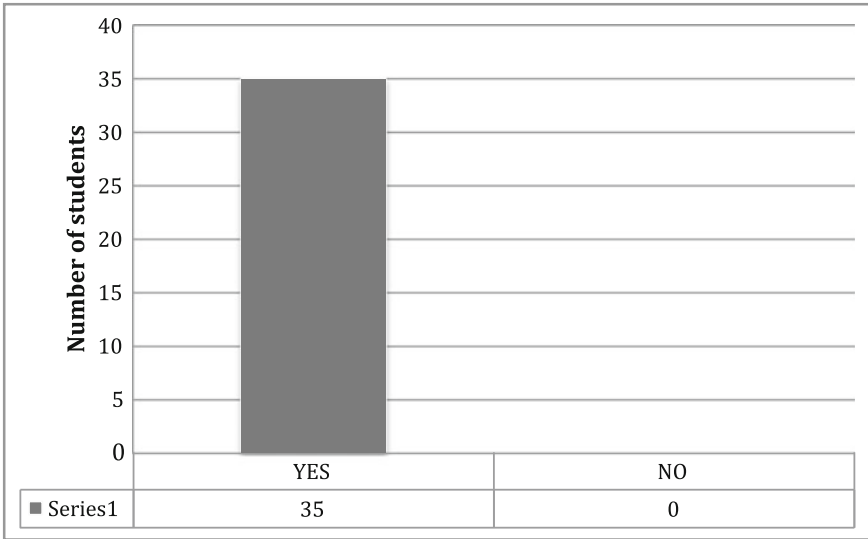


Table 8 PST's identified the use of cross-curricular approaches to be appropriate ways to teach ESD to primary pupils

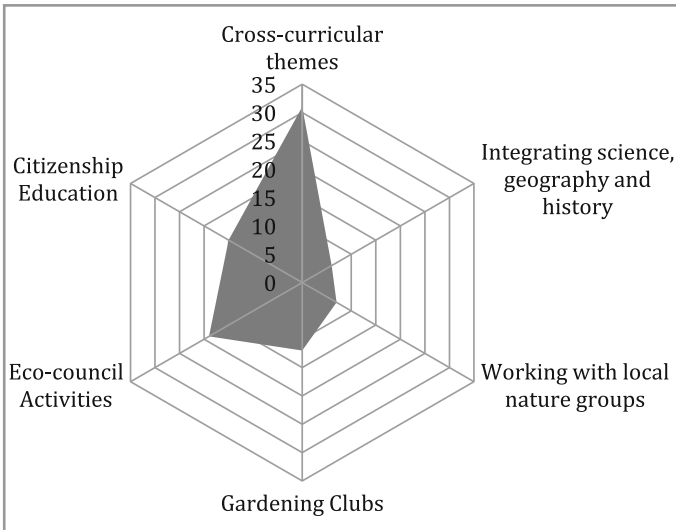




Fig. 4 Pre-service teachers' vocabulary relating to sustainable development before the teaching programme



Fig. 5 Pre-service teachers' vocabulary relating to sustainable development after the teaching programme

Student C: Some children do know a lot about issues if they watch TV, if their parents talk with them. I think it would be a great area to cover in school—I mean to teach about it—it's more relevant than a lot of things going on.

Student D: It makes me think we need a more relevant curriculum.

14 Discussion

Findings indicate many PST's had not observed ESD being delivered as part of a taught curriculum but through adherence to operational practices in line with local authority employers' expectations. The data collected indicated the programme of teaching interventions that promoted a cross-curricular approach to the teaching of ESD was effective in enabling teacher educators to raise PST's awareness of issues of sustainable development by extend the vocabulary they used to describe sustainable development from an initial focus on environmental terms to terms embracing the role of social actors and economic development.

The use of immersive fieldwork experiences further developed through the use of story-telling, role-play and scientific techniques to begin to mitigate the threats to the environment posed by consumption and production was valuable in providing pedagogical models for PST's to emulate in future. For example, fieldwork in the coastal and woodland settings enabled PST's to compare and contrast the use of land and resources to sustain human life, to support economic development and the problems of sustaining natural sources of resources. Each location was deconstructed with respect to local, national and global impacts of sustainable development while meeting the anticipated needs of present and future generations (Scoffham and Barnes, 2017). As a result PST's were able to appreciate changes to a place may be a consequence of natural phenomena and include the seismic movements of the Earth's tectonic plates causing earthquakes and tsunamis, or the result meteorological phenomena causing storms, hurricanes, flooding and drought. In contrast changes may result from human activities that increasingly draw on the Earth's natural resources—clearing land to build homes, raise crops, graze animals, to establish and sustain communities and to provide energy to fuel lifestyles. Such immersive, multi-sensory learning experiences provoked emotional responses from PST's who had to work collaboratively to overcome the many threats to their survival (Goswami, 2015). PST's were able to collectively experience such changes create tensions between the competing needs of the individual and the capacity of the environment to provide for human needs.

In science workshop 1 Children's Literature and the Mantle of the Expert drama technique were used to contextualize strategies to mitigate problems including littering, polluting and disturbing feeding relationships and natural cycles were explored using water surveys and creating purification systems, by assisting natural decomposition processes (composting) and by re-cycling packaging.

Limitations of the research

The findings of this exploratory case study reflect a localized context because a very small sample size within one university has been studied (Denzin and Lincoln, 1994). It would be valuable to study a larger number of PST's in different Higher Education Institutes who are placed in schools within different local authorities and those engaged in school-based initial teacher education or in MAT's to see if there is variation in the findings due to local initiatives promoting ESD.

Implications of the research for future teaching

The role of primary teacher educators in preparing PST's to teach ESD using a cross-curricular approach is fundamental if elementary and primary teachers are to be effective in both introducing young learners to the SDG's in order to facilitate responsible citizenship and stewardship of the Earth and its limited resources and to effect changes in the behaviours of future generations with respect to consumption and production of materials goods and to restore natural capital.

A larger study could be carried out in future to gauge PST's perspectives of working in a cross-curricular way to teach ESD and to engage them in curriculum-making during their initial courses of teacher education.

A study of practicing teachers' experiences of teaching ESD would be valuable in order to identify and audit professional development needs in this subject area.

15 Conclusion

The purpose of this case study was threefold, to investigate whether the use of a cross-curricular approach to pedagogical design and curriculum-making would provide an effective way to mediate PST's conceptualisations of ESD, to provide a model to demonstrate to PST's there are multiple ways of knowing and to experiencing and responding to the environment and to raise PST's awareness of their responsibility to teach ESD by creating transformative curricular opportunities for their future pupils. The use of the picture book, visits to the coastal and forest settings and use of dramatic inquiry did provide PST's with ideas to support their own cross-curricular planning to facilitate future pupils' engagement in learning that encourages moral reasoning about human consumption and production. Story-telling, role-play and the use of puppets were effective in engaging PST's in discussion about issues of sustainable development and suggested ideas for pedagogy to facilitate stewardship of the Earth's resources to ensure they remain available for future generations.

The findings of this case study suggest when teacher educators model to PST's the use of a cross-curricular approach to pedagogical design and curriculum-making they demonstrate there are multiple ways of knowing and presenting curricular content to facilitate a diversity of responses from pupils as artists, poets, creative writers, makers, musicians, dancers, scientists, mathematicians, stewards and guardians.

A new National Curriculum (DfE, 2013) was introduced in England in September 2014 but it is statutory only for state maintained schools, including voluntary aided and voluntary controlled schools. Academies, Multi-academy Trusts (MAT's) and free schools may choose to adopt it or to design their own curriculum. Organized as four Key Stages delineated by age, Programmes of Study provide both statutory expectations and non-statutory guidance for both core and foundation subject teaching at Key Stages 1 and Upper and Lower Key Stage 2. The core subjects include English, mathematics and science; the foundation subjects include art and design, computing, design and technology, languages, (from Key Stage 2) geography, history, music, physical education and religious education.

The National Curriculum (DfE, 2013) framework document stipulates all pupils in state maintained schools should experience a broad and balanced curriculum that:

- *promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society, and*
- *prepares pupils at the school for the opportunities, responsibilities and experiences of later life.*

(DfE, 2013 p. 5: 2.1)

However, within this framework there is no explicit direction for pupils' to study a unit of Education for Sustainable Development, but there is recognition that a national curriculum is only a part of a school's curriculum offer; permission is given to schools to engage in curriculum-making:

Schools are also free to include other subjects or topics of their choice in planning and designing their own programme of education.

(p. 5, 2.5).

The United Nation's (UN) development agenda *Transforming Our World: the 2030 Agenda for Sustainable Development* (UN, 2015) is the current vehicle through which the UN will advance its global focus on Education for Sustainable Development (ESD) over the next 13 years. Decried as a plan of action for people, the planet and prosperity, it is the legacy of the UN's Decade of Education for Sustainable Development (DESD, 2005–2014; UNESCO, 2005) and builds upon the Millennium Development Goals (MDG's). Consisting of 17 Sustainable Development Goals (SDG's) and 169 targets it advocates a global vision for a sustainable future through the eradication of poverty and a drive for peace among nations and communities. This study raises issues about the relevance of the curriculum—do courses of initial teacher education in Higher Education serve the needs of the present generation by acknowledging the responsibilities the present generation has towards future generations in sustaining the natural capital of the planet?

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Field Studies Council: <http://www.field-studies-council.org>

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Is It Possible to Give Environmental Issues a More Prominent Role in Church Life?



Derk Harmannij

Abstract Many theologians and faith leaders seek to make a strong link between concerns for the environment and their faith. By making a strong connection between theology and faith on one hand and the environment and sustainability on the other hand they attempt to show that issues like climate change, air pollution or biodiversity loss are not merely scientific or political issues but also spiritual issues. For them environmental problems are important and urgent issues which the church cannot ignore. However, many believers do not necessarily share this view and for many there is often little relationship between their faith and the environment. Drawing on findings from focus group interviews with churches and research done with a Christian environmental organisation this paper will identify three major problems that obstruct environmental issues from becoming part of church life. The identified problems are: indifference and polarisation towards environmental issues among churchgoers, a lack of engagement with the environment in local churches and the decline of institutionalised Christianity. The paper will also make a brief attempt to propose a solution which might help environmental issues to gain a more central place in church life. The paper will argue that churchgoers need to be engaged by people who they personally know and trust, rather than distant theologians and faith leaders. Clergy and also churchgoers, who are concerned about the environment, need to engage openly, sincerely and personally with their fellow churchgoers within the context of their local church. Otherwise environmental issues are likely to remain an elitist project of a few high ranking faith leaders and environmental activists.

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1 Introduction: High Expectations

In recent years, many faith leaders and theologians have taken a great interest in the relationship between faith and the environment and have come to see environmental problems as important issues. The field of eco-theology has been booming and many theologians have started to explore what relevance theology has to issues like climate change or food waste. Also, faith leaders like Pope Francis, Archbishop Justin Welby and Patriarch Bartholomew have all urged their followers to take action against environmental problems. Due to this apparent surge in faith-based environmental concern many scholars and environmental activists have started to consider religious institutions as important partners in addressing environmental problems (see for example Sagan 1990; Kolmes and Butkus 2009; Hall et al. 2009; McLeod and Palmer 2015). Also organisations like the UN and the World Bank have been enthusiastic about the potential of religious institutions in the addressing of environmental problems (UNEP 2016; World Bank 2006). The UK Environmental Agency has even put ‘faith communities’ on the second highest spot of its list of ‘the 50 things that will save the planet’ (Environmental Agency 2007) and Dasgupta and Ramanathan (2014) argue that involvement of religious communities may well cause ‘*a massive mobilization of public opinion by the Vatican and other religions for collective action to safeguard the well-being of both humanity and the environment*’ (p. 1457). Some have even argued that ‘global religion is greening’ (Chaplin 2016) or that ‘religions are entering their ecological phase’ (Tucker 2003).

However, these statements lack the empirical evidence to back up these rather sweeping claims. Although many faith leaders and theologians are convinced that environmental problems are serious and need to be addressed it remains unclear to what extent the billions of believers around the world share this view and how willing they are to take action. Very little research goes beyond the assumption that religion could spur believers into caring for the environment (Taylor 2011; Haluza-Delay 2014). And another problem is that environmental issues often deeply divide opinions along political lines, not just in the USA but also in Europe (Dunlap et al. 2016; Unsworth and Fielding 2014; McCright and Dunlap 2011; McCright et al. 2016; Clements 2012) and these deep political divides are likely to hinder environmental issues from gaining traction in church life. There also still remains a dark shadow from the accusation of Lynn White, who described the anthropocentric outlook of Christianity as one the roots of the current environmental problems (White 1967). This concern for the negative influence of Christianity is often further fuelled by research that shows that especially conservative Christian theology has a negative impact on environmental attitudes (see for example Morris et al. 2015; Muñoz-García 2014) and reports about Evangelical Christians in the US who deny anthropogenic climate change, oppose any attempt to reduce emissions and challenge Christians who argue that they should be concerned about climate change (Zaleha and Szasz 2014).

So, although there are high expectations about the potential of religion there is still little research about how effective religion really is when it comes to making

people more aware of environmental problems and creating willingness to change unsustainable behaviour. Therefore this paper attempts to go beyond the description of statements by faith leaders or discussing how religious morals and ethics can have the potential to convince people to care about the environment. Instead it focuses on how churchgoers in the UK engage with environmental issues, and whether as many scholars and faith leaders' hope, these issues are gaining traction in church life. Through empirical research the paper will identify several major hurdles that exist in church life and which hamper environmental issues from gaining importance but it will also present a way to overcome these problems.

2 Outline Paper

The outline for the rest of this paper will be as follows. First there will be a discussion of the existing literature about how believers engage with environmental problems and to what extent religion influences attitudes and behaviour towards the environment. Second, the methodology will be briefly outlined. Third, some findings will be presented that describe some of the major hurdles which prevent environmental issues from gaining a more prominent place in church life. After lining out these problems a solution that attempts to address these issues will be presented and discussed. Lastly, a conclusion will be given.

3 Religion and Environmental Behaviour and Concern

Ever since White (1967) published his article 'The Historical Roots of Our Ecological Crisis' scholars have debated what influence religion has on people's environmental attitudes and environmental concern. To answer this question scholars have often employed survey studies based on self-reported behaviour. Most of these studies focus on Christianity within the North American context and sometimes the European and Australian context.¹ Many of these studies, from early studies in the 1980s (Hand and van Liere 1984; Eckberg and Blocker 1989) up to the latest studies in 2017 (Olson-Hazboun et al. 2017; Schwadel and Johnson 2017; Shao 2017) have found a negative relationship between Christianity and environmental attitudes and environmental behaviour and according to some studies, Christianity does also have a negatively influence on the belief in anthropogenic climate change. These negative links exists especially among theological conservative Christians (for an overview and discussion see Taylor et al. 2016). Related research also found a negative relationship between Christianity and environmental attitudes through end time theology (Barker and Bearce 2013; Roser-Renouf et al. 2016; Curry-Roper 1990). There was

¹There are some studies on other religions like Islam (Rice 2006) and Buddhism (Brooks 2009, 2010) but these are very sparse.

also research that found no link after controlling for socio-economic variables or that relationships which were found were only very small and weak (Hayes and Marangudakis 2000, 2001; Nooney et al. 2003; Boyd 1999; Martin and Bateman 2014; Newman et al. 2016). Some research also argues that the relationship has two sides. Theological conservative ideas do have a negative impact but there also exists a positive impact which is generated through the sanctification of nature and stewardship, although this positive effect was often very modest (Tarakeshwar et al. 2001; Sherkat and Ellison 2007; Kilburn 2014; Village 2015; Bulbulia et al. 2016; Pepper and Leonard 2016). Some have explained the negative connection between Christianity and environmental issues by emphasising the distrust among evangelicals towards science and more specifically towards international climate treaties (Evans and Feng 2013; Chaudoin et al. 2014). Some research did find a positive relationship but religious persons still do not have more favourable attitudes towards the environment than non-religious persons (Owen and Videras 2006; Felix and Braunsberger 2016; Peifer et al. 2016). It's important to note that although some European research found a negative relationship between religion and environmental attitudes (Muñoz-García 2014) others found no relationship (Hayes and Marangudakis 2000, 2001) or found both negative and positive relationships (Village 2015) and there is even a recent German study that found a positive relationship (Gutsche 2017). Comparative research by Hagevi (2014) on 22 European countries argues that a Catholic culture has a positive effect on environment concern while a Protestant culture has a negative impact. A worldwide study by Chuvieco et al. (2016) found that religion doesn't influence attitudes towards the environment.

The publication of the encyclical *Laudato si'* by Pope Francis also provided scholars with an opportunity to test to what extent religious leaders can influence people's attitudes towards the environment. Some research argues that Pope Francis had a positive influence on the debates about whether anthropogenic climate change was real or not. American research done just after the publication of the encyclical shows that some Catholics became more concerned about climate change after the publication of the encyclical (up from 31 to 44%) and just over one third of the Catholics (35%) say that Pope Francis has influenced their view on climate change (Maibach et al. 2015). This is described as the 'Francis effect'. Schuldt et al. (2017) found that when exposed to 'Laudato Si' US Republicans perceived climate change more often as a moral issue compared with Republicans who were not exposed to the encyclical but it did not make Republicans feel more personally responsible or willing to address climate change. A study by Li et al. (2016) among Catholics showed that whereas encyclical-aware politically liberal Catholics showed increased concern for climate change compared to politically liberal Catholics who were unaware about the encyclical but encyclical-aware politically conservative Catholics showed decreased concern about climate change compared to the politically conservative Catholics who were unaware of the encyclical. When confronted with the fact that many conservative politicians disagree with Pope Francis' opinion on climate change, the politically conservative Catholics downplayed Pope Francis' credibility on climate change. Similarly, Landrum et al. (2017) found that Catholics with a conservative political ideology and familiar with the encyclical downplayed the credibility of the Pope in

relation to climate change while politically liberal Catholics who were aware of the encyclical gave Pope Francis additional credibility. Myers et al. (2017) found that people (not just Catholics) who were already concerned about climate change undertook extra effort to change their behaviour after becoming familiar with the message of Pope Francis but the message had no effect on those less concerned about climate change. So, although some suggest that faith leaders like Pope Francis can engage individuals who are currently not involved in environmental issues other research argues the Pope's message failed to make an impact among those less likely to be concerned about the environment. A study by Arbuckle (2017), although not focusing on the influence of the Pope, shows that religious affiliation has an influence on concerns about climate change among politically liberal persons but also that religious affiliation has no influence on the concern about climate change among politically conservative persons. But it needs to be added that all this research is American and that also the more long term effects of Pope Francis' message remain unknown.

So, the positive views that many have about the participation of religious institutions might seem a bit premature as much research suggests that there is a negative relationship or no relationship between religion and environmental attitudes or concern. As such it might seem doubtful whether bringing in religion will have much positive impact. Also whether believers are willing to listen and act on the environmental concerns of their faith leaders is according to some studies closely related to pre-existing political ideology. These studies however all remain quantitative self-reported behavioural studies and do not research actual engagements with the environment by believers. But recently, scholars have also started to conduct empirical studies on how believers engage with environmental issues. However, also this research shows that the situation is not as positive as some might hope.

4 Empirical Research on Religion and the Environment

In his research on Anglican Churches in Cornwall (UK), Delashmutt (2011) found that statements about environmental problems almost never reach to the local parish. Few people were aware of the statements made by the Church of England. Most people instead made their own theological arguments about why Christians should be concerned about environmental problems. This shows according to Delashmutt (2011) that

The disparity between the beliefs and practices 'on the ground' and the theologies and imperatives 'at the top' surely represent a crucial problem that impinges upon any church's ability to express its newly developed environmental concern.

Delashmutt (2011 p. 79)

Also American studies on the Catholic Church (Agliardo 2014) and Presbyterians (Townsend 2014), found that although high ranking leaders are interested and make statements, this has little impact or influence on the rest of the church. Douglas (2009) found that in the Australian context clergy often lacked the knowledge needed for

environmental awareness and action. 'Clergy are trained in 'religion' and, thus, by default are not trained in 'science' according Douglas (2009 p. 742). There is barely any attention to the environment in the training of clergy. Douglas (2009) also argues that within churches in Australia there is a strong tendency to view the environment as an economic asset without intrinsic value. Churches were also often already busy in other projects on for example homelessness and had declining memberships which caused shortages in volunteers and funding. Churches in Australia also faced the problem that statements made by synods or bishops do not mean that action will be undertaken by local churches. Other Australian research by Lawson and Miller (2011) found that religious people who wanted to involve their church, mosque or synagogue in environmental issues faced significant challenges. Climate change was met with denial and making buildings more energy efficient was also controversial as it was seen as too expensive. UK based research by Nita (2014) found that Christians and Muslims within Transition Towns and Climate movements are being marginalised within the environmental movements because they were seen as 'being too religious to be green' while they also faced disapproval from fellow Christians and Muslims because they were seen as 'too green' to be Christian or Muslim. However, Nita also found that her respondents did not give up when faced with difficulty. Christians and Muslims actively try to merge and extend their faith with their environmental activism by using religious language, prayer, objects and rituals, to distinguish themselves from secular activists and to relate faith with environmental issues. Research on religious involvement in local energy projects in a German city by Kohrsen (2015) found that religious actors only play a very small role. Churches didn't gave specific attention to environmental issues, were found to be inward oriented and had very limited resources. Religious institutions were more followers than pioneers and were not visible in public debates. Lastly, Swedish research by Lundberg (2017) argues that concerns about the environment within the Church of Sweden do not stem from theology or church wide engagements but rather from personal interests which are brought into the church. Environmentally concerned Christians view the Church of Sweden as not very engaged or interested in the environment.

In the empirical studies described above, religious institutions are depicted as struggling to go beyond making statements. Concerns and interests about the environment do not seem to resonate with the wider church membership and statements also go often unnoticed. Turning the enthusiasm of a group of environmental activists and faith leaders into church wide interest or action therefore seems difficult.

5 Methodology

The findings on which this paper is based are part of Ph.D. research. This Ph.D. research had two main goals. First, it tried to understand how Christians and local churches engage with environmental issues and secondly it attempted to explore

how Christians and secular groups can collaborate on environmental issues.² The research used several different research methods and was mostly qualitative in nature. The research had three parts. The first part of the research focused specifically on 'environmentally concerned Christians' and was done with the help of the national organisation 'Green Christian'. The second part of the research consisted of 5 focus group interviews with churches from different denominations across Exeter. Lastly, there were interviews with local secular environmental groups in and around Exeter.

A survey was distributed through the Green Christian email newsletter and this newsletter was also used to find participants for 30 in-depth interviews. Green Christian itself is a relatively small national organisation and its aim is to help Christians to make a link between their faith and care for the environment. As such most in-depth interviews focused on the personal involvement and experience in churches and secular organisations rather than involvement in Green Christian as an organisation. The researcher also attended and observed 15 different events organised by Green Christian or affiliated organisations. Also, all kinds of documentation related to Green Christian and its events were gathered.

The aim of these focus group interviews was to understand how different churches engage with the environment and what role it plays in church life. The churches that took part were a Methodist Church, a more liberal leaning Anglican Church (Church of England), a charismatic Evangelical church (also Church of England), A Roman Catholic Church and an independent Evangelical church (this church had been awarded an A Rocha bronze Eco church award). The churches were chosen because they represented different theologies and attracted different people but also because these churches were accessible through the network of the researcher. Lastly, interviews were held with secular environmental groups about the place of faith within these secular organisations. Also during the in-depth interviews there a lot of attention for the involvement in secular groups. All the research took place from late 2015 until early 2017.

There are of course limitations on the research. The focus group interviews are focused solely on Exeter and as such do not shed light on the perhaps different ways in which churches in highly urbanised environments and migrant churches engage with the environment, nor does it pay attention to the ways in which churches in rural areas might relate to the environment. As will be explained below, many environmentally concerned Christians are faced with disinterest and resistance against bringing the environment into church. Although, it was clear that this resistance resembled climate scepticism, aversion of left wing ideas and a more general disinterest in the environment the researcher did not have many opportunities to engage with people who expressed such ideas. The results presented in this paper are an attempt to understand how churches and believers and engage with the environment but it is important to say that the research focuses on a specific group of churches and believers and although many of the findings will be present elsewhere too much generalisation should be avoided.

²The issue of collaboration between secular and faith based groups on environmental issues is, although very interesting, not the focus of this paper.

6 Three Barriers that Hinder Engagement with the Environment

What will be described below can be seen as dark and pessimistic as it specifically highlights difficulties and problems. But it is important to realise that even though many faith leaders and theologians are speaking out about the environment it is still a contested topic in society and also a topic which often struggles to leave academic circles. This does not mean that everything is negative. There are success stories about churchgoers who are concerned about the state of the planet and who inspired by their faith leaders make addressing environmental issues a part of their Christian witness. But there are also many instances in which believers show no interest in the environment or even display hostility. Acknowledging and understanding such responses is very important in order to make linking theology and the environment together and acting on faith-based environmental concern not just an academic exercise but also something that takes place among ‘ordinary churchgoers’. What will follow now is a discussion of three issues that prevent churches from taking on environmental issues.

- (1) Christians interested in environmental issues are faced with fellow churchgoers that have very little interested in environmental issues. Polarisation and disagreement about environment issues is present within churches.
- (2) Despite all the efforts of faith leaders and eco-theologians, there is little church led engagement with the environment. The limited attention for environment is often focused on what believers can do in their individual lives rather than what they can do as church community.
- (3) Institutionalised Christianity is declining and this puts a limit on how much churches, faith based organisations and believers can engage with the environment.

7 Facing Hostile and Disinterested Fellow Believers

For many environmentally concerned Christians engaging their own church about environmental issues is disappointing. Fellow churchgoers and also church leadership have little interest in their concerns for the environment and are unwilling to give more space to environmental issues in church. Although some respondents did have no or few negative experiences, many of the participants said that environmental issues were regarded by ‘too many’ people in church as something for ‘hippies’, ‘eco warriors’ or members of the Green Party rather than an important issue for believers. For example, a female member of an evangelical Church of England congregation recalled how people in church named her the ‘green lady’ and how someone accused her of ‘*bringing the Green party into church*’ after she had suggested that her church should give more attention to environmental problems. Her vicar said that he would come back to her suggestion, but he never did until her husband contacted him and

even then nothing happened. At the same time two vocal climate sceptics in church kept dismissing her concerns about the environment. Another female member of a 'middle of the road' Anglican Church, who suggested that her church should include an 'environmental prayer' during services was told by, what she described as 'strong characters', that such prayers were '*pointless and a waste of time*'. The negative response by these 'strong characters' caused deep division among members of the worship committee at her church about whether an environmental prayer would be allowed during services. In the end environmental prayers did not become part of the services. The respondent blamed this failure on the fact that a few anti-environmental churchgoers managed to hijack the whole discussion. According to her there were no theological objections but her opponents '*just deny that climate change is happening*'.

Although, there is outright denial and rejection, often churchgoers just show little interest in the environment. Indifference is very common and many environmentally concerned Christians are sad and disappointed about this apparent disinterest among fellow Christians. For example, a female member of a Baptist church described how she tried to introduce car sharing at her local church as according to her it is good for the environment and '*because it's a way of getting to know other churchgoers in your area and it doesn't hurt to pick people up*'. But no matter how hard she tried she could not get anyone interested in car sharing. She described this as '*quite distressing*'. A male member of an Evangelical charismatic church (without their own building) wanted his church to replace plastic coffee cups with recyclable cups and suggested this idea to the leadership. The idea was interesting according to his church leader but it was not taken up as the issue was '*not on the agenda currently*'. During a Green Christian workshop, making fellow Christians more interested in environmental issues, was described as an uphill battle and someone attending the workshop remarked during a discussion that '*churches aren't ready to hear us*'. Many participants said that in their own church there is little attention for the environment during sermons, bible studies or other church-related activities. Some respondents also had stories about how during events about the environment, nobody apart from the organisers, showed up and all the efforts that they had put into it seemed wasted. For example, after the failure of the environmental prayer, the earlier described Anglican lady was allowed together with a few others to organise prayer meetings in advance of the Paris climate talks. Unfortunately, nobody showed up for the prayer meetings.

Before the COP21 each month we had an hour of prayer at church completely organised about environmental matters, what we hoped to get out of COP21 and all that. But apart from us, nobody ever came to it. It was a lost thing.

It should not come as a surprise that indifference and resistance has a negative effect on environmentally concerned Christians. Some described that they felt lonely or abandoned by their church and that they wanted to give up. They did not feel taken serious in church and a few even became fed up and left their church. But this does not mean that environmentally concerned Christians will stop trying to engage fellow churchgoers about the environment. They are determined to not give

up. Some likened their struggle to the struggles of biblical prophets like Jeremiah who also faced fierce resistance against their message but never gave up.

8 Little Engagement with the Environment on the Level of the Local Church

The focus group interviews turned out to be a struggle. Finding churches that were willing to participate was not difficult. In every church there was someone interested and keen in organising a discussion about faith and the environment. They helped the researcher and were the co-organisers of the focus groups. However, finding enough participants turned out to be very difficult. Somewhat surprising the church where it was not possible to find enough participants was the church that was awarded an eco-church bronze award. After several attempts with the help of a senior lecturer from the Exeter Business School, who also attended the church and who helped the church gain its eco-church status, there was still no success in bringing enough people together. People were too busy and had little time according to the senior lecturer. Instead, the researcher had to resort to interviews with a male participant and with the senior lecturer himself. Additionally, there were some informal opportunities to speak with members of the church.

In this 'eco-church' a lady, in her 80s, who first brought me into contact with the senior lecturer, explained that she decided not to attend the focus group because she felt that she knew very little about the subject and as such thought that she had nothing to say during the focus group interview. Another female with school going children, explained that everybody is involved in their own 'thing' at church, hers was children's work and outreach to international students and therefore not the environment. Also, some churchgoers (university students) were unaware of the fact that the church had the status of an eco-church. When they were shown the eco church award (which hangs near the entrance of the church) they were surprised but some were also a bit indifferent. The church also has a special section on its website dedicated to 'environmental concern'. However, most of this content is several years old and a number of related links on the website are no longer working.³ Also, a link to a Facebook group which was set up to encourage car sharing seemed to be no longer working. At the same time, there was according to the senior lecturer little resistance in the church against becoming an eco-church. There was some doubt at the start but this disappeared quickly over time. And, although the resources on the website are a few years old already, it is still much better and much more extensive in comparison with the other churches. There were especially lots of resources for children and families. The church also organises events where speakers are invited to

³At the moment of submitting this paper (September 2017) the eco-church is launching a new church website. The eco resources have not yet appeared on the new website but they are likely to do so in the near future. It is unknown whether the church will update its eco-materials for the new website. But the main page of the new website features very prominently that they are an eco-church.

talk about faith and the environment. For example a well-known Christian professor of agriculture, who frequently speaks about faith and environmental issues, spoke at the church. The other churches had not such resources and did not invite such speakers. So, compared with the other churches there was much more engagement with the environment.

In the other churches it was also difficult to set up focus group interviews. People were very busy and finding a suitable date and enough participants was hard but with the help of co-organisers in each church who were eager to have a discussion in their church about the environment it was possible. Apart from the earlier mentioned eco-church, none of the other churches had engaged extensively with the environment during services, bible studies or other church-related meetings. They were open and honest about this fact. For many participants in the focus groups it was the first time that they discussed about the environment in a church setting. However, participants also found discussing about the relationship faith interesting and useful.⁴ Participants were also interested in organising more studies and discussions about faith and the environment. *'It really made us really think'* as the male group leader, who helped to set up the focus group at the charismatic Evangelical church said. But it also remained a novel and unexplored topic for many participants. The reason why the environment was not more prominent in church life had nothing to do with resistance from churchgoers or unwilling clergy but rather with the fact for many churchgoers and clergy it was an unexplored topic. The environment just never had a very prominent role in church life before.

Participants often held stewardship views or argued that the command 'to love your neighbour as yourself' requires Christians to reduce their impact on the environment as issues like air pollution, droughts and sea level rise are disproportionately affecting the poor. A few also extended the duty to love the neighbour to plants and animals. But participants struggled to see the relevance of the church as an institution in relation to the environment. Often participants discussed in great length about how Christians should consider buying locally, recycle more waste and fly less. But the focus was often on the individual Christian rather than the church as a whole. Caring for creation was seen as something that individuals had to do and it was also portrayed as something in which the government played an important role. But what role the church could play in more practical terms or what role the church members could play as a community remained mostly unexplored. Some acknowledged this but found it difficult to find a role for the church that went beyond stimulating people to become more 'green'. A male member of the eco-church argued

I think that actually, the actions that need to happen are on a very big scale by big organisations or governments or they are very much on individual scale where we need to make own decisions in life. You know our impact on the world. But for example, I couldn't see that having a group of people from a church going out into the community, you know we can't go out as a group and make them a little bit greener. It doesn't seem quite as obvious a link.

⁴It could for course be possible that church members who are critical about giving the environment more space in church life, decided not to participate in the focus group in the first place or they didn't express their doubts as they were afraid of critical responses.

So, although respondents thought that the environment was relevant to a Christian life, they struggled to see it as relevant to church life. Caring for creation is something individual believers have to do rather than something that has to be done as a church.

9 Engaging with the Environment and the Decline of Institutionalised Christianity

Another reason that prevents environmental issues from gaining importance in churches is the ongoing decline of institutionalised Christianity throughout the Western world. This decline has been well documented (see for example McLeod and Ustorf 2003; Bruce 2002; Voas and Chaves 2016; Brenner 2016; Clements 2017) and this puts the ambitions of environmentally concerned Christians and churches under pressure. Often there is no funding or insufficient numbers of volunteers in churches to get involved in environmental issues. For example, a former leader of a transition town project tried to get nearby local churches involved. His transition town project even started a workgroup to engage with churches. However, the local churches had no time to get involved. Not because they were doubtful about the idea but because they had to put all their time and resources into *'keeping their own show on the road'* as the former leader described it. They did not have the money, time or volunteers to get involved.

Environmental problems are certainly not the only social problem that is seeking the attention from believers. For example, modern slavery is another social problem that is currently seeking the attention from churches. The Church of England has recognised the problem of modern slavery as an urgent problem and has recently launched the Clewer Initiative (Church of England 2017). This initiative seeks to help churches to develop strategies to detect modern slavery and provide support for victims. However, individual churches and churchgoers cannot be involved in everything. Churches have to organise worship services, perform their pastoral duties, maintain buildings and often already have a long history of involvement in for example foodbanks, homelessness or other local causes and taking on more issues like the environment issues or helping victims of slavery in a structural way is often just too much. Churches have to make a choice and it seems likely that the number of churches that will choose to be involved in environmental issues will be small.

Also Green Christian is feeling the ongoing decline of institutionalised Christianity. A group of ageing volunteers is doing the bulk of work while there are very few younger members within the organisation. The vast majority of members and supporters is aged 60 or older and there are few members younger than 40. During a national conference in 2015, that was organised by Green Christian in collaboration with other groups, and that was attended by 200 people there was also a special meeting for people in their 20s and 30s. Only seven people, including three organisers attended. This low number reflects the difficulty that Green Christian faces in attracting younger people. During almost every meeting there were discussions about

how to attract young people, Green Christian even commissioned an official report written by three young females about how to attract younger people. However, the large majority of its active members remain 60 or older.

10 Making Environmental Issues More Relevant in Church Life

As the earlier presented findings show, churches and individual churchgoers engage little with the environment. Some individual churchgoers might try to get their church more involved but structural engagement with the environment by local church leadership is often absent. At the moment environmental issues are often only brought into church via a top-down approach. National faith leaders and other influential clergy publish statements and urge believers to take action. These calls for actions are then discussed (and criticised) in the (social) media but after that little else happens. Such distant and impersonal engagements that originate from higher up will most of the times fail to connect with most of the churchgoers. Instead, churchgoers need to be engaged by clergy, scientists or teachers or any churchgoer, who is concerned about the environment and who is attending the same local church. If churchgoers are engaged by people that are familiar to them and who they perceive as sharing similar values, than there might be much more trust and willingness to consider the relevance of environmental issues.

Although the focus group interviews were often the first time that churchgoers engaged with the environment in a church context they still provided a good opportunity to bring the environment into church life on a more personal level. The focus groups were often framed by the co-organisers as a sort of bible study where participants would learn more about the links between the bible and the environment.⁵ As such the focus group interview provided the co-organisers with an opportunity to bring the environment into the church. It gave the focus group interviews less of an academic character for the participants and co-organisers than it had for the researcher. But it also created an atmosphere in which participants could openly discuss about the environment. The focus groups provided an opportunity to have a discussion about the environment with a group of people that participants knew and trusted. As such there were no political disagreements or general disinterest during the focus group interviews. During these focus group interviews churchgoers became interested in the environment and enjoyed exploring the links between faith and the environment. And as such the link between faith and the environment was no longer distant and impersonal. Therefore the focus group interviews were not only a success for the researcher but they were also a success for the co-organisers as a way to bring the environment into the church.

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In 3 of the 4 cases the focus group interview did in fact replace an actual bible study.

11 Conclusion

Many faith leaders and theologians have been actively seeking to connect faith with the environment and see environmental problems as an important issue. Scholars and environmental activists have responded very positively to this faith based environmental concern and have called religious institutions important allies in addressing environmental issues. However, this faith-based environmental concern is struggling to make its way outside academic and ecclesiastical circles. Environmentally concerned Christians frequently encounter opposition and too many churchgoers are disinterested and sometimes even display hostile and dismissive attitudes. Also many churches, although not opposing the calls for action have up to now not much engage with the environment. Environmental issues are just a novel area for many churches. Also, the ongoing decline of institutionalised Christianity makes it difficult for churches to engage with the environment. However, if churchgoers are being engaged about environmental issues by people who they know and trust, rather than by distant faith leaders and theologians, than there are still opportunities to make environmental issues a bigger part of church life. The focus group interviews show that if churchgoers are openly and sincerely engaged by environmentally concerned Christians from their own church then they certainly are willing to explore the links between faith and the environment. As such there are certainly still opportunities to make churchgoers more interested in the environment. Of course having more personal engagement within churches is easier said than done. It is time-consuming and will require much patience from environmentally concerned Christians. And even if churchgoers are personally engaged some are still likely to remain not interested. It will also require that the church leadership receives more education about the relation between faith and the environment during their theological training. So, it will be a long process that will certainly encounter struggles and even resistance. But it is also likely to be more successful than relying on distant calls for action.

At the moment most of the attention by media, activists and others when it comes to faith-based environmental concern goes to faith leaders like Pope Francis or Archbishop Justin Welby when they make comments or publish statements about the environment or to the 'Christian Right' in USA when openly question climate science or oppose any kind environmental regulation. Such portraits are very narrow and simplistic and do not reflect the complex reality of how believers engage with the environment. Scholars who research the ways in which believers relate and engage with the environment should challenge such stereotypes and help to create a picture that better reflects how believers engage with the environment. Such research will also help environmentally concerned believers to better understand and engage their fellow believers about the environment.

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The Poor just Might Be the Educators We Need for Global Sustainability—A Manifesto for Consulting the Unconsulted



Johannes M. Luetz, Clinton Bergsma and Karenne Hills

Abstract Achieving global environmental sustainability is a current issue, and one of profound importance for the future of humanity. However, environmental sustainability cannot be meaningfully discussed as an issue in isolation, for it is deeply intertwined with other social justice issues such as education, spirituality and—by extension—humanity’s collective understanding of a right and good life. The crucial role of education in achieving global environmental sustainability is universally accepted, although typically understood as a linear process from ‘educated’ to ‘uneducated’, from scholarly elites to their students, from ‘uppers’ to ‘lowers’. This is intriguing given the widely accepted understanding that the so-called ‘uneducated’ poor tend to live far more sustainably than the presumably educated wealthy, and the sustainable lifestyles of the poor are often firmly underpinned by their spirituality. This phenomenon raises important questions in the quest to achieve global environmental sustainability: If the poor have much to teach about sustainable living and contentment, why are they not more actively engaged and enlisted as subject matter experts when it comes to drafting strategic responses to climate change mitigation and profligate living? Are policy makers and development professionals in danger of inadvertently entrenching the status quo where the poor are primarily conceived as service delivery *recipients* rather than engaged on par as active partners and joint sustainability *stakeholders*? This mixed methods research is informed by an analysis of expert literature, including a systematic UN document keyword search, and 20 in-depth interviews that engaged 17 development organisations across eight nations. It also addresses contemporary barriers to the inclusion of the voice of the poor as equal participants in this necessary global discourse. A Judeo-Christian Theology underpins this discussion, offering hopeful historical perspectives on the Divine preference for self-revelation and human betterment through the least expected voice.

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The study extends previous research by focusing expressly on the intersection of sustainability and the humanities as a fertile space for inquiry into auspicious forms of learning about value-based and spiritually shaped sustainability. The research concludes that the poor are overwhelmingly perceived and portrayed as subjects to be helped, rather than as experts to be engaged and heeded. Hence, ‘reversals of learning’ need to be prioritised, standardised and normalised.

Keywords Sustainability · Theology · Spirituality · Reciprocity
The poor · Poverty · Equality · Sustainable development · SDGs · United nations (UN) · Human development reports (HDRs)

We do not inherit the Earth from our ancestors, we borrow it from our children.
American Indian proverb

God’s heart has a special place for the poor, so much so that he himself ‘became poor’ (2 Cor 8:9) ... They have much to teach us. (Pope Francis 2013, pp. 155–156)

1 Introduction

Approaches to environmental sustainability are heavily based on social and cultural values, both feeding from and also informing disciplines within the humanities, including education, the social sciences, the arts, and theology. Specifically, the humanities recognise the links between healthy environments, human actions, and social justice outcomes, all of which are essential elements of a sustainable world. It could be argued that spirituality draws these elements together to form a cohesive whole. This paper contributes to this discourse by analysing existent interrelationships between poverty, education, spirituality and sustainability.

The nexus between education and poverty reduction has been long and well established.¹ Recent decades have expanded education’s focus to increasingly encapsulate sustainable development, a focus also enshrined by the United Nations Sustainable Development Goals (SDGs): ‘eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development’ (UN 2015, p. 5). In this sense, Goal 4 (‘Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all’) may be seen as the best strategy that the international community has to eradicate global poverty: ‘We recognize education as key to achieving full employment and poverty eradication.’ (UNESCO 2016, p. 7).

¹“More than 2300 years ago, the Greek philosopher Aristotle (384–322 BC), student of Plato and one of the most influential teachers of all times, identified education as the kingpin of societal transformation: ‘All who have meditated on the art of governing mankind have been convinced that the fate of empires depends on the education of youth.’” (Luetz 2008, p. 79), and more recently Nelson Mandela famously said: ‘Education is the most powerful weapon which you can use to change the world.’ (Strauss 2013, para. 3).

Even so, if poverty eradication is to be promoted by means of sustainable development with education as its conduit, important questions arise about both 'poverty' and 'education', especially regarding who are 'the poor', and who are 'the educators'. Hence, this paper will look more closely at both the purported 'poor' and presumed 'educators'. In doing so, this paper will argue that the current paradigm of learning might best be described as hierarchical, where students of 'sustainable development' are encouraged to learn almost exclusively from those who Robert Chambers (1997, p. 83) would term 'uppers', namely those in positions of power, influence and authority. This paper argues that education today overwhelmingly includes a power imbalance also evident in other societal paradigms, namely that knowledge flows primarily from 'uppers' to 'lowers', from 'educated' to 'uneducated', from 'experts' to 'unschooled', from 'developed' to 'undeveloped', from the 'rich' to the 'poor'.

Societal constructions concerning the imbalance of rights, privileges, freedom of choice and equal opportunities for marginalised people groups is not a new discourse. Valuable learning can be drawn from the historical struggles of subgroups defined by race, colour, gender, ability or even creed. Society's propensity to regard 'uppers' as the good, well-resourced, all-knowing benefactors to the weak and vulnerable continually finds new ways to express itself. The disability discourse is a classic example of this ingrained 'power over' societal myth (Clapton 2008; Hills and Meteyard 2013; Reinders 2011, 2013; Swinton 1997, 2012; Swinton et al. 2011). Applying these past lessons to the global sustainability space offers the promise of a more holistic, wholesome and inclusive discourse, which includes learning vital insights about sustainability 'from below'.²

Defining just who are 'the poor' however, is notoriously difficult (Greeley 1994; Laderchi et al. 2003; Stewart et al. 2007). Conceptual approaches to defining poverty have important consequent implications: 'how poverty is defined is extremely important as different definitions of poverty imply use of different criteria for measurement, potentially the identification of different individuals and groups as poor, and the use of different policy solutions for poverty reduction' (Stewart et al. 2007, p. 1). If poverty is to be broadly understood as 'deprivation', this raises the question: Deprivation of *what*, specifically?³ There are no clear and easy answers. In development studies discourse today, the most prominent conceptualisations of 'poverty' have been broadly grouped together according to the following four approaches: (1) Income/Consumption; (2) Capability Approach; (3) Social Exclusion; and (4) Participatory Assessment. A broader understanding of these conventional poverty definitions will assist in uncovering the gap in 'bi-directional learning' for sustainability. These four approaches will be briefly discussed next.

(1) *Income/Consumption (I/C) 'monetary poverty'*

²Additional examples of learning 'from below' may be drawn from grassroots studies on forced human migration (e.g., Luetz 2017, 2018; Luetz and Havea 2018), which conceptually regarded these migrants as the preferred teachers and consultants in respect of subsequent policy development.

³In some literature, the concepts 'poverty' and 'deprivation' are used interchangeably (e.g., Laderchi et al. 2003, p. 244).

According to Morrison (2009, p. 241), ‘the notion of a poverty line is the key concept in the I/C approach to determining ... poverty’. The World Bank’s dollar-a-day measure is merely one of numerous examples where the prevalence of ‘poverty’ is defined according to how many survey respondents fall above or below a so-called ‘poverty line’ (UNDP 1997, p. 13). While the concept has the advantage of a simple and straightforward approach to understanding poverty as calculable ‘monetary poverty’, as used, for example, in World Bank Development Reports, the approach has been criticised on several counts, most notably on the grounds that ‘income and spending measure only one dimension of human well-being’ (Morrison 2009, p. 242). Moreover, ‘[c]ountry-wide poverty lines do not allow for cost of living differences within a country or region’ (ibid.), and also fail to reflect ‘how far people fall below the poverty line’ (ibid.), hence potentially masking significant intra and extra household or regional differences and inequalities (White 2002). Finally, the question *where* to ‘draw the poverty line’ also appears to be arbitrary.⁴

(2) *Capability Approach (CA) ‘human poverty’*

Following these and other criticisms of the I/C measure of poverty (Greeley 1994), Nobel Prize-winning economist Amartya Sen counter-proposed a more holistic approach to human development, arguing that ‘development should be seen as an expansion of human capabilities and freedom’ (Morrison 2009, p. 242):

A person’s ‘capability’ refers to the alternative combinations of functionings that are feasible for her to achieve ... various lifestyles. For example, an affluent person who fasts may have the same functioning achievement in terms of eating ... as a destitute person who is forced to starve, but the first person does have a different ‘capability set’ than the second (the first can choose to eat well and be nourished in a way the second cannot). (Sen 1999, p. 75; cited in Morrison 2009, p. 242)

By proposing to combine multiple measures of ‘human poverty’ within a single composite index, Sen (1999) contributed significantly to the conceptual development of the United Nations (UN) Human Development Index (HDI), which incorporates the three dimensions of education, health care, and GDP per capita, and therefore is representative of a more comprehensive measure of ‘human poverty’ than the I/C concept. Notwithstanding, the approach has been criticised for potentially concealing ‘vast differences between men and women, boys and girls, rich and poor, urban and rural, and different ethnic or religious groups’ (Morrison 2009, p. 243), and for failing to focus attention also on other ‘basic needs (such as leisure, security, justice, freedom, and human rights)’ (ibid.).

(3) *Social Exclusion (SE) ‘exclusion poverty’*

Perceived shortcomings of the previous two conceptual models of poverty are addressed by the social exclusion (SE) approach, which extends basic human needs

⁴As of October 2015, the World Bank adjusted its poverty line: ‘As differences in the cost of living across the world evolve, the global poverty line has to be periodically updated to reflect these changes. Since 2008, the last update, we have used \$1.25 as the global line. As of October 2015, the new global line will be updated to \$1.90.’ (<http://www.worldbank.org/en/topic/poverty/brief/global-poverty-line-faq>).

to also encapsulate critical dimensions of human well-being that are missing from the previous two models, including political freedom and the ability to participate:

Unlike I/C and CA, social and political perspectives are central in SE, and issues of inequality and redistribution are necessarily involved. Laderchi, Saith, and Stewart (2003, 257–8) suggest that SE exists if a person is excluded when he/she (a) is a resident in society but (b) for reasons beyond his/her control cannot participate in normal activities and (c) would like to do so. (Morrison 2009, p. 243).

Hence, this conceptual approach is interested in comprehending cultural, racial and social structures that may lie at the root of factors that are responsible for inclusion or exclusion in a community and therefore constitute ‘exclusion poverty’ (Laderchi et al. 2003, pp. 257–260).

(4) *Participatory Assessment (PA) ‘unique participatory poverty definitions’*

The fourth conception of ‘poverty’ was pioneered by Chambers (1994, 1997) in response to criticism levelled against the previous approaches being conceived as too externally described and prescribed. According to Shaffer (2008, p. 5), ‘[t]he Participatory approach is really not a way of conceptualising poverty/deprivation as it is a means of determining *who* should do the conceptualising’ (emphasis added). Expressed in simple language, PA seeks to enlist people ‘to participate themselves in decisions about what it means to be poor.’ (Morrison 2009, p. 245).

There are several advantages to measuring poverty according to this approach: Communities that are not a part of the global cash economy and that have lived happily and sustainably for generations may not conceive of themselves as ‘poor’, except by (economic) comparison with more materialistically minded groups of people. Hence, such communities may only become aware of their ascribed state of ‘poverty’ after being construed as such by the aforementioned poverty definitions. Therefore, inviting poor people into the process of defining their own aspirations is a compelling safeguard to ill-conceived developmental remedies that may be ignorantly and externally imposed (Dossa 2007). The arrogance of so-called ‘progress’ in determining lifestyles that can be categorised as ‘rich’ or ‘poor’, seems to place greater value on constructs such as fiscal wealth, travel, and beauty than it does on community, tradition, culture, or joy (Chatard and Selimbegovic 2011; Elliott 2011). Moreover, bypassing the poor in these discussions also seems patronising, seeing that they have so much to contribute in discourses that determine quality of life. Further, Chambers saw a strong case for inviting ‘the analytical abilities of poor people. Whether illiterate or not, whether children, women or men, they showed that they could map, list, rank, score and diagram often better than professionals.’ (Chambers 1997, p. xvii; cited in Morrison 2009, p. 245).

Synthesis: Implications and opportunities

In synthesis, defining poverty is essentially a challenge of a constructivist nature given that definitional realities surrounding poverty are socially ‘constructed [and] depend on the individuals or groups holding them’ (Punch 2014, p. 17). Hence, “there is no unique or objective way of defining and measuring poverty. There is in each a

large element of ‘construction’ based on a conception of what constitutes a good life and a just society” (Morrison 2009, p. 246; attributed to Laderchi et al. 2003, p. 268). Importantly, different poverty definitions lead to different groups being identified as ‘poor’, thus making it crucial to ‘draw upon all of the approaches when undertaking in-depth empirical assessments of the underlying causes of poverty’ (Morrison 2009, p. 246; attributed to Laderchi et al. 2003, pp. 264–269).

Of course, irrespective how ‘poverty’ is conceptually defined, measurement approaches will remain fraught with difficult questions that reach beyond the scope of this disquisition. For example: ‘If the total number of people in poverty (however measured) rises because of population growth, but the percentage of the poor in the total population falls, has poverty risen or fallen?’ (Sumner 2007, p. 6; attributed to Kanbur 2004, pp. 5–8).

Even so, while the four above mentioned conceptual approaches are still *en vogue* in development discourse today (Laderchi et al. 2003), there is a certain tendency in all of them to conceive of the poor primarily as ‘receivers’ or ‘beneficiaries’ of benevolent concern, development assistance, and so-called ‘help towards self-help’. What appears to be missing somehow is a stronger expectation that knowledge about sustainability may also flow in the reverse direction, namely *from* those who Chambers (1997, p. 83) would term ‘lowers’ to those in positions of power, influence and authority. Do the poor not have hard-earned lessons to teach in areas of frugality, modesty, contentedness, spirituality, and importantly and relatedly, sustainability? Do poor people not tend to live far more sustainably than the wealthy⁵ (Brainerd et al. 2009; UNDP 2007, pp. 47–48; WWF 2016), and are their sustainable lifestyles not recurrently underpinned by a spirituality that supports sustainability? (Buxton 2014, pp. 173–191; Matlock and Jurin 2016; Schein 2015; White 2010).

Here again lessons from the struggles of other marginalised social groups for a voice in their own determination can provide valuable insights for the sustainability agenda. The ‘nothing about us, without us’ (Charlton 2000) cry within the disability discourse, calling for representation in a bureaucratic system of oppression and disempowerment, is hauntingly relevant to conversations concerning learning from the poor about sustainability practice.

There are a number of relatively recent examples that demonstrate how the spirituality of ‘lowers’ was able to be converted for the strengthening of sustainability. For example, the rights of *Pachamama*⁶ (Mother Earth) are now protected by Bolivia’s constitution (CPEB 2009, Preámbulo, p. 2; cf, Ingham 2007) through the *Ley de Derechos de la Madre Tierra* (Law of the Rights of Mother Earth), essentially giving nature equal rights to humans (Cochabamba Documents 2010; LDMT 2010; Ugarte 2012; Weinberg 2010).

Other examples include the Ganges and Yamuna rivers in India that have been granted the ‘same legal rights as human beings’ (Safi 2017), or New Zealand’s third-largest river, which was recently ‘granted same legal rights as [a] human being ...

⁵<http://data.footprintnetwork.org/>.

⁶*Pachamama* (‘Mother Earth’, or lit: ‘Mother World/Land’) is a goddess revered by indigenous Andean peoples (Ingham 2007).

After 140 years of negotiation, Māori tribe wins recognition for Whanganui river, meaning it must be treated as a living entity' (Ainge Roy 2017).

Further, attempts to incorporate so-called 'mutual learning' from the poor have no doubt been made (Cornwall 2000), as exemplified by publications such as the World Bank's *Voices of the Poor* (cf, Narayan et al. 2000a, b). Nevertheless, this paper argues that far more concerted effort is needed in this area to link spirituality with sustainability through unequivocal emphasis on 'reversals of learning' (where lessons are solicited *by* 'the rich' and *from* 'the poor'—however defined), if initiatives such as the UN 2030 Agenda for Sustainable Development (UN 2015) are to be reliably attained through education (UNESCO 2016).

2 Research Contribution, Design and Methodological Approaches

This paper extends previous research by means of a two-pronged research approach that combines 20 semi-structured interviews conducted through Christian Community Development Organisations (CCDOs) with a systematic keyword search carried out within key UN policy documents. In this way, this research combines qualitative and quantitative components that are each distinct and yet complementary. This mixed methods approach (Punch 2014, pp. 301–326) used an 'exploratory design' paradigm that seemed appropriately suited, concurrently allowing for sufficient exploratory breadth and analytical depth (Creswell 2014; Creswell and Plano Clark 2011).

An explanation of the methodological approaches used to carry out the interviews is presented first, followed by methodological approaches used to conduct the keyword search.

2.1 *Qualitative Research Conducted Through CCDO Semi-structured Interviews*

The qualitative component of this research was conducted in late 2016, and involved 23 semi-structured face-to-face interviews of people involved at various points with 17 CCDOs, although ultimately only 20 interviews were deemed suitable for analysis.⁷ The goal of the research was to uncover a perceived CCDO pedagogy 'from below', and thus three respondent contingents were recruited for interviewing:

⁷Of a total 23 interviews conducted, only 20 seemed suitable for analysis: One was discounted for concerns about language proficiency; a second one was rejected because half-way through the interview the recording failed; and a third one had to be rejected after consent was withdrawn by the participant. This left 20 interviews for analysis.

Contingent	M/F Ratio	Approx. Age Range	Average Age	Respondent's Country of Residence	Interview Language	Interview location
Program Participants	3:5	35-62	46	Indonesia	Bahasa Indonesia, Daun	Eastern Indonesia
Practitioners	4:3	25-45	33	South Africa, Malaysia, India, Philippines, Nepal	English	Malaysia
Donors	4:1	29-55	38	Australia, Vanuatu	English	Australia, Malaysia
Totals	11:9	25-62	39			

Fig. 1 Interviewee demographic data overview

1. Program Participants (PPs) who were the recipients of a CCDO program at the community level;
2. CCDO staff or Practitioners (PRs) facilitating community-level programs; and
3. Donors (DNs) supporting CCDOs.

Demographic information is detailed in Fig. 1.

Respondents were recruited through extended personal networks and screened for their suitability for participation in the research according to several requisites. The respondents were required to have been involved with a CCDO for two years or more, needed to share fluency of language with the interviewer and were excluded if they were involved with the same organisation/s as the interviewer. Open-ended interview questions were tailored to three contingents (Fig. 1), namely Program Participants (PPs), Practitioners (PRs), and Donors (DNs). All interviews were recorded and then transcribed, translated (where necessary), and de-identified. The de-identified transcripts were then reviewed by the respondents for accuracy and anonymity. One respondent requested a very minor edit that did not materially affect the data.

Prior to interviews, respondents received information sheets that outlined the purpose and goal of the research. The respondents signed consent forms that stated they understood their right to withdraw their contribution at any time. One respondent withdrew consent immediately after the interview for personal issues unrelated to the research project.⁸ Where possible, respondents were given a summary of the research outcomes and were invited to provide feedback with the commitment to include any feedback in the final research. No respondent commented on the research summary in the allocated feedback timeframe.

2.2 Quantitative Systematic UN HDR Keyword Research

Quantitative data used in this paper are derived from a systematic keyword search that queried United Nations (UN) policy documents for the search string 'the poor'.

⁸See Footnote on 7.

This phrase was chosen to limit the search to nouns (substantives) while aiming to exclude other usages such as adjectives (e.g. ‘poor’ living conditions) and adverbs (e.g. ‘poorly’ developed). This keyword search was based on past similar research that conducted a comparative analysis of the concepts ‘sustainable development’ and ‘environmental sustainability’ (Walid and Luetz 2018). Following this antecedent, this keyword search was limited in scope to all 25 English language UN Human Development Reports (HDRs) published to date (from 1990 to 2016), which were chosen ‘because of their global influence and appeal. Such focus could also be viewed as a limitation.’⁹ (Walid and Luetz 2018, p. 3). HDRs are annual¹⁰ milestone reports published by the United Nations Development Programme (UNDP). Reports are quite comprehensive and range in length from 130 to 440 pages each, with 236 pages as the average report size, and a total of 25 HDRs published to date, comprising a cumulative 5896 pages overall. This body of work represented a suitable data set.

To obtain the data, Adobe Acrobat PRO DC (Creative Cloud 2017) was used to carry out an ‘Advanced Search’ querying the phrase ‘the poor’ as ‘whole words only’ within all 25 UN HDRs, which were accessed from the UN.¹¹ All terms were subsequently counted and individually analysed through multiple review cycles to establish whether each occurrence reflected more of an active OR passive conceptual usage or understanding of ‘the poor’ as predominantly beneficiaries OR benefactors, receivers OR givers, problems OR solutions, teachers OR students. In other words, the guiding motif of the research was to gain a broad understanding about the extent to which ‘the poor’ are viewed and depicted in the most influential of global development literature today as offering the international community potential solutions to some of the world’s most intractable problems such as climate change and unsustainable development.

3 Results and Key Findings

A number of key findings emerged from the research, which have been synthesised and consolidated below. Qualitative research findings are presented first, followed by quantitative results.

3.1 *Qualitative Results Derived from CCDO Semi-structured Interviews*

Finding 1: Economic status is a determinate for the locus of transformational change

⁹This limitation in scope is elaborated in Sect. 6.

¹⁰Over the period 2007–2008 there was only one report published (UNDP 2007), and no HDR was published in 2012.

¹¹UN HDRs were accessed online at: <http://hdr.undp.org/en/global-reports>

A cross-cutting perception through the qualitative interviews was a subliminal expectation that the economically rich are not in need of transformation and are the primary drivers of change, while the economically poor are necessarily the primary beneficiaries of change.

Responses below are referenced according to enumerated source data and transcript page numbers.¹²

When asked about what sort of impact the CCDO's work had at the community level, the three respondent contingents gave a united and positive response:

There were huge changes that we have experienced from the [program] activities. (PP 1, 59)

Oh yes! Yes, lots of change. I've seen lots of change. Lots of families changing. (PR 7, 30)

... I recognise some of the kids, and they've grown up heaps and I can sort of see their growth in their education and that sort of thing, that's pretty cool ... (DN 1, 37)

However, as the interview questions sought to tease out transformational impact further up the economical chain, the stories—and expectations of change—significantly tapered off. Program Participant 4 was asked: What do you think would be helpful for the organisational staff to learn about? What do you wish they asked you to teach or show them?

I feel there's nothing – I never did – because I feel the staff were pretty capable. (PP 4, 68)

Practitioner 2 was asked about how his CCDO role of working with the poor had impacted him. He replied:

Well it uplifts my spirit ... If I go back to that experience, I would be encouraged to see that this is what God has done through me and through the rest of the team who worked on that project. (PR 2, 7)

When asked to elaborate ('has it shaped or challenged, has it changed you at all through doing that work?'), he answered:

Yeah, primarily my knowledge on the issues of child protection has deepened. (PR 2, 8)

Donor 2 was asked about the reasons why he decided to support the particular CCDO that he did. He replied:

Probably because we've seen the need for the work that they were doing, and we've seen that they were efficient in the way that they were carrying it out, to the extent that you know ... you know yourself that you can't do that work, and through an organisation like that you can reach them, where your money can be used in a good way. (DN 2, 39)

Whether intended or not, the implicit perception across the three respondent contingents was that CCDOs foster an expectation of correlation between economic status and a need for transformational change. This supports the hypothesis that CCDOs are encouraging a perception among their stakeholders that the evidence for impact of CCDOs should be found almost exclusively among the economically poor and rarely—if ever—among the economically rich.

¹²Program Participant (PP); Practitioner (PR); Donor (DN). For example, PP 4, 23 denotes a verbatim statement made by Program Participant 4 as recorded on transcript page 23.

Finding 2: There are some things that only the economically poor can teach

The perception that economic status is a correlate of a person's need for transformational change is contrasted by a second—albeit smaller—perception through a number of the interviews that the economically poor have a unique contribution to make to the growth and transformation of the economically rich. While this perception was unfortunately absent from the entire Program Participant contingent, it remains a key insight from the research project. Several Practitioners and Donors readily articulated ways in which the economically poor had contributed to their personal development:

I think [they've] helped me to see how relationally impoverished I am in coming from a Western background. (DN 3, 46)

Sometimes I find it a bit hard to relate when I come back to [the city], where material – there's a lot of emphasis on materialism, going out to eat at expensive places, not giving a second thought to how you spend your money. So I think that really affected me about how I make decisions – even about small things like how much do I pay for a meal; how I live. (PR 6, 25)

One practitioner was particularly noteworthy in the way she explained how the economically poor had contributed to her personal growth. She said:

I am beginning to understand a lot more what a preacher once said in my Church, that – and this is with all respect to seminary training – but this preacher said that: 'Seminary educated my mind, but the poor educated my heart'. And there are times where, it may not be exactly biblical, but I feel that there are times that interacting with the poor are the ways in which God shapes my heart, and the way that God deals with me – even in the way that he deals with my own sins and my own weaknesses and my own failings. That the Lord just speaks to me through the poor. (PR 3, 10)

And a little later in the interview she said:

Like it or not, [the people I work with] live in a different – they do live in a different social caste, and a different economic class; I have things that they don't, and that's when it hit me so hard – that while I may have things that they don't, these people's lives have lessons that I would not be able to learn anywhere else. (PR 3, 13)

This perception by a small number of the interviewed Donors and Practitioners stands in marked contrast—and perhaps in spite of—the first perception of CCDO agenda outlined earlier. It is small but significant evidence that transformational change is not only needed among the economically rich, but that the economically poor have skills and perceptions and gifts and insights that can contribute to—even be required for—the transformation of the economically rich.

Finding 3: Bi-directional learning is not on the organisational agenda

A final cross-cutting perception was that mutual transformation or 'bi-directional learning' was not actively or explicitly encouraged by the CCDOs that the respondents were involved with. Those Practitioners who had articulated ways in which the economically poor had contributed to their personal transformation were asked whether their CCDO had actively fostered that reversal in learning and growth. Practitioner 3 replied:

No, I don't think that [mutual transformation] was something that was officially encouraged by the organisation. I think I stumbled upon it as I exposed myself to the poor and allowed myself to be vulnerable to them. (PR 3, 13)

Practitioner 6 offered a slightly more nuanced answer, indicating that although 'reversals of learning' were not actively encouraged by her CCDO, 'bi-directional learning' is inherent to good community development practice:

I think [the mutual learning] just happened... and maybe in our [organisational] approach, how we do development is also integrated in that process; that whenever you start, you don't talk so much, you listen. (PR 6, 25)

The Donor contingent was also asked to articulate what organisational goals were evident in the correspondence they received from the CCDO that they supported. The replies were rather consistent:

[The CCDO] doesn't expect a whole lot from us other than the financial contributions and prayer." (DN 2, 39–40)

Well, they send me that stuff because they want to pull my heartstrings and be like 'Oh connect with this kid, and then pay more money!' (DN 1, 36)

Donate. [And that's it?] I think so... Yeah. It's always for donations. (DN 5, 49)

The overwhelming perception of the Practitioners and Donors was that the CCDOs they were involved with did not actively encourage 'bi-directional learning' or 'mutual transformation'. While some of the Practitioners and Donors had undergone personal growth as a result of their interactions with the economically poor, their experiences were spontaneous and ran contrary to their understanding of the CCDO's narrative, methodology and goals.

In summary, qualitative semi-structured interviewing revealed the poor to be a largely under-utilised and under-appreciated source for bi-directional learning overall.

3.2 Quantitative Results Derived from Systematic UN HDR Keyword Review

Quantitative data obtained from a systematic keyword search carried out in all 25 UN Human Development Reports (HDRs) published to date (Sect. 2.2) depicted 'the poor' overwhelmingly as subjects to be helped, rather than as experts to be quizzed.

Figure 2 below reflects the raw data: The first column reflects the HDR year of publication; the second column reflects its title; the third column reflects the number of times the search string 'the poor' was found in that report; the fourth column reflects the number of times that 'the poor' were referred to as 'active' or having agency; the fifth column shows non-active and/or simply 'other' inclusions of the term 'the poor'; the sixth column expresses the extent to which 'the poor' are 'active', relative to all 'other' inclusions, as a percentage figure.

Year	Human Development Reports	The Poor (TOTAL)	The Poor (ACTIVE)	The Poor (OTHERS)	% The Poor (ACTIVE/OTHERS)
1990	Concept and Measurement of Human Development	49	1	48	2%
1991	Financing Human Development	75	5	70	7%
1992	Global Dimensions of Human Development	21	0	21	0%
1993	People's Participation	38	4	34	12%
1994	New Dimensions of Human Security	49	9	40	23%
1995	Gender and Human Development	8	0	8	0%
1996	Economic Growth and Human Development	35	1	34	3%
1997	Human Development to Eradicate Poverty	87	3	84	4%
1998	Consumption for Human Development	45	0	45	0%
1999	Globalization with a Human Face	17	1	16	6%
2000	Human Rights and Human Development	7	1	6	17%
2001	Making New Technologies Work for Human Development	6	0	6	0%
2002	Deepening Democracy in a Fragmented World	11	4	7	57%
2003	Millennium Development Goals: A Compact Among Nations	20	3	17	18%
2004	Cultural Liberty in Today's Diverse World	6	0	6	0%
2005	International cooperation at a crossroads: Aid, trade and development	68	2	66	3%
2006	Beyond scarcity: Power, poverty and the global water crisis	163	4	159	3%
2007/2008	Fighting climate change: Human solidarity in a divided world	72	5	67	7%
2009	Overcoming barriers: Human mobility and development	19	8	11	73%
2010	The Real Wealth of Nations: Pathways to Human Development	24	3	21	14%
2011	Sustainability and Equity: A Better Future for All	45	0	45	0%
2013	The Rise of the South: Human Progress in a Diverse World	28	0	28	0%
2014	Sustaining Human Progress: Reducing Vulnerabilities	46	4	42	10%
2015	Work for Human Development	7	0	7	0%
2016	Human Development for Everyone	7	0	7	0%
All years	All reports considered together	953	58	895	6%

Fig. 2 Frequency table of 25 UN HDRs published from 1990 to 2016. In the overwhelming majority of cases, ‘the poor’ are depicted as non-active stakeholders in development. Taken together, there were 953 occurrences of the term ‘the poor’, of which only 58 reflected ‘the poor’ in a kind of active state (6% of the total)

The frequency graphs below (Figs. 3 and 4) reflect alternative views of this data.

In addition to Figs. 2, 3 and 4, a few qualitative exemplars of the phrase ‘the poor’ have been excerpted below, which reflect samples of the two respective understandings (‘others’ versus ‘active’).

References to ‘the poor’ shown here as ‘others’ are generally descriptive of their situations and/or prescriptive in terms of remedial approaches proposed, and are exemplified here by the following three samples:

The poor already live on the margins of subsistence. (UNDP 2007, p. 187)

Cross-subsidies can serve the poor. (UNDP 2006, p. 94)

Most people see aid as helping the poor. (UNDP 1994, p. 71)

References to ‘the poor’ as predominantly ‘active’ participants having agency, knowledge and a capacity to act are exemplified here by the following three samples:

One initiative ... aims to listen to—and learn from—the experiences of the poor, both in Europe and in the South. Its goal is to develop an agenda for action that will contain recommendations and proposals on how extreme poverty can be eradicated and especially on how societies can be mobilized to achieve this goal. (UNDP 1999, p. 101)

The best people to generate affordable housing are the poor themselves—whose energy and enterprise have created homes and thriving communities in the most difficult circumstances.” (UNDP 1996, p. 25)

The poor know best their opportunities for productive and remunerative work. (UNDP 1994, p. 40)



Fig. 3 Frequency graph of 25 UN HDRs published from 1990 to 2016. Interestingly and significantly for this discussion about learning from the poor about sustainability, the UN HDR published in 2011 ('Sustainability and equity: A better future for all', UNDP 2011) did not mention 'the poor' in a kind of active state at all

In summary, quantitative data derived from systematic keyword query in all UN HDRs published to date (see Sects. 2.2 and 3.2) also revealed the poor to be a largely under-utilised and under-appreciated source for bi-directional learning.

4 Discussion of Core Issues: Opportunities for Spiritual Contributions

As revealed in the qualitative research (Sects. 2.1 and 3.1), it appears that the poor are not generally perceived by development stakeholders to be a valuable source for learning about 'sustainability', a finding similarly mirrored in the quantitative research (Sects. 2.2 and 3.2): Of a total 953 inclusions of the phrase 'the poor' in 25 HDRs published from 1990 to 2016, numbering a cumulative total of 5896 pages, there are only 58 references to 'the poor' (or 6% of the total) that appear to reflect them in a kind of active state.¹³

¹³Incidentally, the number 58 drops down to 50 with the removal from the findings of two Bibliographical References that were counted as depicting the poor in a kind of active state, namely *Voices*

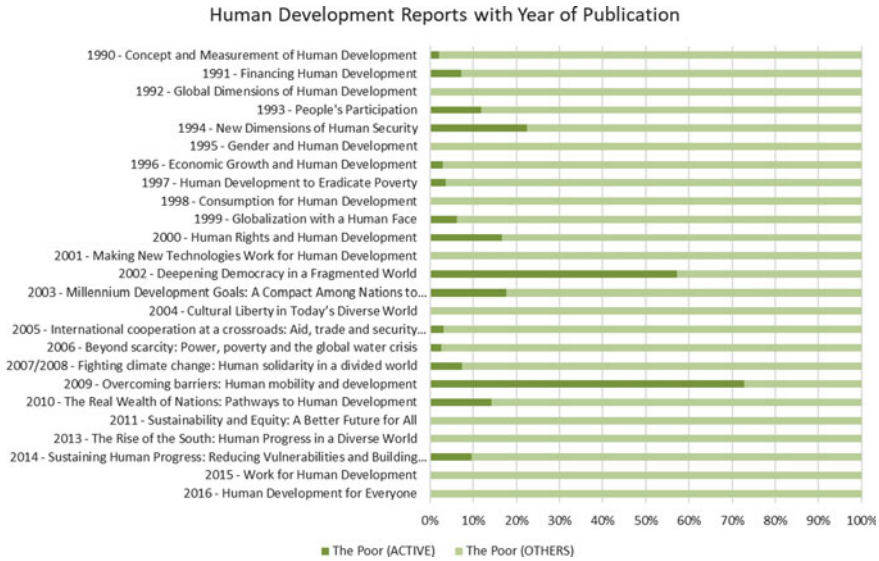


Fig. 4 Frequency graph of 25 UN HDRs published from 1990 to 2016. Expressed as percentage figures, the two UN HDRs published in 2002 (‘Deepening democracy in a fragmented world’, UNDP 2002) and 2009 (‘Overcoming barriers: Human mobility and development’, UNDP 2009) reflected ‘the poor’ as more active than not

During CCDO interviews, there were no explicit connections made regarding ‘sustainability’ and ‘spirituality’. This is surprising given the Christian ethos underpinning these organisations, which (presumably) recognises the inherent worth and potential of those considered the least predisposed to meaningful contribution. Most of the *ad hoc* ‘bi-directional learning’ that did occur seemed to centre on topics like the importance of relationships and/or personal character development. Can it thus be concluded, that CCDOs are not encouraging any space for ‘bi-directional learning’, and so embracing input from the poor about sustainability is off the agenda by default? Or, could it be that the notion of embracing and demonstrating a willingness to *learn* from the spiritual practices and beliefs of people groups with tribal approaches to spirituality, creates a moral and religious conflict for these organisations? Whatever the reason, this is an argument from silence. If CCDOs are not expressly encouraging ‘bi-directional learning’, it seems to be clear that they are not actively seeking to learn from the poor about sustainability. This is disquieting, seeing that the poor live far more sustainably¹⁴ than more materialistically minded groups of people in the so-called ‘developed’ world (Brainerd et al. 2009; UNDP 2007, pp. 47–48; WWF 2016), and their sustainable lifestyles are often firmly under-

of the poor: *Crying out for change* (Narayan et al. 2000a), and *Voices of the poor: Can anyone hear us?* (Narayan et al. 2000b). These were discovered eight times in five HDRs.

¹⁴<http://data.footprintnetwork.org/>

pinned by their spirituality (Buxton 2014, pp. 173–191; Matlock and Jurin 2016; Schein 2015; White 2010).

This diffuse silence is even more surprising in light of the fact that the UN itself recognises the need for harnessing theology for sustainability in its landmark HDR *Fighting climate change: Human solidarity in a divided world*:

Belief in the values of stewardship, cross-generational justice and shared responsibility for a shared environment underpin a wide range of religious and ethical systems. Religions have a major role to play in highlighting the issues raised by climate change. They also have the potential to act as agents of change, mobilizing millions of people on the basis of shared values to take action on an issue of fundamental moral concern. While religions vary in their theological or spiritual interpretation of stewardship, they share a common commitment to the core principles of cross-generational justice and concern for the vulnerable. (UNDP 2007, p. 61)

The report then mentions examples of how sustainability is underpinned in theological or spiritual interpretations of stewardship found in Buddhism, Christianity, Hinduism, Islam and Judaism (Climate Institute 2006; IFEEES 2006; Krznicar 2007; cited in UNDP 2007, p. 61).

Further clear links between sustainability and spirituality are made in several UN HDRs, which explore a range of possible reasons as to why there might be little apparent desire among actors in the development community to learn from the so-called ‘poor’. Impediments include

- (1) The poor can be useful scapegoats or pawns in the hands of politicians:

The poor can also be politically convenient. In some countries they serve as scapegoats for the ills of society, as immigrant workers do in Europe and North America. But they can also serve a useful pool of voters for politicians who claim to serve their interests—even if they never consult them. (UNDP 1998, p. 95)

- (2) The poor may have limited capacity for global concerns, given their preoccupation with survival of their lives, families and livelihoods:

The poor are not preoccupied with the loud emergencies of global warming or the depletion of the ozone layer. They are preoccupied with the silent emergencies—polluted water or degraded land—that put their lives and their livelihoods at risk. Unless the problems of poverty are addressed, environmental sustainability cannot be guaranteed. (UNDP 1994, p. 19)

- (3) The poor may perhaps even be perceived as incapable of erudite contribution:

The poor are usually those with less access to education. (UNDP 1996, p. 99)

- (4) The poor—and their associated disabilities—are perhaps seen as a problem to be solved:

In developing countries, disability is more common in rural than in urban areas, and among the poor. (UNDP 1993, p. 27)

None of these suppositions seem to adequately address the question why there is so little ‘bi-directional learning’ about sustainability from the poor and marginalised.

Indeed, the need for a more holistic education agenda on environmental sustainability, so-called 'Creation Care' and spiritually shaped sustainability is well documented in the literature (Luetz et al. 2018). Could it be that the current global fascination with using almost exclusively economic indicators as measures of worth (cf. Luetz and Walid 2019, in press) categorically discounts poor people as authoritative educators? Or can we attribute the absence of learning about spiritually shaped sustainability from the poor to a scientific worldview that treats the two areas of science and spirituality as irreconcilably separate and distinct?

Matlock and Jurin (2016) posit that '[t]he scientific world-view that created the dichotomy of science and spirit is now merging together ... sustainability practitioners ... need to support sustainability education to include spiritual connections with nature and create opportunities for spiritual growth within the field of sustainability.' (p. 281).

Could it be that the development community remains blinded by what Chambers calls the 'learning disability of uppers' (1997, p. 76)? Chambers argues that 'uppers' are highly susceptible to experiencing 'acquiescence, deference, flattery, and placation from lowers' (1997, p. 76). This seems to significantly hamper their capacity to learn from those further down the community development chain. For Christian development organisations however, the Divine redemptive agenda demonstrates a preference for working through and with 'the weak things of the world to shame the strong' (1. Cor. 1:27).

For the purposes of this Discussion Section, the following reflections shall be limited in scope to Judeo-Christian Theology, which offers hopeful historical perspectives of what appears to be a Divine preference for self-revelation and human betterment through the least expected voices.

The Divine missiological preference for self-revelation through the poor, weak and marginalised is an interesting and important motif that perhaps needs to be recovered and applied by CCDOs. Indeed, Scripture reports God as having chosen a Canaanite prostitute called Rahab and a Moabite widow called Ruth to be Jesus' earthly ancestors (Jos. 2:1; Ru. 1:4; Mt. 1:1–5), although at the time their cultural heritage, gender, marriage status and employment choices made them the worst candidates for regal lineage in the Jewish tradition (Blomberg 1997, p. 199). Moreover, God reportedly chose Hosea, the husband of a prostitute, and Amos, a simple farmer from the south, to be his preferred spokespersons (Hos. 1:2; Am. 1:1). Further, Jesus chose to engage with ignoble Samaritans, an unclean woman, a prostitute, a woman facing the death penalty, despised tax-collectors, children who got in the way (Lk. 10:25–37; Jn. 4:7–41; Mt. 9:20–22; Lk. 7:37–50; Jn. 8:3–11; Lk. 8:9–14; Mt. 18:3–4). Jesus used each of these encounters as exemplars to 'uppers', and in doing so revealed something about Yahweh and the Divine way of working with and through 'the least of these' (Mt. 25:45).

If there is a Divine preference for self-revelation through the misfits and outsiders, could it be that there are lessons about spiritually shaped sustainability that only the poor can teach? And importantly, is there space and interest to listen and learn those lessons? (cf. Francis 2013, pp. 147–168)

We are not arguing here that ‘uppers’ cannot or should not educate for sustainability—far from it. We owe much to the teachings of well-studied, brilliantly minded scholars past and present (Chalmers 2007; Foster 2001; Fowler and Engel-Cox 2004; McFarlane and Ogazon 2011; Pike et al. 2003; Smith-Nonini 2016). We also affirm methodological approaches that have expanded developmental perspectives to concurrently encapsulate education, sustainability, and poverty eradication (UN 2015, p. 5; UNESCO 2016, p. 7). However, we are asking whether these methodologies are sufficiently capitalising on opportunities for ‘reversals of learning’ and ‘bi-directional learning’ where the poor teach the profligate and so-called ‘developed’ rich about the interwoven nature of frugality, modesty, contentedness, spirituality and sustainability.

Ongoing environmental degradation and the unfolding depletion of the Earth’s finite resource endowment make concerted glocal action and expeditious progress towards veritable¹⁵ sustainability increasingly urgent. There is no Planet-B.

Mahatma Gandhi once reflected on how many planets might be needed if India were to follow Britain’s pattern of industrialization. We are unable to answer that question. However, we estimate in this Report that if all of the world’s people generated greenhouse gases at the same rate as some developed countries, we would need nine planets. (UNDP 2007, p. 3)

Learning from the poor about sustainability offers a promising, yet largely unexplored approach and instrumentality to progressing the global sustainability agenda and attaining the SDGs (UN 2015; UNESCO 2016).

5 Conclusion: Questions and Prospects

There are strong suggestions that the poor are not generally perceived by development stakeholders as a significant resource for learning about sustainability. This finding is supported both by qualitative semi-structured interviews (Sects. 2.1 and 3.1) and by quantitative data derived from a systematic UN HDR keyword search (Sects. 2.2 and 3.2) conducted for this mixed methods research. The findings suggest that the poor and marginalised are a valuable, although largely under-utilised and under-appreciated source for ‘bi-directional learning’ about sustainability. In short, the poor are overwhelmingly perceived and portrayed as subjects to be helped, rather than as experts to be engaged and heeded. Hence, ‘reversals of learning’ need to be prioritised, standardised and normalised. Spirituality plays a significant role in the environmental perspectives of the poor, and the potential it brings for sustainability benefits should not remain under-utilised.

The research also raises questions and tentative recommendations.

- Are there disparities between theoretical and practical definitions of poverty? For example, what do current poverty alleviation methodologies subliminally uncover about our understanding of the ‘poverty of the rich’?

¹⁵This stands in marked contrast to other disingenuous and untenable claims to sustainability, as used, for example, in concepts such as ‘sustainable mining’ (Whitmore 2006).

- To what extent is ‘bi-directional learning’ an effective and positive correlate for poverty alleviation and sustainable development? Can ‘reversals of learning’ go beyond meeting immediate needs to addressing (for example) structural and systemic aspects of poverty that are ingrained in and/or perpetuated by the current global economic system? (Klein 2007, 2014; McKibben 2007; Piketty 2014).
- Is this neglect of ‘bi-directional learning’ unique to Christian based organisations, or is this similarly inherent in all Community Development Organisations (CDO)? Do Christian based organisations have an unrealised opportunity to esteem the poor more highly as those whom Jesus commanded His true followers to emulate?
- If it is true that ‘[m]ost major religions call on their followers to aid the poor’ (UNDP 2005, p. 78), how can different development stakeholders better activate, encourage, standardise and normalise learning about spiritually shaped sustainability from the poor and marginalised?

Clearly, such questions expose significant prospects in the creation of a more holistic sustainability. Specifically, these could include exploring innovative opportunities for ‘bi-directional learning’, particularly with respect to spirituality underpinning sustainability (Luetz et al. 2018). Obviously, this would require an openness to acknowledge the contributions of other forms of spirituality, rather than seeing them as a threat to more formally recognised religious traditions. However, by harnessing mutually important spiritual values, space may be created for the injection and translation of fresh knowledge into good practice.

Such knowledge could be integrated into educational programs, inform ‘good practice’ guidelines for practitioners working in the field, allow opportunities for personal and spiritual growth, and empower passive ‘recipients’ and ‘beneficiaries’ (of benevolent concern) to become active ‘stakeholders’ and ‘partners’ (of a common sustainability agenda), thus offering prospects of multiple benefits, including (1) more holistic discourse; (2) input of new sustainability solutions ‘from below’; (3) more equitable power relationships between stakeholders; (4) more robust environmental sustainability agenda overall.

6 Research Limitations and Opportunities for Further Research

The authors acknowledge the limitations of both the qualitative and quantitative parts of this research as follows:

A potentially limiting issue for the qualitative research was the geographical, cultural and language barriers between researcher and program participants. This issue manifested itself in several ways: the conducting of the interviews through a third party; the need for double translations that potentially missed the essence of questions and answers; and the inability to capture research summary feedback from the respondents. A second issue was a skewed donor contingent, wherein the majority had spent significant time working or living in contexts of poverty. This

factor may have shaped the perception of respondents beyond the average donor's understanding of poverty and their role in mitigating poverty.

The qualitative research was also based on a relatively small sample and prioritised depth over breadth. Hence, there is an opportunity here for further research that extends the scope of this study to larger samples, as well as geographically and longitudinally. Finally, the qualitative research did not compare interview data with CCDO vision, mission and value statements; it may be that the interviewee perceptions align with CCDO vision, mission and values, which represents a further opportunity for research.

Following Walid and Luetz (2018), the systematic keyword review was limited in scope to UN HDRs, which were intentionally chosen as a data source 'because of their global influence and appeal. Such focus could also be viewed as a limitation.' (p. 3). Hence, there exists an opportunity for further research that widens the keyword search scope to additional data sources such as the World Bank's World Development Reports (WDRs), published annually since 1978. There are also opportunities to extend the scope of research internally within HDRs to other phrases of interest, e.g., 'the poorest', or between reports, e.g., HDRs and WDRs, conducting comparative analyses. Scrutinising ideological and/or ideational differences between the World Bank's WDRs (advocating the I/C approach for measuring 'monetary poverty'), or the United Nations Development Programme's HDRs (advocating the CA approach for measuring 'human poverty') may yield fertile insights into how learning about sustainability from the poor may be mainstreamed within different organisational or theoretical frameworks for development.

There is also an element of interpretation within the subjective assessment that may be seen as potentially limiting the robustness of quantitative findings. Hence, quantitative findings are best comprehended as 'roughly right [not] precisely wrong.'¹⁶ (Myers and Kent 1995, p. 33). Or expressed in the words of the ancient Greek philosopher: 'It is the mark of an educated mind to rest satisfied with the degree of precision which the nature of the subject admits and not to seek exactness where only an approximation is possible.' (Aristotle, cited in Fripp et al. 2000, p. 55).

This paper also invites further research into the links between the spiritual and sustainable practices of the poor, particularly regarding their adaptability to the northern context. Further research is also needed to explore appropriate and unburdensome practical approaches to eliciting wisdom from the poor on the issue of spiritually based sustainability. Finally, a germane study has subsequently arisen from this research, investigating what prioritisation the UN ascribes to 'economic', 'sustainable' and 'social' development (Luetz and Walid 2019, in press).

Because sustainability is really a global concern that is relevant to all inhabitants of the planet, there is seemingly infinite opportunity for wisdom and learning to be sourced from other disciplines with similar underpinning principles. By exploring the learning from other marginalised people groups as they have struggled to find

¹⁶As advocated by Myers and Kent (1995), '[in] a situation of uncertainty where not all factors can be quantified to conventional satisfaction, let us not become preoccupied with what can be precisely counted if that is to the detriment of what ultimately counts.' (p. 33).

their voice in the world, insight can and should be applied to the discipline of global sustainability also.

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Religious Organizations Bringing Sustainability Closer to Reality: Academic Contributions to Environmental Sustainability and Climate Resilience that Can Help Faith Leaders Build Communities that Are Environmentally, Socially and Economically Sustainable: Part 1—A Literature Review



Joyce Stubblefield and Jan Jaap Bouma

Abstract Sustainability is a three-dimensional concept and religious leaders have underscored their urgent responsibilities for helping to ensure that truly equitable, sustainable societies are nurtured as they also work responsibly in caring for the health of the eco-systems upon which all of us are totally interdependent. Presently, there is a significant gap in empirical and scientific literature to help foster sustainability, climate resiliency (climate change), and people of religious organizations to co-work to help to transition from unsustainable lifestyles to truly sustainable ones. Scientific and empirical knowledge are important factors in decision-making for religious leaders. The authors of this paper considered the theoretical perspective of the Cambridge University sustainability leadership model grounded in leadership theories and *the practice of sustainability by leaders* as key means to assess the roles of knowledge in becoming more responsible social leaders in sustainability transformations. The finding of this review is that there are academic fields of study and research that contribute to advancing environmental sustainability and climate resiliency as practiced by religious organizations. These fields include: environmental science, engineering, health, and other scientific disciplines. Religious organizations and the interfaith community must learn to use and build upon emerging interdisciplinary insights to advance their sustainability actions, in caring for the health of the eco-

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systems. The review identified the academic programs for sustainability through which students and leaders can learn more about environmental sustainability and climate resiliency. Although, members of religious organizations engage mainly on the social discourses of sustainability for example taking care of the poor and sick, the results of this review captured emerging academic approaches that could foster social sustainability more holistically for members of religious organizations by more holistically engaging in environmental, social and economic dimensions of sustainability.

Keywords Environmental sustainability · Climate change · Climate resiliency · Religious organizations · Sustainability leadership · Sustainability degrees · Research projects

1 Introduction: Concepts and Surveys

Sustainability is a complex three-dimensional concept and religious organizations are moving more actively in seeking to advance environmental sustainability as part of their social and ethical responsibility caring for the health of the ecosystems of the Earth and of humankind. There is a significant gap in empirical and scientific literature needed to help members of religious organizations to more effectively foster sustainability and climate resiliency (climate change), in many ways, including how they invest billions of dollars in social services for societal welfare. Scientific and empirical knowledge are important factors in decision-making for leaders of all sectors of society. Hollander et al., argued, that of *the three components of sustainability, social sustainability is the least studied*,¹ but authors of this paper assert that religious organizations have been forerunners on social transactions for the poor and the sick; including ethical investing and research on health. Considering the recent religious bodies' *calls for global action*, the authors of this paper, posed the following overarching question: What academic literature, disciplines, and research is available to help to support members of religious organizations in their efforts to more holistically lead actions for a sustainable future: environmental sustainability and climate resiliency? The purpose of this paper was to provide guidance for members of religious communities to work more closely with academia members and vice versa for academics to work more closely with members of religious groups in multi-disciplinary educational programs and research.

Cambridge University created a sustainability leadership model that positioned sustainability within the context of leadership theories. Visser and Courtice defined a leader as, 'someone who can craft a vision and inspire people to act collectively

¹Hollander, Rachele, Adjo Amekudzi-Kennedy, Sarah Bell, Frazier Benya, Cliff Davidson, Craig Farkos, David Fasensfest, et al. 2016. "Network Priorities for Social Sustainability Research and Education: Memorandum of the Integrated Network on Social Sustainability Research Group." *Sustainability: Science, Practice, & Policy* 12 (1). <https://search.proquest.com/docview/1819118812?accountid=13598> (page 5).

to make it happen, responding to whatever changes and challenges that arise along the way.’ The authors explained that ‘the skills required for sustainability leadership in the UK found that middle managers especially need sufficient knowledge about sustainability to translate it into successful business strategies, as well as to help them to develop effective and persuasive communication by using clear and accessible language.’ These authors used the following theoretical approaches in modeling sustainability leadership: 1. *Trait/Style school*, which focuses on the characteristics or approaches of individual leaders (McCall & Lombardo, 1983; Tannenbaum & Schmidt, 1973); 2. *The Situational/Context school*, which focuses on how the external environment shapes leadership action (Hersey & Blanchard, 1999; Vroom & Yetton, 1973); and 3. *The Contingency/Interactionist school*, which is about the interaction between the individual leader and his/her framing context (Fiedler, 1971; De Vries, 2001). (Visser and Courtice 2011)

Several concepts are discussed in this paper with the recognition that the environment and ecology have been a part of the religious lexicon for decades. For example, Imanaka et al., noted that ‘the release of the June 2015, *Laudato Si*’ was first papal social encyclical dedicated primarily to environmental issues.’ (Imanaka et al. 2017)

An important reflection is that ‘**religious organizations** can act as institutional links to environmental issues by providing sociopolitical values through the filter of religiously-inspired morals to their followers’. These perspectives can help to place environmentalism and climate change in perspective, as: ‘**environmentalism** is an ideology focused on protection and conservation of the natural world. **Climate change** is one concern within environmentalism.’ (Landrum et al. 2016)

Larkin et al., observed that improvement of national resiliency efforts of federal agencies in the United States are devising ways to address resiliency. The National Academy of Sciences definition for disaster resiliency is ‘**disaster resiliency** is the ability to plan and prepare for, absorb, recover from, and adapt to adverse events.’ (Larkin et al. 2015) A definition for **climate resiliency** by the Intergovernmental Panel on Climate Change (IPCC), is that ‘climate resiliency refers to the outcomes of evolutionary processes of *managing change* in order to reduce disruptions and enhance opportunities.’² (Abeyasinghe et al. 2014) and Goodland (1995) stated that defining each component of sustainability distinctly may help organize the action required to approach global sustainability in real life.

Environmental Sustainability (ES) is defined *in short* by Goodland, as, ‘maintenance of natural capital’. More specifically, Goodland defined ES as a set of constraints on the four major activities regulating the scale of the human economic subsystem: the use of renewable and nonrenewable resources on the *source side*, and pollution and waste assimilation on the *sink side*. Goodland further explained that the principles of ES are focused upon improving human welfare by protecting the sources of raw materials used for human needs and by ensuring that the sinks for human wastes do not exceed the capacity of the eco-system to transform them into harmless materials. (Goodland 1995)

²https://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap20_FINAL.pdf (p. 1108).

Sustainability education and action cannot happen without leadership. Visser and Courtice defined **sustainability leadership** as *someone who inspires and supports action towards a better world*. (Visser and Courtice 2011) and Laasch and Conway defined sustainability leadership as ‘a leader who promotes sustainability in a certain group or a system. Sustainability leaders might lead a work team, a whole organization, a complete region, or a whole industry toward sustainability.’ (Laasch and Conway 2014) These simple but powerful definitions can also characterize religious leaders for sustainability as they seek to ground social decisions in human dignity and resource needs.

In 2013, results of an environmental international survey performed by International Social Survey Programme and reported by Tom W. Smith, Director of the General Social Survey, a project of the independent research organization NORC at the University of Chicago, documented that the environment or climate change was not a main concern for most people and that the economy ranked highest in fifteen countries. *‘One reason for the relatively low ranking of climate change is that people often believed it did not directly affect them. Climate change is seen more as a country-level problem than as a personal problem,’ Smith said. ‘While 14.6 percent cited it as the most important environmental issue for their country, only 9 percent rated it first for themselves.’* On the other hand, the survey results revealed that younger people showed a higher concern for climate change than older people. Also, the results underscored the fact that some countries ranked environmental or climate change to be their highest concern.³

In 2015, Rosenau graphed data that showed what religious organizations (church members) most agreed about relative to their ‘belief’ in evolution compared to a social costing for environmental regulations. This graph was impactful as it placed a clear visualization for religions standing on the environment (based on Rosenau’s questions) relative to each other and thought provoking. Rosenau explained the background questions, circle sizes and colors to the graph, in a blog.⁴ The Alliance of Religion and Conservation (ARC) organization hosts information about conservation and planning for religious organizations and reported that there are fifty faith-based action plans on the environment.

The concepts, survey results, academic information and faith projects are Part 1 to this study. Part 2 or next step is to focus upon application of knowledge across leadership, congregants and or adherents who are implementing practices (case studies) for sustainability futures and outcomes.

³<http://www.norc.org/NewsEventsPublications/PressReleases/Pages/International-surveys-show-environmental-issues-rank-low-among-most-peoples-concerns.aspx>.

⁴Data from Pew Religious Landscape Survey (2007) Graph by Josh Rosenau <https://files.acrobat.com/a/preview/326b9f78-8070-46a1-9e80-69180ca915a3>; a blog about the graph can be read at: <http://ncse.com/blog/2015/05/evolution-environment-religion-0016359>. The blog provided Rosenau’s questions, and the meaning of the colors and sizes of the rings, in the graph. One of the questions (most agreed with): *Stricter environmental laws and regulations cost too many jobs and hurt the economy; or Stricter environmental laws and regulations are worth the cost?*

2 Context for Sustainability and Religion

2.1 Urgency for Environmental Sustainability

“The National Environmental Policy Act of 1969 committed the United States to sustainability, declaring it a national policy ‘to create and maintain conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations,’”⁵ and in 1970, the United States Environmental Protection Agency was created to address critical environmental degradation issues in America. In 1995, 2011, and 2016, Goodland, Vallance et al., and Hecht et al., came to assert a sense of urgency for environmental sustainability. Goodland expressed an urgent concern for environmental sustainability, Vallance et al., argued the need to recognize the complexities of social sustainability as paramount to that of a lesser degree for environmental sciences and proposals for sustainability, and Vallance perspective is further elaborated below. Hecht et al., pointed to the rapid pace of many factors working against sustainability and the need for preparedness and resiliency against formidable environmental, social and economic risks. In excerpt:

- (1) *“expanded readings of social sustainability indicate the need to rely less on ‘objective data’ and ‘scientific evidence’ to stimulate changed human perspectives on bio-physical environmental issues. This is not a call to abandon environmental science, but rather a suggestion that its practitioners work alongside social scientists in order to explore how residents interpret, and incorporate concerns about, the places in which they live and the world around them. Despite optimistic proposals from some academics, politicians, and local government managers for greater levels of participation, techno-science, neo-liberalisation and secularisation have created something of a normative vacuum that makes it difficult to effectively reconcile the three social sustainability’s.”* (Vallance et al. 2011)
- (2) *Most natural capital or environmental services cannot be substituted for, and their self-regenerating properties are slow and cannot be significantly hastened. That is why environmental sustainability has a time urgency.* (Goodland 1995)
- (3) *The 2015 UN Global Assessment Report on Disaster Risk Reduction predicted that disasters are expected cost global communities up to \$300 billion annually in the coming decades [4] and that urban leaders and planners should be cognizant of the rapid pace of factors working against sustainability and should prioritize sustainability initiatives with an appropriate sense of urgency to yield significant progress toward urban sustainability.* (Hecht et al. 2016)

Authors (Goodland, Hecht and Maxwell) expressed concerns for the environment, and Vallance contextualized that there is a more apparent role for contributions from the social sciences, as noted above. Wardekker et al., addressed the role of leadership

⁵<https://www.epa.gov/sustainability/learn-about-sustainability#what>.

and urgency to address climate change: “In the United States, the public discussion of the moral and ethical dimensions of climate change is strongly influenced by religious groups and leaders. In February 2006, for instance, a group of 86 US evangelical leaders, under the auspices of the Evangelical Climate Initiative (ECI), challenged the Bush administration on global warming with their ‘Evangelical Call to Action’ (ECI 2006). The document states that climate change is an urgent issue that will impact the poor most of all, and calls for stringent emission controls. Other religious groups and leaders, in the US and other countries, have taken similar positions (Wardekker and Peterson 2008). The (religious-) ethical aspects of climate change are the central theme of their statements.” (Wardekker et al. 2009)

2.2 *A Religious Context of Social and Environmental Sustainability*

The Lynn White’s 1969 thesis published in *Science* caused reflection and debate as he laid blame of our ecological crisis at the feet of religious doctrine and then offered *who better* to take the care of the Earth than the faithful. Since the early 1970s, religious organizations and its congregational members started to emphasize the need to take care of the Earth. The World Council of Churches (WCC)—(church organization) was formed from a desire by students and lay persons to establish a ‘fellowship of churches’⁶ and appeared to at least foster a pre-text for the now coined ‘social sustainability.’ The WCC over a period, focused and refocused its efforts to and from sustainability or ‘Caring for the Earth’ for example, towards Peace. In recent time, The United Methodist Church created a leadership position called the *missionary for the Care of God’s Creation*⁷ or (*Missionary to the Earth*). This aligns with the upswing of global actions for sustainability by religious organizations.

2.3 *Science and Religion*

This research paper is not to withhold debates on science and religion but to look more at what contributions exist that advance learning and application about environmental sustainability. Tucker stated that *environmental degradation is an ethical issue and that we need science and religion to work together as never before for the flourishing of the Earth community*. (Tucker 2015). Both Hitzhusen and Tucker summed up perspectives as follows:

- ‘Religions have an important role to play in Earth Stewardship, which has often been under-appreciated

⁶History of The World Council of Churches: <http://www.oikoumene.org/en/about-us/wcc-history>.

⁷<http://www.umcmission.org/Learn-About-Us/News-and-Stories/2014/April/newunitedmethodistmissionary>.

- Increasingly, religious communities are expressing ethics and practices for sustainability that promote resilience and transformation in the face of the environmental crisis
- Scholarly attention to connections between religion and Earth Stewardship is growing in both theological and ecological disciplines, and partnerships between environmental and religious organizations are becoming more common
- Scientists, policy makers, economists and educators can advance Earth Stewardship by engaging with the environmental perspectives and resources of the world's religions' (Hitzhusen and Tucker 2013)

Tucker furthered noted that 'perhaps most problematic is the *academic divide between scientific fact and policy action*. Most scientists tend to see their research as ranging from pure to applied science but would not want to advocate for solutions. They are comfortable with objective description and wish to avoid ethical prescription. This is understandable, but when scientific reports don't translate into behavioral and legislative change we face a considerable impasse.' Tucker also recognized a need for 'dialogue with the science of climate change.' (Tucker 2015). Lead author of this paper participated by observing actions of academia to bridge a divide, as stated by Tucker. *Case in point*, the Louisiana State University Community Resilience Institute held two workshops in 2017 for community leaders to help them address impacts from the 2016 Great Floods of Louisiana to reinforced collaboration between university and community.⁸ The lead author of this paper attended both events. In addition, clergy formed in the wake of the Great Floods and both authors of this paper conducted an open interview with the facilitating pastor about his role as leader. As discussion in this paper indicate that religious organizations are implementers of social sustainability, deemed 'a moral capital',⁹ authors of this paper believe the leap is not too far to advance *knowledge of environmental sustainability or climate resiliency to that implementation*; as can be provided by educational institutions (example Louisiana State University) to help bring caring for the Earth more closely to reality be it civic leaders and or religious leaders.

3 Education for Sustainability

'Sustainability science has emerged over the last two decades as a vibrant field of research and innovation'. Today, the field has developed a core research agenda, an increasing flow of results, and a growing number of universities committed to teaching its methods and findings. Like 'agricultural science' and 'health science,'

⁸Researchers and academics can play an important role in linking scientific knowledge to action to encourage collaboration and enhance resilience and adaptive capacity (Ostrander and Portney 2007). Community-university partnerships can produce knowledge that is more relevant, legitimate, and useful for local decision-making (Maurasse 2001). Draft article (published) provided to Joyce Stubblefield via email from Traci Birch, Louisiana State University via email on 8/29/2017.

⁹Goodland (1995).

sustainability science is a field defined by the problems it addresses rather than by the disciplines it employs. In particular, the field seeks to facilitate what the National Research Council has called a ‘transition toward sustainability,’ improving society’s capacity to use the earth in ways that simultaneously ‘meet the needs of a much larger but stabilizing human population, ... sustain the life support systems of the planet, and ... substantially reduce hunger and poverty’ (1) Clark, W. C. (2007). ‘Sustainability science: a room of its own.’ *Proceedings of the National Academy of Sciences* **104**(6): 1737.

‘In the twenty-first century, environmental education is turning toward a community of partners so that students, teachers, NGOs and politicians can work together to identify and resolve socio-ecological problems. In order to make these fundamental changes, leadership is pivotal for driving the change.’ Akiyama et al., furthered profoundly expressed ‘therefore, when we say reorienting higher education, the tasks we have to observe are how the existing knowledge on environmental education and sustainability can be extended as well as establishing the role that the higher educational institutions can play. There must be a balance in society between investing for sharing existing scientific knowledge and further extension of that knowledge.’ (Akiyama et al. 2013) Authors of this paper note that universities around the globe are emerging with degree programs in sustainability to address this multi-disciplinary phenomenon to learning. For example, Rochester Institute of Technology (RIT) identified a variety of degree programs across multiple disciplines. RIT stated their focus is the next generation sustainability leaders: ‘For centuries, the core of every college and university has been the interactions among faculty and students where learning and ideas take root and new generations of thought leaders and change agents emerge. At RIT, we are preparing the next generation of sustainability leaders through an array of undergraduate and graduate programs; interdisciplinary research; student projects; and an emphasis on innovation. Sustainability is approached from myriad perspectives that include engineering, science, management, policy, and technology to name a few.’¹⁰ Table 1 below is a sample listing of sustainability related degrees offered at RIT with the related fields of study. Authors of this paper also compared this information with example academic resources and journals links.

Arizona State University is known for its environmental sustainability degree programs. Southern Methodist University (SMU) offers two Master degree programs for sustainability: Sustainability and Development in the School of Engineering and a Masters of Liberal Studies environmental sustainability concentration in the School of Education and Human Development. Lead author of this paper is a graduate and adjunct professor of sustainability at SMU. For one class session, the United Methodist Church missionary to the Earth via Skype discussed advocacy for climate change action across religious organizations. SMU is also home to Perkins School of Theology and Dedman College of Humanities and Sciences Religious Studies. In addition, the lead author presented a topic: Diverse Religions on the Global Stage for Climate Change at an International Conference of academics, in Sitges, Spain in 2015. Along with newly designed sustainability courses at universities.

¹⁰<http://www.rit.edu/sustainability/academics-research>.

Table 1 Sample of RIT sustainability degrees and related fields of study along with additional research links

Rochester Institute of Technology Degrees	Fields of Study	Sample academic research and links
Ph.D.	Sustainability	Journals and Resources Links: https://files.acrobat.com/a/preview/fe0233bb-d6fb-48b6-b04a-99eb24c2b19c .
	Computing and information	Sustainable Computing—Journal—Elsevier (https://www.journals.elsevier.com/sustainable-computing/)
	Microsystems engineering (alternative energy or energy efficiency)	
Masters	Architecture	Journal of Sustainable Architecture and Civil Engineering—Exeley (https://www.exeley.com/journal/j_sustainable_architecture_civil_engineering)
	Business Administration (environmental sustainable materials concentration)	SSRN OIDA International Journal of Sustainable Development (https://papers.ssrn.com/sol3/JELJOUR_Result.s.cfm?form_name=journalbrowse&journal_id=1650801)
	Environmental forecasting, disaster preparedness and response	Environmental Forecasting PDF—Environmental forecasting for Sustainable Development (https://www.researchgate.net/publication/267852364_Environmental_forecasting_for_Sustainable_Development) Disaster Preparedness and Response International Journal of Disaster Risk Reduction (https://www.journals.elsevier.com/international-journal-of-disaster-risk-reduction/)
	Packaging Science (sustainable packaging track)	Sustainability in retailing (https://www.emeraldinsight.com/doi/full/10.1108/IJRDM-02-2015-0024)
	A full listing of Table 1 can be viewed at: https://files.acrobat.com/a/preview/57787b3f-c500-4b8a-896c-070e4ad562ed	

Further research can be evaluated to integrate sustainability curricula into teachings in Schools of Theology and or Religious Studies. For example, **GreenFaith** is an organization that works ‘to inspire, educate and mobilize people of diverse religious backgrounds for environmental leadership’ and connects resources for faith environmental actions and foster education.¹¹ According to GreenFaith’s 2015 annual report, religious leaders are engaging in education and fellowship programs.

- (1) Education: ‘Seminaries, schools of theology, divinity schools, and their counterparts are the institutions that train religious leaders. They make an enormous difference in the future spiritual and moral well-being of society. **Yet, many of these schools are only minimally responding to the important opportunity to promote environmental discourse and action amongst their students....** In 2015, the Green Seminary Initiative (GSI), which addresses this opportunity directly, became an official program of GreenFaith and Drew Theological School. Founded in 2009, GSI fosters efforts by theological schools and seminaries to incorporate care for creation into the identity and mission of the institution. GSI maintains a collection of syllabi on seminary environmental courses in the US, publicizes the creation care efforts of a range of schools, and connects seminary leaders who are interested in environmental protection and care.’ (page 26)
- (2) Fellowships: ‘Launched in 2007, the GreenFaith Fellowship Program is among the world’s oldest and most respected environmental training programs for faith leaders. Our Fellows are among the most recognized and active leaders of the religious-environmental movement in the US and beyond. With more than 160 Fellows across the US and Canada, the program has helped faith leaders from diverse backgrounds develop their public voices on environmental issues, skills in fostering sustainable consumption habits within faith communities, an understanding of environmental racism and injustice, and tools for community organizing and mobilizing. Our newest class includes 27 Catholic, Protestant, and Pentecostal Christians and Jewish, Buddhist, Muslim, Unitarian, and Traditional African Religious and Spiritual Seeker Fellows from Caucasian, African American, and Latino communities. These Fellows will participate in three leadership training retreats and monthly webinars, completing a series of eco-theology writing projects and carrying out an action plan.’ (page 28)¹²

4 Research for Sustainability

Research projects funded by federal agencies are associated with academic institutions. These projects can be found at Federal RePorter: <https://federalreporter.nih.gov>. *Federal RePORTER is an initiative of STAR METRICS® to create a searchable*

¹¹<http://www.greenfaith.org/about>.

¹²http://www.greenfaith.org/resource-center/spirit/greenfaith-annual-report-2015/at_download/file.

Table 2 Federal RePORTER analysis for number of research projects per selected search terms

Selected search terms	Research project search results ^a	Funding totals
Environmental	91,182	
Climate	24,217	
Climate change	13,594	
Ecology	12,416	
Sustainability	9,730	
Environmental sustainability	3170 —see Visual 1	
Tribal	3115	
Economic sustainability	2878	
Indigenous	2785	
Social sustainability	2020	
Church or churches	577—see Visual 2	459 projects—\$233,249,505
Faith-based organizations	296	217 projects—\$119,603,977
Climate resiliency	109	
Religions	25	20 projects—\$1,978,380
Federal RePorter provides funding totals for projects.		

^aNote Results for each term searched can be obtained by contacting lead author of this paper

database of scientific awards from federal agencies and make this data available to the public.¹³ An analysis of the data using selected search terms yielded funded research projects and the results are noted in Table 2. Table 2 also includes selected funding totals. Fig. 1 (visual 1) and (visual 2) are a comparative analysis for the search terms: *environmental sustainability* and *church or church or churches* to learn of research projects that support religious communities and or needs. The analysis revealed

- a gap in topics (research) exists between the searches: climate change, life cycle, and long term do not show up as topics or subtopics for ‘church and churches’ visual 2.
- no EPA funded projects were identified under ‘church or churches’ visual 2.
- Most projects under the search teams ‘church and churches’ are related to health.
- two projects: sustainability at the community level: the role of faith-based organizations was identified as an EPA funded project; and groundswell new farmer training program project was funded by the Center of Religion, Ethics and Social Policy.
- EPA-funded projects identified topics: Water Quality, Air Quality, Air Pollution, Low Cost, and Specific Aim but these topics do not appear in the ‘church or churches’ visual 2, more readily.

¹³<https://www.starmetrics.nih.gov/>.

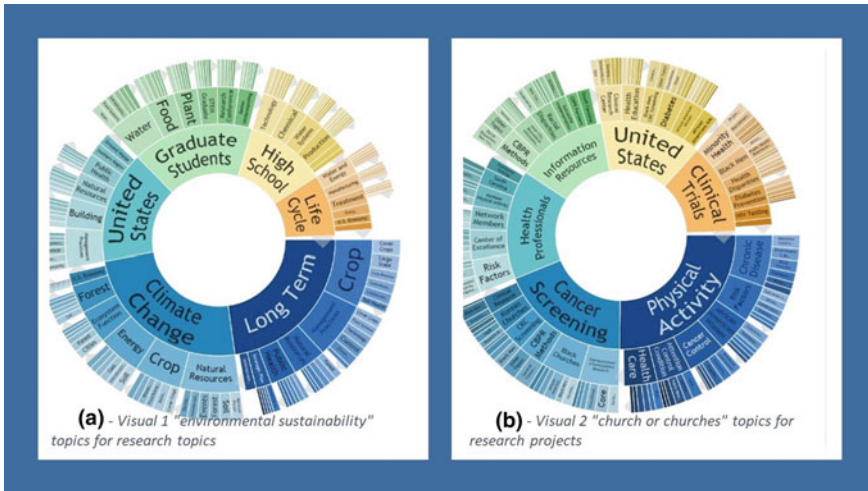


Fig. 1 Visuals 1 and 2 represent topics designated based on search terms **a** “environmental sustainability” and **b** “church or churches” respectively

It appears research could be applicable to environmental concerns and investments of religious organizations and leadership for change.

For interactive and more detailed study of projects see the following links (Fig. 2):

Visual 1

[https://federalreporter.nih.gov/Projects/topicClusters/?searchId=75cd770409f7452a8a75e83e9f3fc117&searchMode=Smart&filters=\\$Fy;2016;2015](https://federalreporter.nih.gov/Projects/topicClusters/?searchId=75cd770409f7452a8a75e83e9f3fc117&searchMode=Smart&filters=$Fy;2016;2015)

Visual 2

<https://federalreporter.nih.gov/Projects/topicClusters/?searchId=3fe3b219db0746338197812f85bf5575&searchMode=Smart&filters=>

Visual 3

[https://federalreporter.nih.gov/Projects/topicClusters/?searchId=b850241613a74a58962c0bd1a1edd5d4&searchMode=Smart&filters=\\$Fy;2016;2015\\$Department;EPA&navigation=True](https://federalreporter.nih.gov/Projects/topicClusters/?searchId=b850241613a74a58962c0bd1a1edd5d4&searchMode=Smart&filters=$Fy;2016;2015$Department;EPA&navigation=True)

5 Religious Projects for Sustainability

On a global scale, religious organizations environmental projects and climate change plans can be found at: http://www.arcworld.org/projects_overview.asp. Individual projects by faiths can also be viewed at: http://www.arcworld.org/projects_by_faith.asp. Climate change plans have been in play since 2009 and recent calls of actions are taking place globally. Deane-Drummond reflected, ‘the treatment of ecological issues

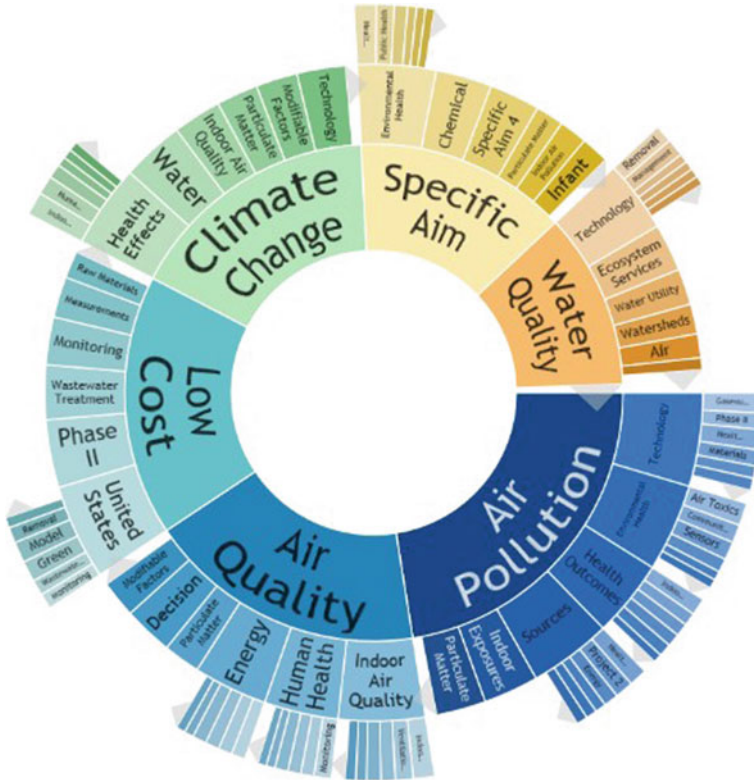


Fig. 2 Visual 3 represents US environmental protection agency funded projects by topics for fiscal years 2015–2016

Fig. 3 An interactive Faith Banner of projects can be found at: http://www.arcworld.org/projects_overview.asp



in *Laudato Si'* is a cry from the heart,¹⁴ bringing a passion that has been informed by his first-hand early experience of living at the tip of Argentina and witnessing the drastic melting of Antarctica.¹⁵ and that 'Pope Francis is deliberately building on

¹⁴Burno Latour, "The Immense Cry Channeled by Pope Francis," trans. Stephen Muecke, *Commentaries on Laudato Si*, ed., ...

¹⁵Cardinal Oscar Andres Rodriguez Maradiaga, "A Conversation with Cardinal Rodriguez: Thoughts on *Laudato Si* and the Synod" (lecture ...

the attention to environmental issues of his predecessors, especially in the teaching of Pope Benedict XVI and Pope John Paul II... the first chapter of the encyclical is dedicated to a discussion of environmental harms, including climate change and that the Pope's Encyclical brings it home to the common person (the disconnect to climate change) in that "Pope Francis tries to avoid this by highlighting specific environmental problems and showing how they impact the livelihood of everyone who shares *our common home*." (Deane-Drummond 2016). Authors of this paper pose another question, albeit for the message by Pope Francis, how else can we make projects work globally, if common everyday people do not feel a connection to the intractable and complex issues of global climate change? to answer this question, in part, one new initiative for church action is called: 'Eco-twinning'. Eco-twinning: 'Many people in the West wonder what they can do to support people and communications already directly affected by climate change. What can common people do to practically help those paying the price for greenhouse gas emissions that have mostly been carried out by industrialized countries? One answer, as part of ARC's 7-year plan project is eco-twinning, linking faith groups—initially churches—and faith schools in the global north with those in the global south that are experiencing the detrimental effects of climate change first hand.'¹⁶

For further analysis, Table 3 is a listing of example projects. Table 3 matches Faiths with their specific environmental projects by topics (types) and existing climate change plans.

Findings

Implications for religious organizations to advance environmental sustainability and climate resiliency, as part of their core mission, can be identified in sustainability learning degree programs and use of scholarly research in application. Most research focus for religious organizations is in the health sciences. It is observed that religious organizations are making calls for actions and focusing on environmental sustainability. Sustainability leadership has become more prominent and visible for religious organizations at the global scale. Some faiths such as The United Methodist Church has appointed a missionary to the Earth and recent climate change declarations such as the Pope's Encyclical have been made. Table 4 surmises (through this limited research) that each religious organization can more aggressively connect their sustainability plans with sustainability learning and through research and more creatively. Both avenues (university programs and research) are publicly available for application.

¹⁶<http://www.arcworld.org/projects.asp?projectID=367>.

Table 3 Sample list of religious organizations and their environmental sustainability and or climate resiliency plans

Sampling of religious organizations projects & plans	
Baha'i	Climate Change Plan http://www.arcworld.org/downloads/Bahai-7YP.pdf
Buddhist projects	Forests Environmental programs Conservation Ancient environmental texts Buddhist garden Green pilgrimage Climate change (Environmental) plans http://www.arcworld.org/downloads/Mongolian-Buddhist-8YP.pdf http://www.arcworld.org/downloads/Mongolian-Buddhist-8YP.pdf
Christian projects	Agriculture (farming) Water resources Forests Orchards Ecology Living churchyards EcoNewsletters Gardens Global warming Clean up lake Ethical investments Dioxins Environmental policy Green pilgrimage Climate Change plans http://www.arcworld.org/projects.asp?projectID=497
Daoist projects	Ecology Conservation Medicine Wildlife programs Climate Change (ecology protection) http://www.arcworld.org/downloads/Daoist-8YP-English.pdf
Hindu projects	Green pilgrimage Forests Rivers Gardens Climate Change Plans http://www.arcworld.org/downloads/Hindu-9YP.pdf http://www.arcworld.org/downloads/Bhumi-Africa-Summary-Sep2012.pdf

(continued)

Table 3 (continued)

Indigenous projects	Green pilgrimage	
Jain projects	Rebuild earthquake village	<i>'Jainism is fundamentally a religion of ecology and has turned ecology into a religion. It has enabled Jains to create an environment-friendly value system and code of conduct.'</i> http://www.arcworld.org/faiths.asp?pageID=82
Jewish projects	Environmental protection Environmental audits Agriculture Climate Change Plan http://www.arcworld.org/downloads/Jewish-CCC-7YP.pdf	
Muslim projects	Environmental network Farming Public Park National Park Biosphere Reserve Fishing Center for Islam and Ecology Climate Change Plans http://www.arcworld.org/projects.asp?projectID=497	
Shinto projects	Forests Climate Change (Long term) Plan http://www.arcworld.org/downloads/Shinto.pdf	
Sikh projects	Alternative energy Climate Change (generation) plan EcoSikh Seed Plan and EcoSikh Guidebook for generational change.	
Zoroastrian projects	Recycle flower offerings Groves	<i>Zoroastrianism claims to be the world's oldest revealed religion and also the world's first proponent of ecology, through caring for the elements and the earth.</i> http://www.arcworld.org/faiths.asp?pageID=12
Multi-faith projects	Declarations Sustainable development Commitments World Bank Alliance Newsletters Trees Food Travel Fairtrade Climate Change Eco audit Education	Water Farming Energy Forestry Green pilgrimage Economics Inner City Eco-twinning Wildlife (Fig. 3)

Table 4 Summary highlighting potential connections with academia and research for all faiths with environmental programs and plans

Connecting religious organizations to education on environmental sustainability and climate resiliency		
Religious organizations projects and or plans	University programs	Research (\$\$)
Baha'i	✓	✓
Buddhist	✓	✓
Christian	✓	✓
Jewish	✓	✓
Muslin	✓	✓
Shinto	✓	✓
Sikh	✓	✓
Zoroastrian	✓	✓
Indigenous and others	✓	✓
Multi-faiths	✓	✓

Fig. 4 Visual of *words* emphasized from listing of diverse religious organizations sustainability projects and climate change plans via NVivo word cloud software program



6 Conclusion: Contributions from Academia in the Field of Environmental Sustainability Can Advance Religious Organizations Social Sustainability Dimension More Holistically

Contributions from academia should be advanced within the religious community. Authors of this paper suggest a Part 2 of this literature review to identify case studies linking environmental sustainability and climate resiliency issues addressed by various faiths to that of co-located schools that incorporate education and scientific

research projects to bring sustainability of their issues closer to reality. For example, one potential case study is linking clergy to environmental sustainability and climate resiliency from flood impacts. Another example is linking faith organizations such as the United Methodist Church with its ethical investment portfolio to that of University programs on environmental economics. A gap identified from this review is that most scientific research projects funded by federal agencies are health related such as AIDS or HIV when it comes to benefitting faith (searched terms: ‘church or churches’) communities. There were few funded research projects that focused on environmental sustainability for religious organizations. Some example empirical or scientific projects could be for leadership for sustainability such as: environmental measured and implications of divestments and investments; environmental contaminant protection from digging water wells; sustainable development in urban core centers, food production, green infrastructure to mitigate climate change effects, awareness of air quality health issues of faith communities; environmental monitoring for church communities co-located to landfills or industrial polluting sites; personal and church reductions in carbon footprint, materials management and purchasing; environmental management systems for operations; and or alleviating poverty through better ecosystem services and benefits, etc. There is a current movement for next-generation faith leaders to be educated in environmental sustainability and as degree programs build more congregations can benefit from the education of their congregants and leaders; as described by the new green seminary initiative mentioned earlier, in this paper. There is an increase need for education and academic research connections to religious organizations contributions and leadership for sustainability; fostering social sustainability more holistically by learning of environmental, social and economic dimensions that bring sustainability closer to reality.

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The Roots Project: Student Sustainability, Well-being, and Global Citizenship



Kath Abiker and Antonia Linehan

Abstract The impact that enabling students to participate in developing and delivering extracurricular activities to focus on sustainability, student well-being and community cannot be overlooked in Arts and Humanities contexts. Particularly when nuanced mapping of sustainability and embedding it into the curriculum in a meaningful way can take time. The Humanities offers a rich terrain of subjects and poetics which lend themselves to Education for Sustainability and extracurricular activities can work as complementary activity to embedding and can lead to refreshed attention to Sustainability within the curriculum. However, institutional strategy, process and people can block or impede spontaneity and the flow of vitality required to realize ideas into action with respect to the integration of concepts surrounding sustainability into the life and work of the university. Some of the successes and difficulties associated with embedding Sustainability into the culture and curriculum of a school within a Faculty will be explored in this paper. This will be accompanied by an overview of The Roots Project and its identification in the School of Language Studies and Applied Linguistics as a need. The relationship of the project to University Strategy concerned with Learning, Teaching and Assessment, Sustainability and Faculty Business Planning will also be discussed with the wider aim to explore the slowing down of progress around embedding sustainability in more depth. The paper will do this through the use of geological metaphors found in Robert Smithson's essay 'A Sedimentation of the Mind: Earth Projects (1979) and Barnett's (Being a university. Routledge, USA, 2011) exploration of the 'Ecological university'. Barnett's notion of Sustainability as a 'thick concept' in Being a University will also be discussed. The idea of progress being characterized in the paper through Barnett's discussion of the University as 'continuing to unfold' (Barnett in Being a university. Routledge, USA, p. 110, 2011). The paper will also relay the process of student engagement and involvement (as students were given the autonomy to design and deliver The Roots

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Project) and some of the challenges around delivering the project at a school and institutional level will be critically reflected upon.

Keywords Student sustainability · Thick · Concept · Partners in learning · Extracurricular · Well-being · Intercultural

1 Introduction

‘one cannot avoid muddy thinking when it comes to earth projects’ (Smithson 1979, p 82)

Robert Smithson’s comment as above in his essay ‘A Sedimentation of the Mind: Earth Projects’ (1979) eludes to the complexity of geological evolution and its capacity to impact on our thinking and ability to act.

He pictures in the essay, ‘matter’ that makes up the earth- ‘slump, debris slides, avalanches’ (p 82) as a sort of ‘mire’ that slows our thinking and decay’s our rationality and goes on to say ‘movement seems motionless,...it crushes the landscape of logic under glacial reveries’ (p 82).

In the bigger picture Smithson is problematizing older ideas of progress and proposing a ‘one step forward, two steps back’ model. This can be seen in the way that Smithson makes troublesome the idea of progress for example in the quotation below:

for progress to take place the artist must go into the places where ‘remote futures meet remote pasts (Smithson 1979, p 91).

Smithson’s land-locked metaphors elude to time long past, but are still startlingly of the moment. They make visual the sheer physicality of geology confronting our capacity to measure it, as it simultaneously erodes and encourages new becomings. Pulled sharply into focus is the proposition of the ‘emotional overhangings’ this sort of trajectory might affect in the context of individual, societal and cultural relevancies.

The graphic nature of Smithson’s statements stunningly exposes the predicament of Sustainability in the face of the necessity in Higher Education Institutions to make ordered and logical via strategy and policy a concept who’s nature is multidimensional and intertextual and which can leave faculties literally ‘in treacle’. As such Faculties are left to pick through a ‘rubble of logic’ (p 85): mappings, definitions, curriculum review processes, terminology, action plans and institutional expectations to make sense of the many sets of strands and themes that pull together to make up Sustainability.

Despite there being clearly defined reasons presented around the benefits of embedding Sustainability such as the encouragement of transformation, the enhancement of learning and teaching, the linking of curriculum to campus and the integration of skills building, the emotional responses of those employed to set the Sustainability story straight and to realize change where there is the perception of ‘imposition’ can also slow things down.

Whilst being wrapped up in the process we may also get ‘stuck’ just talking about the ideas, or be ‘blocked’ because of inertia or confusion or because of the rigidity of attitudes, systems and processes.

The strata of the earth for Smithson and its surface is described as a ‘jumbled museum’ where ‘a heap of wrecked maps’ rest (p 86).

When Smithson’s idea of ‘wrecked maps’ for example is held up against the reality of embedding Education for Sustainability into the curriculum as extracurricular activity, we can see where there may be the potential for great ideas identified through ‘curriculum mapping’ for example never to be seen through to fruition.

Pictured here in the introduction is a sort of ‘tug of war’, of oppositional forces that come into play in relation to the embedding of Sustainability where we may be simultaneously trying to find a fresh footing whilst losing momentum in the progression of ideas.

2 Sustainability as a ‘Thick Concept’ Partially Unraveled

Robert Smithson’s ideas are uncannily echoed by Ronald Barnett (2011) in *Being a University* who points to the model of the ‘Ecological university’ as one which is ‘just in reach and just beyond reach’ (Barnett 2011, p 151).

Barnett (like Smithson) brings into focus a wider critique around some of the entropy which is inherently part of the evolution of the contemporary university.

In his chapter on the ‘Ecological university’ a rather ‘puzzling’ situation described in the introduction is modeled by Barnett in relation to the idea of Sustainability where he sees it as a ‘thick concept’.

‘Thick’ because of how the many rationales, interconnections and ‘environments’ that operate and intersect in a university problematize the virtuous implications of being Sustainable, with all of the ethical and moral dilemmas that this entails.

We can see this in the way ideas such as the university as bureaucratic or marketised rub uncomfortably up against older notions of the university and the values, behaviors and beliefs of the people who study and work in them. Rather like tectonic plates.

Throughout the whole book, Barnett is revealing and proposing new models of the university and implications for the ways in which it ‘does business’. He does this through developing challenging thematic chapters which nudge us slowly towards the many connotations and aporia’s connected to the purpose and identity of the university.

Before Barnett gets to the idea of the ‘Ecological university’ we are taken through other themes which are helpful to consider.

3 The ‘Liquid University’

For example Barnett’s (2011) notion of the ‘liquid university’ eludes to the need to straddle the challenging terrain of higher education in transition between the two social, cultural and historical epistemes of modernism and postmodernism (Bloland 1995). Barnett poses the idea that the university is in a state of flux as it adapts and interacts with the shifting contexts of economic and social environments, (Barnett 2011) which echo Smithson’s poetics of mind and of scape.

This flux may have a ripple effect onto the communities housed within the university walls (students and staff). Particularly with respect to the push and pull of conflicting priorities and shifting profiles and demographic features of the subjects housed within. Not to mention the different readings and understandings that subjects impose on the situations they find themselves in within the university.

Barnett believes universities have an ethical responsibility to support the societies within its walls under such circumstances and poses the question thus:

At the levels of communities and of society, a university can ask itself how much it is helping communities and societies to flourish. Is society learning about itself and it’s many communities, such that those societal learning processes are not merely being sustained but enhanced? (Barnett 2011, p 143)

4 ‘Rhizome’ (A Root)

Deleuze and Guattari’s notion of the ‘rhizome’ (a root) is reflected upon by Barnett and how this mirrors characteristics of the ‘liquid’ university in the emerging multiplicity of ‘faces’ (Barnett 2011, p 111) it presents, which could be suggestive of its collective identity morphing in an attempt to catch up with its context.

A discussion is constructed where the university is set on a journey into the future of its own ‘becoming’ (Barnett 2011, p 111), particularly in relation to the continued construction and deconstruction of its own identity.

Barnett advocates the need for more agility and speed to be features of the way in which the university operates, in spite some of the ‘muddied waters’ that Smithson visualizes and Barnett also reflects on.

5 The ‘Other’ and Intercultural Awareness in the Mix

Psychoanalysis has affected how we understand the construction of identity [‘The I is always in the field of the Other’ (Lacan 1977, p 2)], how society (such as held in universities) sees itself as a ‘culture’.

Barnett (2011) explores this idea in a chapter named ‘Culture’ and ‘Anarchy’ where those housed within the university are in a position of self-doubt around their

relationship to the ‘Other’ which is echoed in the Lacanian Mirror Stage. He reflects on the need for the university to avoid clinging to its comfort zone: a ‘Culture’ borne out of the Enlightenment that is known, whilst on the other hand aspiring to one (in its rhetoric) that is unknown and ‘Anarchic’ (Barnett 2011).

the mirror stage is far from a mere phenomenon It illustrates the conflictual nature of the dual relationship between self and image of self. (Lacan 1977, p 3)

In the context of ‘Otherness’ Barnett also introduces ‘metaphysical’ themes (Barnett 2011: 20) where by the university in its aspirations for itself must be accountable for what happens within its walls, must ensure that the its societies remain humane, respectful celebratory and supportive of the ‘Other’. Staff and students alike. To ensure the health, well-being and attention to all connections.

6 The ‘Ecological University’

Finally, in Barnett’s chapter on the ‘Ecological university’ the notion of Sustainability and its implicit relationship to well-being as a ‘thick’ concept is discussed.

Thick, because of the way in which the sediment of integrated environments as previously described, hugely impact on something as simple as the quality of social relations, intercultural communication and the student experience. Digging down into these layers and working out how to make progress amongst them can take time.

Barnett provides the reader with several ecological possibilities that point towards solutions to get around the problem of Sustainability’s ‘thickness’ which encourage the fostering and support of communities internal and external to the university.

Here is where the relationship between the notion of Sustainability as a ‘thick’ concept and The Roots Project’ becomes clearer.

7 The Roots Project

7.1 *Strategy and Business Planning*

The Roots Project is guided by actions imposed through strategy, identified by staff, imagined and delivered by students in the School of Language Studies and Applied Linguistics in the Faculty of Arts and Humanities at Canterbury Christ Church University. The project is designed to support the notion of community.

However, the project found its relevance to Barnett’s notion of the ‘Ecological university’ and the idea of Sustainability as a ‘thick concept’ only in retrospect.

Common practice in the university today is the embedding in Faculty and school activities Sustainability initiatives and actions which are aligned to strategy and business planning.

In the context of the Faculty of Arts and Humanities Business planning around Sustainability starts off with the vision that:

We cannot hope to create a sustainable culture with any but sustainable souls¹

The plan goes on in preamble to unpick this vision as follows,

‘Derrick Jensen’s contention has for long been the leitmotif of the idea that Sustainability extends beyond the physical, the earth and the environment to sentient beings and humanity’ (McLay, Faculty of Arts and Humanities Business Plan, 2016/2017). The Dean’s statement in the Business Plan echoes Barnett’s sentiments of the ethical responsibility universities have towards encouraging its societies to flourish.

Business Planning requires logical accounts of activity with clear rationale and targets set against benchmarks and frameworks to encourage the uptake of best practice with respect to Sustainability and crucially progress. It encourages some quickening of movement partly because of the way in which planning makes us accountable.

The ‘thickness’ of the concept of Sustainability however can subtly impact on the flow of change partly because of its complexity and interconnectedness with a myriad of other aspects of action planning associated with Learning and Teaching and the resistance of ‘forces’ at play.

The notion of ‘thickness’ is further compounded within the humanities because of the way in which teaching teams may have to update within the curriculum regions of specialist practice or knowledge, literature/texts and indeed the language of program specification documents at validation, to evolve the perspective (or hue) of a module in a way that may feel ‘uncomfortable’ or at odds with original premise of the module.

Before the identification of The Roots Project, student well-being was already being fostered in the Faculty via a Partners in Learning student Induction activity entitled ‘Culturocity’, which engaged students in developing an early appreciation of Equality and Diversity issues to improve team work and build on student’s sense of belonging, community and retention. (Culturocity now being a nationally recognized activity (HEFCE recently published this activity in Evidence of Sector Leading and Innovative Practice in Advancing Equality and Diversity) which is moving into its third year of delivery).

Despite the success of this project and longitudinal evidence of its positive impact, further coordination as a response to the University Framework for Sustainability was established in the Faculty across 15/16 and 16/17. A set of awareness building, audit as mapping exercises and development activities were devised and rolled out across schools as ‘away days’ which were underpinned by an introduction to the new university Learning, Teaching and Assessment Strategy 2015–2020, that has at its heart themes connected to internationalization, global citizenship and curriculum design for transformation.

These sets of interventions yielded diverse and emotive responses from the academic community in the School of Language Studies and Applied Linguistics which

¹D. Jensen, *The Endgame: The Problem of Civilisation* (London: Seven Sisters Press, 2006), p. 190.

were discipline and subject-specific. As part of the interventions the School identified as a need for both staff and students, the drawing together of communities who had become isolated from one another and a need to strengthen student integration between UK and non UK students (intercultural awareness). Academic's responses, were gut, felt and founded in their observations of their students' experiences in the school and their own.

At the intellectual and emotional level of the school there was a shared recognition that embedding Sustainability intersected with poetics, and the analysis of language for example and within practices connected to encouraging innovation, supporting learners to thrive, equality and diversity, the inclusive curriculum and facets of the development of Graduate Attributes. This was countered by emotional responses to higher level top down strategic drivers around embedding Sustainability.

However, the idea to develop extracurricular enhancements which would improve recruitment and retention as well as enhancing the viability of programs was not developed further after mapping initially identified it. This was due partly to the normal pressures of program delivery, the need for a member of staff to be appointed to champion Sustainability in the school.

To this end (and partly to encourage momentum) a member of staff (Antonia Linehan) was identified to support curriculum mapping in teaching teams and develop a Partners in Learning project, which the students named as 'The Roots Project' resonant with connotations of flourishing and which echoes Barnett's use of the 'rhizome.'

It was in fact the students involved in the project who saw with immediacy (as only students can) how to separate the wood from the trees and evolve the momentum to construct a renovation of student and staff experience.

8 Students as Partners in Learning

The approach to student partnership adopted for The Roots Project was drawn from the Higher Education Academy (HEA) Framework for Partnership in Learning and Teaching (2014) and High impact Pedagogies: Engaged Student Learning (2005). It was also built on though the experience of designing and delivering Culturocity (as previously mentioned), where 'partnership', as a process for student engagement, allows staff and students to grow and work together to foster better interconnectedness, resilience, perceptions of self and others. In addition it proactively develops the growth of a learning community comfortable with each other's 'otherness' (Lech and Abiker 2017) through participation and evolution of the project.

Student self-management was at the heart of the project and this engendered a strong sense of well-being and inclusivity. The work of Healey, Flint and Harrington's (2014) for the HEA on *Students as Partners in Learning* was useful in providing a conceptual model for the project. Their list of key values students attain including, 'authenticity, inclusivity, reciprocity, empowerment, trust, challenge, community and

responsibility' (HEA 2014, pp 14–15) helped shape the evolution of the project and its transfer from tutor initiated to student led work.

Partnership is further evolved through the focus in the project of the tutor's willingness to let go of the project and enable the students to develop the work with their own sense of responsibility and authenticity. This can be frightening but also exciting for both the tutor to initiate and then hand over responsibility for the project and the students. Letting go enables the students to challenge themselves and their peers and feel truly empowered by the experience.

Two students from Level 5 for BA English Language and Communication, French and an Pre Ph.D. Programme for Algerian students were recruited. Once briefed on the project and relevant strategy and policy associated with Sustainability, the students were supported and trained by the university Partners in Learning team. Students were tasked with not only identifying the focus for the intervention and creating the project name, but also designing the intervention for students in the school, delivering and evaluating it. They were also asked to plan to extend and hand over the project to the next year's second year to ensure the flow and continuation of the project as a 'work in progress'.

In spite of the 'thickness' of the concept of Sustainability and difficulties associated with this slowing things down, the project gained momentum organically and it was felt that working in this way was an exciting step forward for students and colleagues in the school.

Partly the energy from students came from the fact that they had identified where there needed more input to improve their own student experience and that they had been empowered to make changes. The main aim being to bring together cohorts (international and UK profiles) from undergraduate and postgraduate pre-sessional programs to avoid students feeling isolated or even segregated from one another and to encourage integration and a stronger feeling of community in the school.

Students planned a communications strategy and marketing campaign through canvassing in learning spaces and through the use of Social Media (Facebook, Twitter, e-mail and through the development of a blog), to raise awareness of the fact that throughout the year, they would be running fun and informal events to provide the opportunity to meet others with whom they worked so closely alongside but who were often 'culturally confined' and begin to foster a virtual community too.

The launch event planned and led by the students was particularly vivid and designed with a 'party' atmosphere in mind. Project lead students facilitated a variety of social activities which included introductory games, a quiz, and an opportunity to eat together with background music! One student highlighted of particular significance the turnout at the launch event from students and lecturers.

The simplicity of the idea and the launch's success however did not go without some challenges for students in liaising, planning and publicizing activities.

Organising (in the lead up to the launch party) was particularly difficult. Students identified as leads worked extremely hard to visit every program and every level to publicize the launch event and the project premise to gain maximum engagement in the student community. The event needed to be inclusive, therefore compromises had to be reached around choice of venue, date, dietary requirements and policy on

alcohol. A source of funding and appropriate policy and processes was not clearly available within the institution to buy resources and supplies for the launch event. There were differences at a management level surrounding the idea of empowering students to use university funding and identify how to spend it outside of the confines of the institution. These sticking points were overcome however and the success of the launch was a huge boost to the project as later student qualitative comments suggest.

Barnett's notion of Sustainability as a 'thick' concept is revealed once more when the project team and the lead for Sustainability in the school set about identifying challenges and next steps for the project.

For example, it was identified policy and process at an institutional level may require updating to enable the allocation of funding to start up or facilitate project roll over to the next year. The flexibility and agility to reassign funding pots for the support of extracurricular activities requires the institutional structure to reshape. Furthermore, the structure of the academic year offers further complexity to the merging of graduate and postgraduate students together that is difficult to overcome to ensure the continuity of students being able to participate. This is further compounded by exam periods and restrictions to student activity because of timetabling.

Evaluation of the project so far has been qualitative. Further thinking around how to research the project's impact on student's well-being and sense of community is required from teaching teams and project leads. However, with the evolution of metrics associated with the National Student Survey and new focus to question sets devoted to the student experience of community, a base line of satisfaction has been identified in 2017 which will enable comparison.

To this end the project is reliant on a high level of determination to overcome and find ways round fixed institutional hurdles and barriers as well as a degree of attention to keeping up the momentum of work and improve in NSS metrics associated with students as community.

Despite all of the above, the benefits to the uptake of Sustainability can clearly be seen in the initial evaluation of the project particularly with respect to further strengthening of Faculty strategic approaches to the embedding of the Learning Teaching and Assessment Strategy 2015–2020 and Sustainability as a crosscutting theme in the University Strategic Framework 2015–2020.

It has built on forging links between the curriculum, campus and community whilst also being relevant to real world, local and community issues and the integration of skills building and employability.

Qualitative comments from the students involved as Leads echo the above:

There were several challenges that we faced throughout the year, in all aspects of the project. One of the initial difficulties was facing the challenges that comes with collaborating with new people, which can be daunting no matter what your age or the circumstance. With this came another challenge, namely that of being on different pages when it came to brainstorming ideas for events, etc. Our cultural differences undeniably caused difficulties.... But this is exactly the point of the project: to explore our differences in culture and discover what this means, enhancing our skills in compromise and negotiation whilst enriching our (inter)cultural knowledge and understanding

Another student fed back that:

In terms of student Wellbeing, it has given us an outlet/an escape from our academic work. It has been nice to have something else to focus on, and it has helped me to develop my skills in multitasking

The final comment here seems to suggest that this project may benefit both students and

Case Study

Antonia Linehan, Senior Lecturer and Sustainability Lead, School of Language Studies and Applied Linguistics

‘Our learning communities should provide spaces of belonging and return where life-long friendships are nourished’

In 2016 I was asked to take a lead as Sustainability representative for my School. I set up a student led project under the umbrella of Sustainability. The aim was to promote greater cohesion and a sense of identity within the School and help build learning communities. The school itself has one of the highest international student profiles in the university and as such I felt that all our students within the School needed to benefit from this. The LTS *principle Global Citizenship and Internationalisation* was therefore extremely helpful in underpinning the project and allowed me to present the project not simply as ‘a bit of recreation for the students’, but as a valued extension of the curriculum. Students from all cohorts were asked to volunteer and this resulted in five students from three of our programs taking ownership of what has become The Roots Project.

The five students were offered training in project development from Partners in Learning. This helped to hone their skills in areas such as budgeting, project management and presentations. I coordinated the early meetings and fostered initial communication and this enabled the five project leaders to grow into their leadership roles and take control. Not only did this provide an integrated approach to employability skills for the participants, but it also focused on educating the whole person. The connections the leaders made with the other students in the School encouraged more open discussion and debate about intercultural issues. Student self-management was at the heart of the project and this engendered a strong sense of well-being and inclusivity.

My real appreciation of the Learning and Teaching Strategy is that it has validated many of my long held views on teaching and learning. This has given me confidence and recognition from colleagues regarding the work I do. In June I was awarded the University Golden Apple for work on Sustainability and with the Faculty Director of Learning and Teaching led several curriculum workshops that have enthused colleagues and led the School towards a more integrated approach to sustainability. The L&T principles have underpinned this work and provided a powerful structure for the ongoing transformation of

the curriculum with the School of Language and Applied Linguistics with the students as partners in learning and development.

staff satisfaction and may facilitate mutually respectful student and staff relationships: ‘with respect to global citizenship, my involvement in The Roots Project has allowed me to collaborate with people from different cultural backgrounds: an opportunity that I would never have had if it weren’t for the project’. The same goes for other students within the school; students who attended our event and connected with us on social media were able to meet and socialize with other students from different cultures that they otherwise may never have met.

9 Conclusion

Constructivism of a refreshed student society as an extracurricular pedagogic approach (Carnell, MacDonald and Askew) requires as Barnett suggests ‘different ways of knowing’ to allow students to ‘live with themselves and each other’ (p 146) to enable as an aspiration to solve as he states ‘basic problems of living’ in a university context.

The project as Barnett discusses in his chapter on the ‘Ecological University’ is clearly ‘susceptible of further imaginings’ (p 154) which have been envisaged in future planning and aims. This is exemplified in ideas for 17/18 and 18/19 including: the integration of the activity into Welcome Week, an evening of activities and art-work, a film screening followed by discussion and a School International food event as well as an already piloted summer activity building on community involvement coordinated through links with Friends of Kingsmead Field. Activities to include will focus on litter picks, tea, cake and conversation and supporting work on encouraging biodiversity such as wild flower-planting.

However, these aims require logical positioning within a ‘scaffold’ of order to avoid as Smithson declares ‘a heap of wrecked maps’ (Smithson 1979, p 86) and the inevitable thickening connected to the concept of Sustainability and its inherent complexity and consequential slowness.

Clearly there have been lessons learnt by the school and academic lead, particularly in ensuring that work to refresh the project and recruit to it in 17/18 takes place as swiftly as possible in the timeframe of Semester 1. This will ensure maximum student engagement and enable space in the academic year to factor in other possible community-based activities linked more widely across the university associated with the work of the Sustainability office for example.

Since the project was developed and delivered in 16/17 further conscientious work at a strategic level in the Faculty seeks to overcome slowness via shaping a response to Sustainability moving through to 17/18 to integrate into the work of the Faculty

Education and Student Experience Committee as a standing agenda. This shift is determined to raise ESF issues and subsequent additions to the Faculty LTA Action plan which are considered and reported on and which feed into the Faculty Executive and curriculum design for transformation as part of validation or periodic program review.

As such a regular ‘temperature check’ around progress against objectives, curriculum mappings and the seeing through of initiatives can take place which is crucial for continued momentum.

Finally, refreshed institutional focus and processes to improving student satisfaction in the light of the Teaching Excellence Framework as part of Annual Programme Monitoring activity will also drive work forward where metrics relevant to students as community require improvement.

Returning to geology, Smithson suggests that whilst progress may be slow, by refusing ‘technological miracles’ (Smithson 1979, p 84) (or the idea that a quick fix is possible) other mindsets, gut responses, thoughts, feelings and interdependencies can begin to emerge and Sustainably as a concept to embed can begin to ‘unfold’ (Barnett 2011) despite it’s troublesome nature. The school has already embraced this idea and has become in the first year of the project more open to new ways of thinking and doing around supporting its community.

Smithson forms the realization that ‘the refuse between mind and matter is a mine of information’ (Smithson 1979, p 84). His comment represents how the school has been led to an understanding of itself and that out of the project and overcoming its difficulties, there has been found a refreshed resilience. With respect to this ‘change of hue’, the nature of Sustainability as a ‘thick’ concept’ may be a positive trait after all.

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Transitioning to Sustainable Food Choices: A Course Design



Kathleen M. Kevany, Gene Baur and George C. Wang

Abstract This paper provides curriculum ideas for increasing fluency and literacy around the moral and practical value of transitioning to sustainable diets. By combining systems theory, feminist spirituality, mindfulness, and experiential learning for a semester-long course, learners in higher education and community settings become exposed to more holistic analyses that examines moral, ethical as well as intellectual approaches to sustainable living. Analyses of food systems reveal that whole-food, plant-based diets low in processed foods—sustainable diets in short—are associated with lower premature death and chronic diseases and with lower greenhouse gas emissions, cleaner air, and water and more equitable and compassionate care for humans and animals. Yet achieving reductions in greenhouse gas emissions and climate change along with cancers, heart disease, and obesity have been elusive. Increasing opportunities to align goals for health, environment, community equity and personal values prompt the recommendation that more education for sustainability in humanities is essential. Additional research on the various implications of diets, including the moral and physical, could illuminate examples of successful transitions in diets to inform fuller academic programming.

Keywords Sustainable diets · Environmental education · Systems theory
Feminist spirituality · Mindfulness · Well-being and health

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1 Introduction

Significant gaps exist between what science knows and how society acts. Compelling evidence reveals that current food systems and food choices are fostering biodiversity loss, water pollution, ecosystem destruction, and greenhouse gas emissions that are accelerating climate change. Links between diets, disease, obesity, and commercialized fast-food environments have been well established (Dannenberg et al. 2012, Ornish et al. 1998). Illness and premature death from largely non-communicable diseases, including such ailments as cancers, heart disease, and obesity, are worsening. In many countries it is anticipated that trillions of dollars will be required to address growing illnesses. More concentrated economic powers are driving more global, ubiquitous western diets with their debilitating outcomes. Ecologists, environmentalists, humanists and ecofeminists, among others, point to the destruction of ecosystems and public health as profound crises with social, political, economic, technological but also moral and spiritual foundations.

Sustainable diets aimed at reducing harm to humans, animals, and the environment have been challenging to achieve. The inabilities of individuals to change dietary habits often are blamed. Yet individuals and professionals are not well informed about sustainable diets. In a survey of 265 dietetics programs, 68% of 145 educators, while interested in sustainability education techniques, had insufficient knowledge and exposure to feel adequately prepared (Harmon et al. 2011). Students in humanities and social sciences also need exposure to the assumptions around food choices, anthropocentrism, and doctrines that fuel the squandering of earth's resources. 'The preservation of the earth requires a profound shift in consciousness: a recovery of more ancient and traditional views that revere the connection of all beings in the web of life and a rethinking of the relation of humanity and divinity to nature' (Christ, cited in Plaskow and Christ 1989, p. 315). Learners in all fields, particularly the humanities, need to strengthen their food and environmental literacy and enlarge their focus to incorporate considerations like the close association between agricultural policy and public health (Story et al. 2009). 'What humanity eats has major impacts on public health, the economy, the environment and the future' (Mason and Lang 2017, p. 9). This paper outlines a course design for reorienting food systems for more humane, justifiable, and sustainable outcomes.

2 Background and Context of Food Systems

If sustainable agriculture and diets are to become more commonplace, the systems that contribute to unsustainable patterns need to be proactively identified and remedied. "The modern America of obesity, inactivity, depression, and loss of community has not 'happened' to us; rather we legislated, subsidized, and planned it" (preface in Dannenberg et al. 2012, p. xvii). This necessitates a greater role for education at all levels and a leading role for higher education. Advancing sustainable food systems

and diets require consideration of production and consumption on: (1) the well-being and health of the environment, humans, and animals; (2) biodiversity, soil and water conditions and state of climate change and global warming; (3) the economic and emotional cost of good nutrition and health or poor health and non-communicable disease; (4) economic impact of government subsidies and trade policies on equity, fair trade, and access to healthy foods; (5) fuel and energy consumption in production, packaging, transport, food preparation, and refrigeration; (6) social, cultural, political, and built-environment influences on diet patterns and practices (see Lairon 2012; Mason and Lang 2017). Industrial ecologists assess the energy and land required of various foods and diets in several countries (Lairon 2012) and nutritionists reviewed diets to reduce risks of obesity and major chronic diseases. The predominantly plant-based Mediterranean-type diet emerged as a dietary scenario that could satisfy both sets of concerns (Duchin 2005; Mason and Lang 2017). Such culminating evidence is leading many governments to consider sustainable diet regimes. To achieve greater sustainability attention needs to be focused on much more than agricultural policy or practice; it requires inclusion of public health and lifestyle considerations along with spiritual, ethical, political and economic influences.

3 Animal Welfare and Food Ethics

In the industrial system of food production driven by efficiency and profit, animals are treated like commodities rather than as living, feeling beings, and they are denied basic humane consideration (Safran Foer 2009; Schlosser 2012). Many family farms operate less intensely and more humanely. But predominantly animals exploited for, and referred to as meat, milk and eggs, are produced through ‘factory farming’ (Jackson et al. 2009). Inadequately accounted for in this paradigm are the costs to animal welfare, ecosystem biodiversity, health and a sense of decency and fairness (O’Kane 2012). Chickens, turkeys, pigs, cows and other animals bred for food are routinely overcrowded in stressful, unhealthy conditions and many are routinely subjected to painful mutilations including castration, tail docking, ear notching, de-beaking and toe clipping, all without anesthesia or analgesics. They are unable to engage in basic natural behaviors and they suffer both physical and psychological disorders. Millions of animals are confined in cages and crates barely larger than their bodies. They are unable to walk, turn around or stretch their limbs (Safran Foer 2009). Every year millions are injured, denied necessary veterinary attention and die before reaching the slaughterhouse (Scully 2003).

With increasing public awareness, agribusiness has been under pressure to reform its practices. A handful of laws have been enacted to prevent certain inhumane confinement practices, including veal crates (calves), gestation crates (sows), and battery cages (laying hens). Some industry leaders are recognizing the need to treat animals better, but others are taking a different approach and working to enact ‘ag gag’ laws that prevent animal advocates from documenting and exposing inhumane farming conditions.

People employed in the factory farming industry also endure dangerous and stressful working conditions (Joy 2011). Performing repetitive tasks thousands of times a day at industrial slaughter plants can be injurious. Sharp blades, saws and other machinery designed to disassemble animals' bodies can also injure and debilitate people's bodies. The risk of mishaps increases with worker fatigue and as line speeds intensify. Billions of farm animals are killed at industrialized slaughterhouses every year. In order to maximize profits, slaughterhouse line speeds have increased so that thousands of animals are killed every hour (Emel and Neo 2015). This pace makes it difficult to adequately stun and kill individual animals, which means that living, feeling animals, shackled and hanging upside down, continue on to subsequent stations on the slaughterhouse dis-assembly line, resulting in some animals being boiled alive and some being dismembered while still conscious. As Safran Foer (2009) suggests this system often treats 'living animals like dead ones.' Human workers fare only slightly better. Slaughterhouse work is physically demanding and exacts significant mental and emotional strain (Joy 2011).

Industrial farms, which confine animals by the thousands, generate massive quantities of excrement and other waste that pollutes the land, air and water (Matheny 2003; Pimentel and Pimentel 2003). The noxious air inside these places can cause a burning of the eyes and throat and contribute to respiratory problems for both human and nonhuman animals. Agricultural chemicals, including antibiotics, are employed on factory farms to fight disease and keep animals alive and productive in over crowded conditions. The routine use of antibiotics leads to the development of antibiotic resistant pathogens, which pose a threat to human health (Pimentel and Pimentel 2003).

Property values near industrial animal farms decrease as homeowners' quality of life is negatively impacted. Factory farm pollution threatens neighbor's health, while a stench in the air prevents them from enjoying outdoor activities (Baur 2008). People who live near these facilities, like those who work in them, are often of lower income and have limited ability to protect themselves. Agribusiness, on the other hand, often uses its wealth and influence, to enable enactment of laws limiting rights of neighbors to seek justice and recompense for any harms experienced.

Animal agriculture is an extractive industry that exploits and kills animals for profit, and treats living, sentient beings as inanimate production units (Baur 2008; Joy 2011). This disrespectful attitude toward nonhuman animals has a tendency to spread, and it has become increasingly pervasive. Wheatley (2014) argues that humans create a sad and lonely world when we think humans are the only ones who feel or 'who live with loss, who love to play, who value being alive' (p. 53).

4 Human Nutrition, Health, and Well-Being

As noted above, a global epidemic of chronic diseases is taking significant tolls on our collective well-being, quality of life, and economy. The Global Burden of Disease Study 2015 showed a steady increase from 1990 to 2015 in the number of deaths

from chronic, non-communicable diseases (such as cardiovascular disease, cancer, diabetes, and Alzheimer's disease), which caused 71.3% of deaths (39.8 million, 39.2 million to 40.5 million) globally (Mortality and Causes of Death 2016). This trend parallels the global increase in incomes and urbanization in the past decades. As per capita gross domestic product increases, there has also been an increase in the per capita dietary demand for meat protein and empty calories, such as from refined sugars and refined animal fats (Tilman and Clark 2014).

We consider here the effect of food choices on the top two leading causes of death from non-communicable diseases in 2015 worldwide: cardiovascular disease (accounting for 17.9 million deaths) and cancer (accounting for 8.8 million deaths) (Mortality and Causes of Death 2016). Cardiovascular disease is an umbrella term that includes conditions such as coronary artery disease (also known as coronary heart disease), peripheral arterial disease, and stroke. It has been said that 90% of heart attacks can be prevented (McGill et al. 2008). Beyond smoking cessation and regular exercise, current evidence suggests that plant-based diets significantly modify cardiovascular disease risk and outcome.

In a prospective observational cohort study that enrolled more than 44,000 participants (of whom 34% were vegetarians) living in England and Scotland and followed them for about 11 years, vegetarians (defined as those who did not eat meat or fish) had a 32% lower risk of developing coronary heart disease than non-vegetarians (Crowe et al. 2013). Importantly, this lower risk was seen after adjusting for smoking status and physical activity level, which can influence heart disease risk. This finding was not surprising, especially since the study participants who did not eat meat or fish in this study also had lower body mass indices, lower cholesterol levels, and lower systolic blood pressures (Crowe et al. 2013).

In individuals who already have coronary artery disease, following a plant-based diet improves their outcomes. In a study by Esselstyn et al. that followed 198 patients with established cardiovascular disease counseled on plant-based nutrition, those who were adherent to a plant-based diet (defined as elimination of dairy, fish, and meat, and added oil and comprising primarily whole grains, legumes, lentils, other vegetables, and fruits) had a much lower recurrence rate of a major cardiac event (0.6%) than those not adherent to the diet (62%) (Esselstyn et al. 2014).

In a randomized, controlled trial conducted by Ornish et al., participants who underwent an intervention of comprehensive lifestyle changes that included a vegetarian diet experienced some reversal of coronary artery stenosis (4.5% relative improvement after 1 year and 7.9% after 5 years), while those in the control group had an average increase in coronary artery stenosis (5.4% relative worsening after 1 year and 27.7% relative worsening after 5 years) (Ornish et al. 1998). In the same trial, the risk of a cardiac event was almost 2.47 times lower in the intervention group than in the control group.

Food environments, food availability and food choices influence cancer risk. When more than 61,000 British study participants were followed for almost 15 years, vegans (who did not eat meat, fish, dairy, or eggs) were 19% less likely to develop cancer than meat eaters (Key et al. 2014). Vegetarians (who consumed dairy and eggs) were 11% less likely and pescovegetarians (who did not eat meat but ate fish) were 12%

less likely to develop cancer than meat eaters. In another prospective cohort study that followed more than 77,000 North Americans for about 7 years (as part of the Adventist Health Study 2), vegetarians, pescovegetarians, and semivegetarians (who ate meat one time or less per week), when considered as a group, were 22% less likely to develop cancers of the colon and rectum than non-vegetarians (Orlich et al. 2015).

Plant-based diets also decrease mortality risk. In the Adventist Health Study 2, which followed more than 73,000 participants for almost 6 years, vegetarians had a 9% lower mortality risk than non-vegetarians. Vegans, by eliminating dairy and egg from their diet, had an even lower mortality risk, 15% lower than non-vegetarians, (Orlich et al. 2015).

In another prospective study that followed more than 37,000 men from the Health Professionals Follow-Up Study and 83,000 women from the Nurses' Health Study who had no cardiovascular disease or cancer at the time of study enrollment, investigators found that each 1-serving-per-day increase in unprocessed red meat increases the cardiovascular disease mortality risk by 18% and cancer mortality risk by 10% (Pan et al. 2012). The risks are even higher with processed red meat, such as bacons, hot dogs, and sausages. Each 1-serving-per-day increase in processed red meat increases cardiovascular disease mortality risk by 21% and the risk of dying from cancer by 16%.

Analysis of data also from the Health Professionals Follow-Up Study and the Nurses' Health Study showed that replacing animal proteins in the diet with plant proteins is associated with lower mortality. Replacing 3% of protein energy from processed red meat with an equivalent amount of protein from plants lowers the mortality risk by 34%. Replacing the same amount of protein energy from unprocessed red meat with plant protein lowers mortality risk by 12%, and replacing egg protein with plant protein lowers the risk by 19%, (Song et al. 2016).

These analyses are not to suggest that only plant-based diets can confer health benefits. For example, having added sugar in the diet significantly increases the risk of dying from cardiovascular disease (Yang et al. 2014), and moderation or reduction in the amount of added sugar intake may also improve cardiovascular outcomes.

5 Sustainable Diets

With health and the environment in decline feasible strategies are needed. Answers are urgently being sought on how the system supplies and citizens select suitable levels of nutrients for health while ensuring systems are accessible, equitable, and sustainable. How might we produce more food with fewer resources, such as land, water, and fuel to feed the growing global population? What examples of successful, multi-sectoral transition teams may be found? Collaborations to help shift unsustainable diets and creatively reorient food beliefs, policies and practices to sustainable ones are needed involving dietetics, nutrition, and health along with social and economic policy, along with those concerned about food impact, food systems, and food

science, humanities and social sciences. This paper and the proposed course were developed by an interdisciplinary team: a medical doctor, an agricultural specialist and animal advocate, and a social scientist and social change animator. This team put forth systems solutions that are transformative yet practical. To spread sustainable diets more information, supports, skills and resources are needed around what is sustainable, moral, equitable and healthy.

Eating more plants and less meat, dairy, and eggs would stimulate significant impact on public health, well-being and the economy. Springmann and colleagues (2016) found that the widespread adoption of a vegetarian diet would result in 7.3 million avoided deaths per year worldwide. Not surprisingly, the adoption of a vegan diet would result in even more avoided deaths, 8.1 million per year. About 45% of all avoided deaths would result from reduced coronary heart disease, 26% from stroke, 16–18% from cancer, and 10–12% from diabetes. From the economic perspective, the widespread adoption of vegetarian diets would lead to \$973 billion per year (range, \$644–1303 billion per year) of global health-related cost savings, and the adoption of vegan diets would lead to savings of \$1067 billion per year (range, \$708–1426 billion per year). These savings translate to 3% of expected world gross domestic product for vegetarian diets and 3.3% for vegan diets (Springmann et al. 2016).

Evidently, more research is needed in how significant political and economic investments in established systems can be effectively transitioned. More data are needed to inform local and regional policy and practices. More evidence collected around strategies successful at reducing the negative impacts of food systems on environment, health and economics and equity also could be beneficial. As well studies of students empowered through education for sustainable development to shift their diets and transition to more conscious living may be instrumental in refining this course and program design for the humanities.

6 Sustainability Education

Higher education contends with many pressures: fiscal constraints, neo-conservatism, post-modern culture. The will of universities to address issues of sustainability has been pronounced in multiple declarations (Sylvestre et al. 2013). Yet addressing concerns of climate change, ethical investments or food systems have not been widely emphasized by higher education administration. A scan of the literature reveals a dearth of scholarship involving higher education for sustainable diets. Substantive materials are needed to fill this gap. Educators could benefit from access to practical examples of transitions to healthy, sustainable diets. This proposed course could help those working in the fields of ethics, theology, literature, nutrition and health, business, soil sciences along with those working for social change.

Sustainability education is necessarily multidimensional and complex as it includes analyses of and discussion about the impact of food and food systems. Integrating strategies for education for sustainability has been underway over decades

in the Humanities, yet as noted, little attention is paid in higher education to food systems or sustainable diets. When studies do touch on sustainable farming or sustainable lifestyles their emphases are largely on environmental elements and little attention to social, economic, political or education. Shift towards holistic thinking and working with complex notions beyond dualisms become essential (Meadows 2002; Hall and Clover 1997). As many argue, activities of human communities and organizations cannot be separated from the natural world even if humans feign such distinction; nature includes no separation, all life is interconnected (Hall and Clover 1997; Fox 1999; Plaskow and Christ 1989; Christ 2012). In addition to systems-thinking learners are prompted to examine their emotional reactions to environmental threats, treatment of animals and acceptable sacrifices for the food system (Dawe et al. 2005). They also are encouraged to compare and contrast a citizen and a consumer and to examine consumerist versus environmentalist systems of belief, emotions, and impacts. This paper and proposed course offer transitioning ideas in food systems and environment, animal welfare, and health policies. (See Appendix 1 for the Learning Objectives for the *Art and Science of Sustainable Diets*.)

Studies in the Humanities afford valuable space for educators and learners to contend with questions of intergenerational equity, ethics around impacts from food, and notions like how pleasure and pain may influence food systems. (See Appendix 2 on Growing Self-Awareness). Jucker (2002) proposes that the Humanities should help 'students grow into independent, critically minded citizens, fully aware of the traditions, histories and ideologies which formed them and respectful of their responsibilities towards their communities and the biosphere' (cited in Dawe et al. 2005, p. 11). Should such insights be cultivated in students of Humanities, they in turn might significantly benefit society by improving sustainable practices in a variety of jurisdictions. One illustration from Ali Khan and Peters (1995), is that through Rural Environment courses students cultivate skills to recognize the environmental impact of their personal choices along with external systems like how food is grown, valued and managed, and to propose environmental solutions needed in their region (as cited in Dawe et al. 2005). In addition to students being coached to consider multiple perspectives, good practices in environmental education include integrating learning in diverse settings like in the field, through collaborative work, in the classroom, or across the community (Corcadden and Kevany 2017).

This course on the *Art and Science of Sustainable Diets* includes critical reflective practice and the infusion of eco-philosophy, feminist spirituality, political change, and adult education theories like Paulo Freire or Jack Mezirow that advocate for education that illuminates dysfunctions in society to effectively transform one's frame of reference. Educators and learners alike are urged to engage in critical and compassionate self-reflection and focused mindfulness. Through course exercises including sharing among peers students become exposed to the importance of biodiversity, feminist spirituality, social change, and the value of appreciation and gratitude and applied learning using mindful eating (See Appendix 3). Students also may encounter the role of activists in social change. Through students challenging their former learning and taking stock of their own values, actions, and impact they may generate strategies to reduce any value-action gaps (See Appendix 4). Who feeds cities? Considerations of

alternative food systems from urban and rural perspectives also are included (More reflections are in Appendix 5).

While we seek to ignite knowledge of and transition towards sustainable diets with this course, we do not suggest this would be a panacea to the troubling issues. One course could not include all that would be needed to facilitate social change and political and agricultural transformation. The course does however offer creative tools for catalyzing needed change by underscoring key elements of interdependence and diversity, global and local connectivity, and actions, values and beliefs. As well students would encounter leading thinkers with inspiring visions for food systems, ethical and healthy access, and sustainability. (See Appendix 6 for Successful Collaborations for Sustainability.)

While several Humanities educators already contribute to fostering sustainability, from the research it is clear that major barriers were encountered in the arts and humanities in integrating sustainability materials into their higher education subjects. Some barriers identified included overcrowded curriculum, academic staff perceiving the sustainability material as irrelevant to their course objectives as well as a sense of limited expertise and limited institutional drive and commitment and gaps in living what is taught (Beringer et al. 2006; Dawe et al. 2005). David Orr has referred to graduates of higher education as the most privileged as well as the worst kind of planetary vandals (as cited in García et al. 2006). Such ‘vandals’ have advanced learning but obtain inadequate education about sustainable living. The Humanities could be particularly helpful with raising consciousness and reducing practices of human hubris.

7 Conclusion

Examining the social and political influences that drive human behavior and influence daily choices is urgent. The accumulative anthropocentric practices have become unsustainable and unjustifiable. Timely solutions are needed to counter climate change, compromised health, and inequity in food systems, and to replace these with inspiring and sustainable policies and practices. Reorienting food systems to whole-food, plant-based diets may provide practical and constructive pathways for preventative health, reduced climate change, and improved quality of life for human and nonhuman animals. Solutions are needed that are data-driven and evidence-based, while being sufficiently realistic and inspiring to ignite citizens and leaders to seek improved outcomes and effectively transition to sustainable diets. Many actors are needed to inspire sustainability: governments, civil society, industry and educators of all types, particularly the humanities. The course design offered in the paper seeks to ignite new thinking in learners and educators and to spark new patterns of thinking and living, to orchestrate transitions in food systems and household food habits. Many tools and exercises are provided to enable learners to reflect on and adjust eating patterns. The course materials included are designed to spark systems thinking and an appreciation of the interconnections of food to a good life. More

study is required of successful transitions away from unsustainable practices to commitments towards eating, connecting, and living in more humane and enduring ways.

Appendix 1: Art and Science of Sustainable Diets Course Learning Outcomes

1. Consider and articulate possible goals for agriculture, health, social, and political policies to advance sustainable diets
2. Deepen and extend understanding of food systems and their impact

Post-course actions

3. Identify measures of progress towards sustainability and methods to measure them
4. Choose one method of being an agent of change and work with networks and policy makers and practitioners to design and implement intersecting policies

Appendix 2: Exercises in Self-Examination and Self-Awareness

(Part 1) Take time in personal reflection to consider the following questions. Include examples from your life to illustrate how you arrived at your answers.

1. What do you think are the beliefs driving your food choices and that of others?
2. What might you notice about the differences in peoples' food choices?
3. How might you describe your emotional reactions to recent environmental threats?
4. What are your feelings and thoughts on the treatment of animals for food?
5. Are their sacrifices that you deem acceptable for people to be able to eat?
6. How might you compare and contrast a citizen and a consumer?
7. What might you suppose are the belief, emotions, and impacts of consumerist and of environmentalist?
8. What questions or issues may arise for you around intergenerational equity or pleasure and pain in food systems?

(Part 2) After completing the personal examination, pair and share with your peer partnership. Take note of your observations on the similarities and differences and points of discomfort or disagreement with your peers.

Appendix 3: Choosing and Eating Mindfully

Eating mindfully can be described as a way of life that includes choosing to pay attention to food choices and consequences, being appreciative and giving thanks for producers and suppliers of good food, slowing down and being present to savoring and enjoying your food. Simmons and Morrow (2014) suggest that with more mindful eating practice, you eat less, you digest food better, and you can maintain a healthy weight.

Try these two exercises in mindful eating.

(Exercise 1) Maintain a daily food diary for a week. Eat proactively, consciously and mindfully. Pay attention to your food choices; increase your food literacy; investigate and take note of the supply chain of two foods items you included in your week's diet. Note where the foods come from, how they are produced, how are they delivered and with what environmental consequences and what health impact of your food choices? How might you describe your practices of appreciation and gratitude for your food? Note also how you feel about your food while choosing, purchasing and preparing it along with eating it and after reflecting on it.

(Exercise 2) Read the following quote by Gene Baur, President of Farm Sanctuary. And meditate on his words and your reactions to them. Write a personal response to Gene Baur. Gene will receive all reflections and respond collectively to the class through a scheduled discussion via Skype.

“Most people want to be humane, and knowing we’re not causing unnecessary harm feels good. If we aspire to be compassionate, but behave in ways that are cruel, such as by supporting the factory farming industry through our food choices, there’s an emotional toll, a dissonance between who we want to be and who we are. Nobody is perfect. Just by living we cause harm, but we also create kindness and beauty, and we can each strive to do better. Living the farm sanctuary life is all about aspiring to live as well and compassionately as possible. It’s a process more than an end destination. To paraphrase Gandhi, it’s about being the change we wish to see in the world.” (Baur and Stone 2015).

Appendix 4: Value-Action Gaps

In small groups of your peers, discuss the following questions. Take note of your group’s discussion to share with the class.

1. How might you or a member of your family define what they mean by *progress* and its impact?
2. In what ways does your family talk about, engage with and/or appreciate the natural environment?
3. Based on your reflections and self-discovery and peer coaching in the previous exercises, what areas of value-action gaps may be evident in your life?

4. What values are driving your actions? What results are your actions achieving?

Appendix 5: Alternative Food Systems

What are the various ways in which you can access food? Write as full a list as you can. Think about all the ways you have obtained food to eat in the past. Think about how frequently this form of food acquisition would be part of your diet and fill this in on the chart. Then work in pairs to find out about and fill in what percentage of is earned by the various methods of obtaining food. Note: while these percentages may be guesses, they help to assess the distribution of food income across society. What might your list reveal about you and about the food systems in which you are embedded?

Ways or places I have obtained food to eat	% of my diet over a month	% they earn over a year

Appendix 6: Successful Collaborations for Sustainability

In pairs investigate the work of the British Nutrition Foundation.

1. How are they contributing to sustainable diets?
2. What roles might those in government, farming, food industry, academia and other sectors be contributing towards more sustainability in the food system?
3. Might this be an example of collaboration for transitions to sustainability?
4. Appreciating sustainable diets—are these approaches justifiable?
5. To advance diverse goals, what further actions might you recommend?

Links to Additional Teaching Resources

<http://www.sustainabletable.org/5162/teaching-and-educator-resources>
<https://www.nutrition.org.uk/nutritionscience/sustainability.html>

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Terra Two: An Ark for Off-World Survival—A York St John University Project on Sustainability, Spirituality and Science Fiction



Liesl King

Abstract In Timothy Morton's eco-philosophical text *Hyperobjects* (Morton in *Hyperobjects: Philosophy and ecology after the end of the world*, University of Minneapolis Press, Minneapolis, 2013), he dramatically announces that 'the end of the world has already occurred' (7), going on to suggest that the start of the Anthropocene coincided with the development of James Watt's blueprints for the steam engine in the eighteenth century, an act which led to the Industrial Revolution, and thus to swift and damaging environmental change on a geophysical scale. This paper introduces Terra Two: An Ark for Off-World Survival, a project which draws on the spiritual wisdom advanced by a range of science fiction novels, films and TV episodes in order to counter and overturn Morton's gloomy, apocalyptic prediction. Initially a web-based platform, the project invites contributors to distil messages found in sf texts in order to help shape the first off-world community, which NASA is hoping to settle on Mars in 2030. In building up an ark(ive) of material which critically and creatively reflects on topics such as permaculture, artificial intelligence, ethical governance, spiritual diversity, gender, sexual identity and race, and by facilitating community and globally based projects, Terra Two not only aims to influence the first off-world colony, but to impact generatively on planet Earth. The project specifically supports the key aims of Education for Sustainable Development, as it exposes students in the School of Humanities, Religion and Philosophy to a range of social and environmental approaches to contemporary science fiction. Students are invited to attend outreach events related to Terra Two, to develop contributions to the magazine, and to attend a series of extra-curricular workshops around science fiction and sustainability. The paper explores key science fictional influences, a working theory of secular spirituality, and early project aims and outcomes.

Keywords Science fiction · Secular spirituality · Vision
Collaboration · Evolution · Future

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1 Part 1: Terra Two: An Ark for Off-World Survival

The Terra Two project is a digital ark(ive) gathering critical and creative responses to science fiction in order to influence the first human settlement off-world. Based at York St John University, Terra Two's aims are to contribute to the welfare and preservation of our species and the many species indigenous to the planet, to seed research and creative outputs, and to bring enjoyment and inspiration to readers, viewers and listeners. Terra Two runs an allotment in tandem with the York St John Pollination Project; it facilitates creative/critical writing workshops such as the recent York Festival of Ideas' 'Terra Two: Writing for an Off-world Colony'; and from October 2017, it will offer a series of monthly workshops for staff and students (and members of the public subject to funding) in order advance research, outreach and employability. Terra Two additionally enhances the Level 5 Literature module 'Imaginary Worlds', which has now been revalidated as 'Science Fiction for Survival' (from 2018), by highlighting a direct relationship between science fiction and its potential social uses through its online magazine, and through the opportunity for students to get involved with the project. In October 2018 the Terra Two project editors aim to host a weekend-long festival at York St John, working in conjunction with Terra Incognito, a Sheffield-based theatre company with an interest in the impact of satellites and space-junk, as well as the York Environmental Humanities group, of which its editors are members. It additionally aims to work with the educational arms of NASA and the UK Space Agency. This year the founder has been joined by two co-editors/curators, Rob Edgar (YSJ Creative Writing), and Dr. Adam Smith (YSJ Literature), who both have expertise in science fiction studies. Terra Two has a presence on social media, with a Twitter address of @YSJTerra2 and an Instagram address of @terra.two. The Terra Two: An Ark for Off-World Survival ark(ive)/online magazine can be located at <https://yorkstjohnterratwo.com>.

The 'About' heading on the Terra Two Word Press site offers the following, for more information:

'Where my guides lead me in kindness, I follow, follow lightly...'

Terra Two's key aim is to give shape to the first off-world settlement through the lens of science fiction. NASA is keen to settle the first group of colonists in 2030, and it is my own feeling that we simply cannot leave the development of the first colony to the scientists; instead, we in the Arts and Humanities, especially those who are acutely aware of the warnings implicit in science fiction, must add our voices to this larger project in order to ensure that when we settle a new planet, we take an entirely new approach to our environment, to other species within our sphere of influence, and to one another. To simply transport contemporary western culture's attitudes and behaviours into deep space would be to create a mission doomed from its inception; when we go, we need to agree on a new set of principles, and we need to find a way to make them stick.

Contemporary science fiction, with its increasing focus on the environment as well as on cultural, ethnic and sexual diversity serves as a repository for the hopes and fears of our age, an age we might aptly entitle *The Age of Disaster*. For eco-philosopher Timothy Morton ‘the end of the world has already occurred’ (2013: 7); James Watt’s blueprints for the steam engine marked the beginning of the industrial revolution, and so too, the beginning of geophysical disaster on a global scale—the beginning of the end of days. Many scientists suggest that the ‘tipping point’, that window in time where we might have been able to reverse the adverse effects of technological advancement, has now passed. Whether this is the case or not, as I see it we have two choices—keep on partying, western-style, while the rest of the globe grows increasingly hungry and more miserable, OR make a plan for a radical new way of living, one we can use to transform contemporary reality here and now on Terra One, and one we can take with us when we move to our first new home among the stars.

Science fiction readers and critics, we invite you to distil the wisdom found in your favourite texts for this moveable ark. Creative writers, visual artists, gamers and musicians, we invite you to reflect on science fictional texts or themes in order to help us visualise a future played out light years away from Terra One, our beautiful planet Earth. Historians, law-makers, politicians—we invite you to think about how governance will work in the first off-world community; what do our wisest sf writers and film-makers suggest we will need to do in the future to keep the peace? Spiritual and religious thinkers, philosophers, ethicists—please comment on the way we might harness our best, most compassionate selves within the new space. Scientists—how will we get there? What will we need to do to survive in a new environment? Whatever we do—it is certain that we will need a diverse range of abilities in order to get us through—diversity, and resilience.

Good quality contributions to Terra Two are welcomed from YSJ academic staff and students and from guest contributors by invitation. The Terra Two editorial team will send out calls for contributions at least three times a year, and in addition, we will facilitate projects and collaborations to provide additional opportunities for submission. We will launch our online archive at a celebratory event in September of 2017, to which all contributors are invited. Following our launch party, we will share our Ark for Survival with NASA and the UK Space Agency.

This site is dedicated to science fiction writer Ursula K. Le Guin, whose deep understanding of human beings, and her faith in what we can achieve collectively, has influenced me profoundly all of my adult years.

Liesl E. King 14/3/17

Caretaker—Terra Two: An Ark for Off-World Survival

So far, following its ‘soft launch’ at the university’s Research Reflections conference in September 2016, Terra Two has attracted submissions from 25 YSJ staff members, postgraduate students, and invited guests in the fields of Literature, Creative Writing, History, Media, Religious Studies, Theology, Illustration, and Music.

The Bishop of Whitby, Paul Ferguson, was the first to submit a piece of work, and the youngest contributor to the site is ten year-old creative writer Meredith Edgar-Hunt, who attended the York Festival of Ideas workshop in June. In the recent response to July's call for submissions, ten YSJ staff members, postgraduate students, and invited guest contributors submitted creative and critical pieces, including poet and science fiction writer Luke Kennard, author of *The Transition* (2014). Luke visited York St John this September to read from his contribution to Terra Two and to officially launch the project. During the staff and student workshop series that will be running monthly from October to June we are planning to dig, plant, and write at the @YSJTerra2 allotment after reading extracts from apocalyptic sf; to offer Terra Two writing workshops to Park Grove Primary School, Joseph Rowntree Secondary School, the Kyra Women's Project, and the York Quakers; and to support students to develop a Terra Two Junior Word Press site for contributors 16 years of age and under as well as to liaise with students in Rwanda through the charity We Are Limitless. We have recently put in an institutional bid to support this workshop series, and in 2018/19, in tandem with the York Environmental Humanities group, we aim to put in a larger external bid to support a weekend-long festival with Terra Incognito, a multi-modal, cross-disciplinary publication, and a one day symposium facilitated jointly between York St John and the UK Space Agency. Although many of the above plans are still in 'seed' form, the activities of Terra Two across 2016/17 have established a presence for the project both on and off campus, creating interest and enthusiasm in advance of upcoming events.

The Terra Two project encourages Humanities students at York St John studying Literature and Creative Writing, Media and Film Studies, Theology and Religious Studies, History and American Studies, and Human and Environmental Geography to reflect on the relationship between their subject areas and key principles behind sustainable living. In terms of advancing the values inherent in the concept 'Education for Sustainable Development', the Terra Two project (1) offers students a platform to engage critically and creatively with science fiction's social and environmental messages through its online magazine; (2) foregrounds the ark(ive)'s ethos of sustainability through its extra-curricular workshops; and (3) symbolises the importance of fostering communication between the humanities and the sciences through its publicised goal to share the ark(ive) with NASA and the UK Space Agency.

Although the online ark(ive)/magazine is free for all to enjoy, we ask individuals who have enjoyed the creative and critical work on the site to consider contributing a small sum to the charity We Are Limitless, which has so far supported 46 orphans through school and university: <http://www.wearelimitless.org>.

My own research interests lie in the relationship between science fiction and spirituality, and the reflective section which forms the second part of this paper has been written in direct response to the title of the upcoming Canterbury Christ Church University's conference 'Sustainability and Humanities: linking social values, theology and spirituality towards sustainability'. The Terra Two project invites submissions from practitioners of every faith and no-faith; it aims to include the work of contributors who have a relationship with the term 'spirituality', and equally, of those who have no relationship with this term at all. In the official launch of this project

which took place at the university on the 29th of September, 2017, I explained that the project had two watchwords—diversity, and sustainability. T2’s editors have welcomed contributions of a good standard that in some way address one or both of these terms. Although not all individuals conceive of themselves as ‘spiritual’, spirituality is a term that, as Cornell Toit puts it, is ‘accessible to all’ (2006: 1252). Arguably, a desire to express and cultivate spirituality is synonymous with the promotion of diversity and sustainability. Secular spirituality sits *between* religious and non-religious approaches, and by foregrounding this term through research, my aim is to bridge the gap.

The Canterbury call for papers inspired me to flesh out the connection between secular spirituality and science fiction so that I could better articulate the ethos which shaped the development of Terra Two for readers, contributors, and for academics external to YSJ. The following section on ‘Secular Spirituality and Science Fiction’ will be uploaded to the ‘About’ section prior to the next call for submissions, and I will share these ideas when I visit Canterbury in November. Ideally, these reflections will contribute to the conversation that research professor Pauline Kollontai has begun with her recent contribution to the ark(ive), ‘Reflections from the Garden of Eden’, which includes the questions: ‘In Terra Two, what kind of cultures need to be created to diminish our human ability to hurt and destroy one another? Will religions continue to exist and in what form?’ Ideally, the research which follows will provoke further engagement with the concept of ‘spirituality’ and related, practical applications for supporting sustainability on Earth as well as on the first off-world colony. The reflections, along with the many contributions to the site from other Humanities staff members, will ideally encourage students to see university degrees not only as a means through which they might gain economic success, but through which they might find opportunities to impact on local and global well-being.

2 Part 2: On Secular Spirituality and Science Fiction: A Provocation for Terra Two

Write, form a rhizome, increase your territory by deterritorialization, extend the line of flight to the point where it becomes an abstract machine covering the entire plane of consistency. (Deleuze and Guattari 2013: 11)

Speak up about a third way—it is no longer about a particular religious tradition, or spiritual leader, or path to enlightenment; nor is it about turning one’s back on spirituality as a concept; instead we might explain that spiritual desire is as real and urgent for each of us as hunger, sexual desire, or the need to breathe. In fact, these desires are all one.

The Terra Two project has been developed with a working understanding of ‘secular spirituality’ in mind, and the remainder of this paper will attempt to tease out what this concept might embrace, and why it is valuable, drawing on a range of science fictional texts which have simultaneously inspired and given shape to the

term. Additionally the section gives focus to the work of Gilles Deleuze's and Felix Guattari's visionary *A Thousand Plateaus* (1987), and most specifically to its generative, disorderly, 'rhizomatic' understanding of the way organic life in our multiverse functions, a model which arguably sheds light on human spirituality.

In the introduction to their concept of the rhizome, Deleuze and Guattari explain that '[i]t is not a question of this or that place on earth, or of a given moment in history, still less of this or that category of thought. It is a question of a model that is perpetually in construction or collapsing, and of a process that is perpetually prolonging itself, breaking off and starting up again' (21). I might begin here by suggesting that human expressions of 'spirituality' are integral to a sustainable vision of the future; additionally, they are expressions in modes which in practical terms are 'perpetually [...] breaking off and starting up again'. Spirituality is an impulse which human beings have attempted to tame, capture, and house within religious paradigms since the beginning of culture as we know it. Spiritual expression finds a natural home in religious communities, as tribes, groups and nations seek to express ways of doing and being which connect with something larger themselves; however, spiritual energy sits at the core of every vibrating life form, and like Deleuze's rhizomes, it 'operates by variation, expansion, conquest, capture, offshoots' (22). In other words, as theologian Cornell Toit explains, although all religious communities engage in some form of spiritual practice, spirituality 'does not discriminate between religion and denomination, or between believers and unbelievers. It is a human capacity accessible to all' (2006). The impulse to experience and recognise deep connections between the self and other forms is as natural as breathing or sleeping; the spiritual impulse is at the heart of every ethical decision, every admiring response to nature, every act of love.

Yet how do we pin down a concept that may be a 'human capacity', but which means very little without context? Theorist Ernesto Laclau might call spirituality an 'empty signifier', as it has no direct referent (2006). However, to my mind, spirituality is one of the most valuable words in the English language; the process of understanding and working with this concept is identical to the process of living in a sustainable, open-hearted, and compassionate way. Considering the work of science fiction writers who have influenced my thinking, I would suggest that there are (at least) seven values practiced by individuals, communities, projects, institutions, and relationships which might be called spiritual, and these include the following: (1) connection (2) compassion (3) respect (4) vision (5) attention (6) evolution and (7) love. The importance of placing the term 'secular' beside the term 'spirituality' in this section's title cannot be overstated: at this point in history, when many religious communities are at odds both with one another and with secular groups, a number of human beings across the globe (secular and religious) are working to respond to sf writer Ursula Le Guin's invitation to philosophically 'move sideways' (1989: 95) in order to acknowledge common spiritual ground. It is my contention that we cannot move forward successfully, sustainably, as a global community until we consciously acknowledge that all human beings, no matter what their religious or non-religious beliefs may be, express spiritual desire on a daily basis. Until we understand and acknowledge that the impulse to connect spiritually comes first, and the impulse to

join a particular religious institution, to study astrophysics, or to nurture a vegetable garden comes second, we will continue to judge some human beings as insiders and others as outsiders. Sf writer Ursula Le Guin's novels, short stories and essays imply that a culture's underpinning philosophy forms the basis for its future, and I would in turn suggest that a global, planetary culture which recognises, and appreciates, diverse expressions of spiritual desire will signal the next stage in our mutual evolution. When we settle a 'Terra Two', whether that be Mars or a planet outside our solar system, will it not be necessary to form new rituals, new, collaboratively developed ways of recognising birth, death, commitment, sorrow and joy? These 'becomings' (Deleuze) will be innovative, rich in affective creativity. Our colonists will bring spiritual desire with them, and together they will find new ways to express it.

Theologian Robert Fuller in his book *Spiritual but not Religious: Understanding Unchurched America* (2001), makes the following assertions:

Up to 21 percent of all Americans are unaffiliated with a church, but should nonetheless be considered religious in some broad sense of the term. The largest group of the unchurched, then, is concerned with spiritual issues but choose to pursue them outside the context of a formal religious organisation. These Americans can be described as "spiritual but not religious." [...] They view their lives as spiritual journeys, hoping to make new discoveries and gain new insights on an almost daily basis. Religion isn't a fixed thing for them.[...] Importantly, the terms they adopt in their effort to understand such things as the nature of God, the essence of the human soul, and the practices that promote spiritual growth are almost all drawn from spiritual philosophies outside dominant religious institutions. (Fuller 2001: 4)

Fuller's paragraph contains inconsistencies: he suggests that 21 percent of Americans who are not affiliated with a church 'should nonetheless be considered religious', but he also explains that they can be described as 'spiritual but not religious' (4). I would suggest that a common tendency in academic culture to collapse the two terms 'spiritual' and 'religious' creates confusion here. The two terms do not connote the same thing, although for many individuals they are deeply connected. Robert Fuller, although curious about and often generous towards the 'unchurched Americans' he describes, concludes finally that those he classes in this way can often be considered anti-social (178). In other words, from Fuller's Christian-based perspective it is the term 'religious', with its associations to biblical scripture, traditional ritual and community worship which holds value, while to be 'spiritual but not religious' is to experience spirituality in a diminished form. To again create a parallel with Deleuze and Guattari's description of rhizomes, I would suggest that spiritual desire works through 'variation', 'expansion', and 'offshoots': although many individuals immerse themselves within a single, dominant religious tradition, numerous others connect with spiritual concepts, behaviours, and experiences through alternative, and crucially non-religious sources.

One particular artistic genre is uniquely placed to offer perspectives on spirituality 'outside dominant religious institutions' (4), and that genre is science fiction. Science fiction, as critic Damien Broderick has pointed out, is 'that species of storytelling native to a culture undergoing the epistemic changes implicated in the rise [...] of technical-industrial modes of production' (1995: 155). In other words, science fiction

speaks specifically to those across the globe who are experiencing dramatic social transformations due to the advances of technology. Science fiction additionally has a history of asking the ‘bigger’ questions, such as ‘how did we get here?’, ‘what does it mean to be a human being?’ and ‘what can we do to make the world a fairer place?’, questions which a number of religious texts also explore. Writers such as Ursula Le Guin, Marge Piercy, Octavia Butler, Margaret Atwood, and Jeff VanderMeer draw on non-traditional modes of spiritual expression in order to advance warnings about environmental damage and social injustice. They and a range of other contemporary sf writers and film-makers focus our attention on issues of race, class, gender, sexual identity and dis/ability, creating parallels between our treatment of difference and our treatment of non-humans and the natural environment. In so doing, they express spiritual desires for alternative futures.

3 Seven Spiritual Values in Science Fiction

(1) *Connection*

In Ursula Le Guin’s short story ‘Newton’s Sleep’ (1994), human beings have chosen to select a few people with exceptional intelligence scores to inhabit a satellite which will exit the Earth’s atmosphere, leaving the destructive effects of pollution and overpopulation behind; when they leave the atmosphere they relegate ‘rain, roaches and Spanish’ to the stored memory of their catalogue file (38). But once the satellite is launched the inhabitants are haunted by collective, hallucinatory visions of the people, the wild animals and the growing things they have abandoned. In the story’s narrative, elements of the past are superimposed upon the present, conveying the impression that time is merely a series of separated layers which can theoretically be pressed back together; and we come to understand that for Le Guin, time and space are ultimately irrelevant—what matters is that all of life is intrinsically intertwined. The character Susan sums up the experience thus: ‘How did we, how could we have thought we could just leave? [...] All it is, is we brought ourselves with us [...] The horses and the whales and the old women and the sick babies. They’re just us, we’re them, they’re here’ (49).

In an article by scientists Carla Hustak and Natasha Myers, the two writers offer a non-utilitarian, ‘involutionary’ approach to biological studies of plant/insect relations: they explain that ‘pullulating under the surface of chemical ecologists’ neo-Darwinian accounts, we find the glimmerings of an affective ecology contoured by affinities and repulsions and teeming with articulate plants and other loquacious organisms’ (79). They suggest that Darwin’s 1862 treatise on orchid pollination exposes a ‘glimpse of him involving himself in an “inextricable web of affinities”’ (83), and they propose that plant/insect encounters are not simply ‘conditioned by a calculating economy but by an affective ecology shaped by pleasure, play, and experimental propositions’ (77–78). These writers’ account of interspecies symbiosis is similar to that of Ursula Le Guin’s short story ‘Newton’s Sleep’: in both narra-

tives the authors focus on foregrounding an ‘inextricable web of affinities’, stressing developmental interdependence and biological, affective interconnectivity. Hustak and Myers reference Deleuze and Guattari’s *A Thousand Plateaus*, highlighting the celebrated passage which calls on readers to ‘consider the wisdom of plants: even when they have roots, there is always an outside where they form a rhizome with something else—with the wind, an animal, human beings [...]’ (10). These intersecting perspectives from literature, science and philosophy express a truth which vibrates at the very core of every function of the multiverse—that of continuous, interactive, transformative connectivity.

(2) *Compassion*

In Ursula Le Guin’s short story ‘The Ones Who Walk Away From Omelas’ (1975), the writer provides a metaphor of what it means to be compassionate by telling about a few characters who choose to walk away from a beautiful, fictional city, a city permitted to preserve its wealth and happiness as long as it keeps one miserable, hungry and lonely child in a filthy cellar. The rules of the city insist that such a child must always exist, and so the wealth and pleasure of the many are predicated on the poverty and misery of the one. Many inhabitants accept that the sacrifice is inevitable, and they come annually to stare at the child in order to acknowledge and internalise the sad truth. But a few refuse to accept it, and they walk away from the city and all that is known. This story, widely anthologised, distils in its representation of the filthy, motherless, starving child a truth that individual humans can either look at or turn away from—the fact that deep pain, torture, and misery occur regularly, daily, all across our globe. Susan in Le Guin’s short story explains, ‘The horses and the whales and the old women and the sick babies. They’re just us, we’re them, they’re here’ (49). Awareness of the first value, connection, leads to an enhancement of the second, the value which most succinctly sums up what it means to be human—compassion. The latter is a truth illuminated by a range of landmark sf novels and films, from Mary Shelley’s *Frankenstein* (1818) to Cormac McCarthy’s *The Road* (2006).

(3) *Respect*

Clara Sue Kidwell, Homer Noley and George Tinker’s *A Native American Theology* (2001) explains that Native Americans cultivate planting ground so that it will yield crops for seven generations to come. Native Americans, they explain, see themselves as an intrinsic part of the larger web of life, which in turn inspires respectful behaviour towards the natural environment: [f]or Native Americans, their intimate relationship with the natural environment blurs the distinctions between human and non-human [...] (107). Historically, western European and North American (non-indigenous) approaches to the environment have been markedly different to this. The successes engendered by the Industrial Revolution created the impression that western humankind was in control of nature, that following nineteenth century advances in medicine, transport, architecture and food production, human beings had the ability to mould and shape the natural environment without experiencing adverse effects. An important text in terms of this topic, Timothy Morton’s eco-philosophical treatise

Hyperobjects (2013), dramatically flags the repercussions of unsustainable technological advancement. In order to express his argument, he dances around the term 'hyperobjects' until it appears to embody just about everything we are not: 'a hyperobject could be a black hole' (1); it could be the biosphere, or the solar system'; it 'could be the very long-lasting product of human manufacture, such as Styrofoam or plastic bags, or the sum of all the whirring machinery of capitalism' (1). In short, his treaty suggests that the world came to its end as the Industrial Revolution began. But ultimately *Hyperobjects* functions as an incitement to action rather than a prophecy: its extended polemic insists that unless we learn to acknowledge and to respect the hyperobjects all around us, our planet will soon fail to sustain its diverse range of species.

Science fiction offers us warnings about our treatment of the oceans, the atmosphere, the soil and all of the species on our planet, over and over again. In 1976, Marge Piercy's *Woman on the Edge of Time* offered two alternative futures, one in which human beings lived sustainably in 'ownfed' communities, and another, where all but the 'richies' lived as slaves or prostitutes, choked on pollution, and were 'ashed' at age 43. In 1999, the Wachowski siblings' *The Matrix* urged us to 'wake up' ('wake up, Neo'), by projecting a future in which artificial intelligence had taken over, following a war in which human beings had 'choked the sky'. In her *Maddaddam* trilogy (2003, 2009, 2013), Margaret Atwood imagines a future where young people spend their free time watching snuff movies and live executions, in which scientists have created 'rakunks' (a hybrid combination of racoons and skunks), and 'pigoons' (pigs implanted with human stem cells), and significantly, in which the haves and have-nots exist in wholly separate spheres. The lack of civilised behaviour in any strata of society leads one scientifically talented zealot to create an innocent, humanoid species, the Crakers, and to release a pandemic in order to wipe the planet of human beings. Atwood's point is clear: the exaggerated, unsustainable, unhealthy behaviours of these fictional citizens have direct parallels to our own.

One of the key strategies of many science fiction texts is to demonstrate the way in which respectful attitudes can be harnessed to impact positively on a range of different bodies. In Marge Piercy's *Woman on the Edge of Time*, the futuristic American society in the future uses non-gendered terms to undermine stereotypes, such as 'per' for person; it mixes genes prior to artificial fertilisation so that no single skin colour dominates; it is non-discriminatory in terms of sexual identity; and it treats mental health problems as part of an ordinary spectrum of experiences which any individual might encounter across a lifetime. Ursula Le Guin's *The Left Hand of Darkness* (1969) similarly focuses on an imaginary landscape in which diversity is respected alongside environmental awareness. In terms of the environment, on Gethen it is always 'Year One', which is significant as the Gethenians practice 'Presence over Progress', constructing trucks that go no faster than 30 miles per hour, and building homes without heat, so that citizens can learn to withstand the wintry conditions outside. In terms of representing diversity, Le Guin's protagonist Genly Ai is brown-skinned, a bit darker than the Gethenians he visits, and during his journey across the Gobrin Ice with the alien Estravan, he learns to love 'a man who is a woman, a woman who is a man' (202). Both of these influential novels suggest that respect is an attitude

that, once cultivated, can then be channelled to extend in all directions—towards humans, non-humans, the earth, the sea, the atmosphere, and out beyond our planetary atmosphere too.

(4) *Vision*

Writing has nothing to do with signifying. It has to do with surveying, mapping, even realms that are yet to come (Deleuze and Guattari, 3).

In a recent trip to a conference in San Diego I noticed that the word ‘generative’ seemed to appear everywhere—in a conversation with a man on the plane, in discussions around apocalypse at the conference, and in a conversation with my old friend in Los Angeles. I wonder if the urge to focus on that which is ‘generative’ is a symptom of the general state of global unease; perhaps if we can cultivate behaviours, projects, and attitudes which are ‘generative’, we can experience ourselves as part of the solution instead of part of the problem. Of course, not everything that is ‘generative’ generates positive outcomes for the planet and its diverse species. To successfully channel the urge to generate, one must first identify visions for and the parameters of projected spaces in which a variety of life forms can thrive.

When Connie, the protagonist of *Woman on the Edge of Time* arrives in the future, she is most disappointed: she is expecting ‘gleaming machines’ and is instead faced with low-rise buildings, roaming chickens, and washing lines (68). Luciente explains to her that the cities in Connie’s age did not work, and so the people of her future replaced them with single-storey living, featuring single rooms for each individual and communal eating space. Piercy’s vision of a better future is very different to what Connie expects, which leads the reader to consider for herself what she would like the future to look like. It is the opposition between specifically detailed utopian and dystopian versions of Mattapoisett which articulate Piercy’s vision: in order to move forward, she suggests, we need to first take a step back.

In *A Thousand Plateaus*, Deleuze and Guattari propose an ‘acentred’ system towards a macro-level, philosophical model of ‘becoming’: ‘To these centred systems, the authors contrast acentred systems, finite networks of automata in which communication runs from any neighbour to any other, the stems or channels do not pre-exist, and all individuals are interchangeable, defined only by their state at a given moment—such that the local operations are coordinated and the final, global result synchronised without a central agency (17). This explanation of the way life processes work suggests that individuals exist *in relation* to other individuals or forms of life, an approach which brings to mind that of Martin Buber, who suggested in *I and Thou* (1923) that it is in the relationships between human beings that God exists. Perhaps provocatively replacing the word ‘God’ with that of the less culturally located term ‘spirituality’, it is possible to propose that like Deleuze’s rhizomes, spirituality exists in the in-between, in the interstices; it does not exist except within a relationship or connection with an other. The rules of generation are such that they are always relational to other forms: the seed can only flourish in the presence of nutrients, light, and water. One important aspect of Deleuze and Guattari’s vision, then, is again about interconnectivity. Reading their work, I have the sensation of being not singular but one amongst many, bringing to mind the sentiment expressed

within Le Guin's rendition of *Lao Tzu's Tao Te Ching*: 'The ten thousand things arise together, and in their arising is their return' (1997: 22). If I imagine myself at molecular level, I can perceive myself as a consilience of infinitesimal points within the vastness of all that is, and it then makes sense to me that 'I' come into being only when a number of intersectional relationships take place.

The second visionary aspect of the above quotation from Deleuze and Guattari can be found in the phrase: 'such that the local operations are coordinated and the final, global result synchronized without a central agency'. To assert that human beings come into being, as all processes do, in the moment of connectivity with an other is to understand that there is no 'centralising General' as Deleuze explains (17); to grasp this is to experience a sense of trust in the on-going processes of organic life that occur generatively without the need for an overarching plan. Deleuze emphasises that the 'stems and channels do not pre-exist', and by extension, I would argue that human beings generate and coordinate transformative projects locally, which in their overarching sum, then come to form a 'global result'. Ursula Le Guin's short story 'Vaster than Empires and More Slow' (1971) describes an exploratory mission to a planet without human or animal inhabitants, though richly populated by diverse plant-forms. When one of the team is murdered, the rest move to investigate what has occurred: it transpires that one of the members of the team has killed another in the forest, and the fear and pain generated has been sensed and internalised by the plants. Significantly, even though the crew seeks to fly as far away as they can from the forest space in which the murder occurs, they cannot escape the ominous presence of the plants, as even in the grasslands, far from the forests, the arboriforms are aware of the event. Simultaneously, the fear and pain has travelled across vast distances; the local has become global; and the impact has been 'synchronised'. The story comes to its conclusion when one of the party sacrifices his future to live with the plants, returning the planet to a state of equilibrium. Le Guin's story serves to fictionally illuminate Deleuze and Guattari's concept.

Both of these texts suggest that we can develop local, generative, visionary projects which benefit the planet without worrying that we have no comprehensive map or grand plan. We do not need to feel individually helpless, for solving global environmental damage and social injustice is not one person's responsibility. *However*, the two texts also suggest that we do need to work collaboratively, creatively and playfully if our aim is to effect change. When ideas are exchanged and repeated across the planet, the global result is one of synchronisation; conversely, it is then the lack of doing, and the lack of vision, which serves to maintain the status quo.

(5) *Attention*

Arguably, western civilisation which Le Guin suggests pursues 'hot progress' (1989: 90) has focused specifically on the use of cerebral processes to advance culture from the beginning of the twentieth century, undermining physical and spiritual ways of knowing and being. The result has been a de-emphasis on exercise, which has led to widespread obesity in America and the UK, and a concomitant preoccupation with technological forms of entertainment, which can lead to feelings of social isolation. In literary theory, the period before and after the millennium saw a return to the

‘material’, spearheaded by feminists such as Elizabeth Grosz and Rosi Braidotti, a movement which insisted that feminism should consider the experiences of real bodies in a range of intersecting situations. In the twenty-first century, the increased take up of yoga and mindfulness amongst westerners, and the general turn towards ‘experiences’ rather than ‘things’ (see *The Guardian* 5/17), are other examples of a counter-balancing effort to access the full range of our senses. In order to appreciate and understand the world around us, we need to pay attention to it, and not simply through the lens of our thoughts.

In *The Left Hand of Darkness*, the Handdaran foretellers of Gethen practice ‘the Handdara discipline of Presence, which is a kind of trance [...] involving self-loss (self augmentation?) through extreme sensual receptiveness and awareness’ (169: 1969). This summer I have made a conscious effort to practice ‘sensual receptiveness’ when I can. I have been weeding and planting in the @YSJTerra2 and @ysjpollinationproject1 allotment; I have experienced a ‘gong relaxation song bath’ with forty other women—a full immersion in the sounds of Himalayan singing bowls, percussion instruments and gongs; I have sat quietly, reading and writing with the windows open, listening to the warm wind rushing through my loft windows. I have soaked in the sight and smell of the wildflowers and roses we planted for the bees and insects on the allotment. I know that I am more than a person who analyses; I am a person who senses. I am related to plants, insects and animals who all respond to touch, and who all sense the vibrations of thunder.

(6) *Evolution*

A range of science fiction texts including Octavia Butler’s *Xenogenesis* trilogy (1987, 1988, 1989), Marge Piercy’s *Body of Glass* (1991), and Jeff VanderMeer’s *The Southern Reach* (2014) suggest that human beings in the future will evolve and shift so that we may become unrecognisable to our current selves. In Butler’s *Xenogenesis* series, gene-trading aliens arrive on a post-apocalyptic Earth in order to reproduce with humans, creating a third race. In Piercy’s *Body of Glass*, cyborgian, artificially and emotionally intelligent ‘Yod’ appears more human than many others in his human community. In VanderMeer’s *The Southern Reach*, a mysterious alien force advances to cleanse the planet of technology, simultaneously facilitating strange, mutational synergies between humans, plant-forms, and other mammals. These novels examine the earlier theme of universal interconnectivity, but they also emphasise the concept of evolution, implying that we as a species are still in the midst of this process. They additionally highlight the fact that trauma, disease, ageing, decay, and ultimately extinction are natural processes that we participate in alongside all other life forms. To deny the inevitability of these processes is to remain childlike, and to mature is to accept daily that we are ‘assemblages’, and that the fabric and substance of contemporary humanity can never be permanent. To acknowledge this impermanence, perhaps, is to see ourselves as inextricably linked to the rest of the biosphere rather than separate from it. To become alive to this is to allow that our current behaviours can change and evolve. To act on this is to find ways to protect our planet from further, premature transformation.

(7) *Love*

For it seemed to me, and I think to him, that it was from that sexual tension between us, admitted now and understood, but not assuaged, that the great and sudden assurance of friendship between us rose: a friendship so much needed by us both in our exile, and already so well proved in the days and nights of our bitter journey, that it might as well be called, now as later, love. But it was from the difference between us, not from the affinities and likenesses, but from the difference, that that love came: and it was itself the bridge, the only bridge, across what divided us.

And now these three remain: faith, hope and love. But the greatest of these is love. (Corinthians 1:13)

Assemblages, readers, Terran brothers, sisters and non-binary siblings, I invite you to fill this final section in for yourselves, perhaps drawing on the science fictional texts that for you, best bring this concept to light.

The next submission date for Terra Two: An Ark for Off-World Survival is the 31st of January, 2018. <https://yorkstjohnterratwo.com>.

4 Conclusion

The provocation above ideally conveys that science fiction is not just entertaining, but that it is, as Doris Lessing explained in 1979, a genre that examines ‘the sacred literatures of the world in the same bold way [sf writers] take scientific and social possibilities to their logical conclusions—so that we may examine them’ (1979: x). For the readers and contributors to Terra Two, the invitation to consider the way in which many of the writers in this genre introduce the concept of spirituality will ideally lead to future critical and creative responses around this theme. Introducing a ‘third way’—secular spirituality—one that sits ‘between’ secular and religious belief systems will always have its limitations, since to curate (or seek to expand) an alternative paradigm, one that moves to merge or aims to cross-fertilise deeply valued cultural perspectives will inevitably prove problematic and unappealing to some. However for others, thinking in terms of a secular spiritual approach may prove liberating and stimulating. Ultimately, there is no need for those who engage with the Terra Two project to reflect formally upon the term ‘spirituality’; it is more than enough to keep the two watchwords, diversity and sustainability, on each shoulder. Allowing that this is the case, however, it is worth acknowledging that for many communities on our planet, spiritual practice is fundamental to living, and understanding this is crucial to the success of efforts towards global peace and reconciliation and to future off-world settlements. In the spirit of advancing the next stage of our evolutionary project, each of us across the globe might begin by ‘walk[ing] a mile in [other] moccasins’ (Lathrap 1885), in the knowledge that in the space between ‘I’ and ‘Thou’, we are likely to discover common ground.

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Sustaining Theology: Personal Search to Public Research: Bible to Bibliography



Maureen P. Ellis

Abstract ‘The limits of my language mean the limits of my world’ (Wittgenstein in *Tractatus Logico-Philosophicus Logisch-philosophische Abhandlung*. Keegan Paul, London, 1922/2010: 5.6). Rejecting bland multicultural theology, global frames analyse textual Products, interpret contextual/social Practices, critique Purposes. Chronological narratives integrate human streams of consciousness, coherently de-/re-constructing semantic triangles/semiotic trinities. No mere literary device, relating physics to metaphysics, binding anthropology to theology, ubiquitous metaphor pervades ‘Quantum consciousness’. Consistently scrutinised, metaphor can alter/altar consciousness, yielding fresh discourse—law, contract, policy and praxis—performative drama/dharma from kindergarten and ‘universe-city’ to oecumenical eudaimonia. Encapsulating Vedic/Buddhist/Taoist Critical Realism, Critical Theory, and Critical Discourse Studies, Cultural Historical Activity Theory proves an evaluative framework amidst bewildering multimodal globalisation. Crucial systemic, dialectic, heteroglossic, (w)holistic, transformational criteria probe assumptions and linguistic presuppositions. Systemic Functional Semiotics, Bakhtin’s claim, ‘the symbol has a warmth of fused mystery’, Jung’s ‘Modern Man in Search of a Soul’ associate atma, atomic energy, consilience, Eastern magi(c) deep in the Western psyche. Depth hermeneutics, distributed phonology and morphology, explain and enlighten discipleship. This presentation invites spiritual expansion, literate rather than literal reading of the wor(l)d beyond the word. It justifies specific pragmatist strategies: spatio-temporal, sensorial, symbolic and material modalities discern, discriminate, define, divine and empower metaphysical Self, Soul, ‘that of Go(o)d’ in every being. Challenging global political-economy and cultural politics, 500+ teachers, teacher-educators, international-NGO administrators and academics in Britain and overseas evidenced empathic transformation.

Keywords Sustainable development · Theology · Linguistic anthropology
Education · Humanities

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1 Introduction

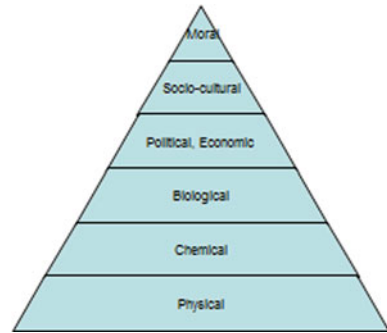
Profuse accounts of sustainable campuses, credit-worthy initiatives in resource management, bio-gas generators, solar photovoltaic energy, hydrogen fuel cells, water conservation, waste reduction, recycling and zero emission vehicles reflect disproportionate attention to tangible, measurable ‘Sustainability’. Far less attention is paid to pedagogy, curriculum, the psycho- and socio-dynamics of sustainable education, enlightened performance, long-term elusive measurement of heightened awareness and altered consciousness. Globalisation, austerity policies, a time when foreign students represent a lucrative source of income also however present opportunities for navigating enlarged geo-political frames, ecological epistemology, fresh conceptions of s/Self, (w)holistic discussion of intellectual and moral Sustainable Development, Scylla and Charybdis of cultural essentialism and relativism, biosphere consciousness.

Orr (1991: 52) confirmed environmental damage ‘is not the work of ignorant people. It is, rather, largely the result of work by people with BAs, BScs, LLBs, MBAs, and PhDs ... My point is simply that education is no guarantee of decency, prudence, or wisdom. More of the same kind of education will only compound our problems’. Huckle (Steiner 1996: 36) reminded an emerging field that ‘without adequate attention to critical theory and emancipatory politics, experiential learning is unlikely to constitute critical pedagogy’. More recently Sterling and Scott (2008: 391) attest, ‘In particular, the pedagogic implications of ESD are problematic, as most academics do not have an educational theory background ... greater development in relation to environmental/sustainability management and SD-related research than there has been in relation to curriculum/teaching’, ‘more of a perception in HEIs that sustainability requires accommodation as regards curricular content, with less agreement that ESD needs to involve pedagogic change and renewal, interdisciplinarity and appropriate policies at the level of the institution’.

Huckle (2004: 1) has consistently argued that Critical Realism (CR) constitutes appropriate ontology, epistemology and axiology for Higher Education for Sustainability, and that ‘the key requirement of institutions and courses that seek to educate for sustainability is a philosophy of knowledge that integrates the natural and social sciences and the humanities, accommodates local knowledge, supports critical pedagogy, and continues to regard education as a form of enlightenment linked to a vision of more sustainable futures’. CR resolves ‘tensions between mainstream, Marxist and postmodern environmentalisms in progressive ways’ (Huckle 2004: 2), ‘uniquely placed to manage the professionalisation of teaching’ (Shipway 2011: 186). Systemic CR (Fig. 1) maintains that moral and ethical values emerge from social practices, themselves dependant on material resources. The argument here is that ‘social values’ must include ideological foundations of social sciences, natural sciences and humanities.

This paper highlights transdisciplinary conceptual and empirical research conducted at London University Institute of Education, more fully described in ‘The Critical Global Educator: Global Citizenship Education as Sustainable Develop-

Fig. 1 Critical realist ontology



ment' (Ellis 2016). A Jungian mandala (Appendix 1) synthesised philosophical and theoretical foundations, CR, critical theory, neuro-, psycho-, socio- and cognitive linguistics; critical analysis of policy documents; an evaluative framework for self- and negotiated-evaluation of critical global educators based on Engestrom's Cultural Historical Activity Theory (CHAT); and empirical data. Predominantly confronting European contexts, justifying an explicitly political stance in Sustainability Education, sharper critical focus on semiotic analysis, theorised multimodality, and active communities of praxis (COPxs) which deploy powerful educational technologies to foster thematic multi-stakeholder global networks, eight recommendations finally yielded an Unconditional Pass PhD.

(W)holistic transdisciplinary Sustainability problematizes essential constructs of Humanities, Theology, Environment (D)evolving evolutionary 'Humanities', critically defined, contextually emergent, democratically debated, universally deliberated, represent precisely those very quintessential values which count: work, worth and wor(th)ship, worthy of Sustaining. Expansive education, renewed consciousness replacing parochial modes of thinking, requires fresh focus on symbolic exchange, the vital driving power of metaphor, theorised understanding of cosmic multimodality, 'big history' (Christian 2008), discerning and discriminating zeit geist.

2 Wholism, Integrity, At-One-Ment: Sound Basis for Sustainable Education

C.S. Peirce's dialectic theory of agency, incorporating multi-faceted self, frames identity as passionate intellectual consumption/production of multiple discourse competences, material and weightless 'signifiers'. Whether presented as hierarchy; excess; surplus; ascending physical, chemical, biological, economic and social strata; (Fig. 1) or transcending concentric circles; CR's stratified, differentiated worldview represents 'modes' of reality. Critical ontology rests on Vedic/Buddhist/Taoist insights, anthropological routes, etymological roots, resonances with Sanskrit, sacred language and literature, most systematic mother of European languages: refined ancient

wisdom, initially expressed in chakras (wheels), Judaic Septuagint, seven pillars of wisdom, Shiva's dance of the seven veils; abbreviated in Pentecost, pentacle, pentagons and stars and in trinities of Brahma, Vishnu, Shiva; Greek Clotho spinning the thread of life, Lachesis measuring out one's lifespan, and Atropos finally cutting it short; or more recent simplifications of body, mind, spirit; past, present, future or head, heart and hands.

Advocating unified beta–gamma '*consilience*' of sciences, evolutionary scientist E.O. Wilson (1998) reveals how partial namings of omniscient, omnipresent omnipotentiality (Sanskrit *Om*) fracture humanity's historically integrated giant beanstalk of knowledge, the 'absorption of the Divine in nature' (Buber 1958: 145). Urgent global issues of human rights, conflict resolution, diversity, environmental degradation and social justice demand CR's interdisciplinary systemic comprehension, which perforce includes historical understanding. Ecopsychologists maintain that the angst of late modernity reflects Man's alienation from the pain of the natural world (Kahn, in Darder et al. 2009). No single discipline can claim a central position, while a vacuum, uncertainty, competing disciples, will inevitably allow bagman Judas to satisfy neo-liberal economic rather than ecological agenda. Teilhard de Chardin's (1965) noumenal Mass on the World, his religious anthro-palaeontology, fundamentally unites reflection, invention and soul; evolutionary 'noosphere' blends time, space and mankind's material, organic and psychic strands with the cosmos.

Jung's Buddhist references brought to Western psychology Vedic understanding of the stratified embodied self, seven wheels or chakras, from root, sacrum, solar plexus, heart, throat, mind's eye to crown. Ancient and modern alchemists, dharma, Greek drama, forgotten wisdom coming from the East give contemporary relevance to imagery of 'body' and 'blood' in 'holy communion'. 'Only this East is not a Tibetan monastery full of Mahatmas, but in a sense lies within us. It is from the depths of our own psychic life that new spiritual forms will arise; they will be expression of psychic forces which may help to subdue the boundless lust for prey of Aryan man' (Jung 1933: 221). Relating tacit understanding to theorised disciplinary knowledge, polymath Michael Polanyi (1966) rationalises the disciplines as emergent reason along a cline ranging from (1) precise measurement or predictability to (2) systemic understanding and (3) human interest.

'The ideal of the unity of learning, which the Renaissance and Enlightenment bequeathed us, has been largely abandoned' (Wilson 1998: 11). One contention of this paper is that the terms and conditions, fundamental concepts and notions with and within which ESD operates, require radical expansion if education is to address the vast diversity entailed in current complex, 'compressed' globalisation. 'Humanities' can be described as the study of how human beings collectively process and document the human experience. In the Middle Ages, Humanities or secular Classics contrasted with Divinity. Renaissance humanists, treating the human figure as in Leonardo da Vinci's 1490 Vitruvian Man as the principal source of proportion, sought to balance upper class scholasticism with a citizenry capable of articulating and engaging in civic life. Related notions of propriety, proper (French '*propre*' = one's own), appropriate, carry implications for epistemic weight and pedagogical justifications today.

Fig. 2 Semiotic trinity

Philology constituted an essential component in the Humanities, evident in epicurean emancipation, intellectual expression and personal freedom. Traditionally the Humanities used critical and speculative methods with historical perspective, in contrast to empirical and natural sciences. Kepler, Newton, Boyle and Hooke, philosophically evaluating, critiquing, questioning the ‘why’ of natural sciences, challenge such false dichotomy. It is ironic and regrettable if in this current age of advanced communications, educators settle for narrow definitions of oecumene. As science and mysticism begin to speak with one voice, CRISPR technology confirms palindromic chiasm, tardigrades justify ‘dust to dust’, and British theoretical physicist Sir Roger Penrose and anaesthesiologist Stuart Hameroff research quantum consciousness, it is particularly unfortunate if research methods in education reinforce division.

Enhanced interpretations of ‘word’ hark back to Vedic notions of expression, breath, Being, spirit, atma or atomic energy, Hebrew ‘ruach’, the phonetician’s ‘schwa’. Its power, so effectively conveyed by Taoism’s sophisticated, nuanced, dynamic yin/yang (Fig. 2) is elaborated in C.S. Peirce’s semantic triangle. Replacing the customary symbol with a Y, Peirce and Buchler (1955) represents this semiotic trinity as Tychism (chance, spontaneity, arbitrariness); Synechism (continuity, regularity, order); and mediating existential Pragmaticism (distinct from pragmatism). Similarly, Austin’s (1975) Speech Act performativity carefully discerns i. actual locution or words, ii. illocutionary force or purpose and iii. real-world perlocutionary consequences of discursive utterances. Everyday baptisms and confirmations signify power to label, define, represent, or re-present, ‘an ideal semiotic “guerrilla warfare”’ in which ‘the addressees will choose their own ways of interpretation ... a tactic of decoding where ... the addressee rediscovers his freedom of decoding’ (1979:150).

‘The beauty of the practice of teaching is made up of a passion for integrity that unites teacher and students. A passion that has roots in ethical responsibility’ (Freire 1998: 88). (W)holistic learner-centred ‘response-ability’ means theorising passion, nurturing semen seeded deep in the learner’s consciousness. Distinctions of secular and religious faith do not deter or determine progress or transcendence

in the creation of eudaimonia, and superficial descriptions of people of faith versus those of no faith prove crass and inaccurate. ‘Action research’, participatory project-based discovery, converts consumers to producers. Somekh and Zeichner (2009: 5, 6) explain, ‘In generating research knowledge and improving social action at the same time, action research challenges the normative values of two distinct ways of being—that of the scholar and the activist ... it is precisely because action research deliberately mixes discourses—and thereby erodes the boundaries between action and knowledge-generation—that it is uniquely suited to generating and sustaining social transformation.’ Action research as ‘epistemology of practice’ (p. 325) sees ‘Knowledge and power are interconnected through action and research’ (p. 332) despite shifting emphases, ‘a search for personal knowledge within a social world’ (p. 334).

Using neuro-imaging to identify the multiple sites of multimodal processing in the brain, sensory anthropologists reveal, not a distinct, separate sensorium, but, rather, a sensori-perceptual interdependent modality that forms ‘unified percepts out of the diversity of inputs’. The myriad ways in which the senses are conjugated in different cultures suggest cross-modal plasticity or synaesthesia as a ‘more productive model for conceptualising perceptual processes’ (Howes, in Jewitt 2009: 226). Synaesthetic literacies (Cope and Kalantzis 2009) sequence experience, conceptualisation, analysis and *application*. Just-in-time disciplinary naming weaves theory and critique, social fabric and moral fibre in formal, informal, non-formal subjectivity. The most successful critical global educators enlarged learners’ consciousness, expanding concepts to encompass sociology and anthropology in disciplinary ‘con-science’. This approach ignites passionate etymological quest, integrating personal search with public research, communicating and justifying individual rationale with(in) collective consciousness.

Explaining the essentially metaphoric nature of thought, language and development, cognitive linguists offer sustainable educators transdisciplinary common ground. Linking surface framing to deeper conceptual frames, metaphor recalls sacred Greek amphora storing precious defining aphorisms. Symbolically represented in Sanskrit ritual by potentially lethal camphor, decongestant that burns without physical residue ash, metaphor intuitively eases mental absorption. Lakoff and Johnson (1980: 196–7) demonstrate that ‘most of the conceptual structure of a natural language is metaphorical’: around 90 per cent in Cameron’s dataset (Maybin and Swann 2006: 48). Grounded in universal human experience, almost impossible to avoid, metaphors represent the process of meaning construction. Meaning or ‘de-meaning’, metaphors extend understanding from familiar source domains to more abstract, difficult, possibly threatening target domains.

Irrespective of medium or mode, individual consciousness adopts cultural metaphor, creating psyche, constructing meaning. Logos, icons and imagery depend crucially on visual/verbal meronymy, metonymy, metaphor, to span ‘impure’ distances from physical to metaphysical, literal to liberal interpretations of a message. Referring wistfully to a distant domain, Medieval Islamic philosopher Tufayl (1185, trans Goodman 2009: 157, 159) speaks of ‘the practice in this religion to represent all reality in symbols’ and the ‘passion for the study of more sophisticated level of inter-

pretation'. Metaphoric modelling evaluates semantic adequacy, appropriacy, revealing afresh the lunacy of consumerism, the cancer of urbanisation, the asphyxiation of debt burden, the blood poisoning of chemical pollution (Jackson 2008). Metaphors that disguise complex military–industrial addiction, greed as entrepreneurship, injustice and misery as spiritual refinement demand examination of intentions/intensions. Persuasive metaphors of a 'war on terror', 'floods of migrants', 'rule of law' or 'freedom to choose' require discernment to identify sociopolitical, economic or military origins, domains and values.

A critical discourse approach to 'greening the curriculum' systemically addresses ground zero, the creative commons beneath languages, disciplines, across cultures and spatio-temporal division. CR's physical to metaphysical pyramid shapes and sharpens consciousness, priming citizens to constantly classify, categorise, prioritise and justify criteria. It probes precisely what it is that is being 'sustained', focusing on the complex laminated sustainability of physical environment, biodiversity, economic interests, socio-cultural mores which penetrate 'con-science', seeking universally justifiable values at individual, institutional, organisational, regional and global levels. Critical Discourse analysis makes explicit the ideology and values underlying diverse discourses and disciplines treating conventional curriculum, campus, faculties, 'universe-cities', and community as living language laboratories.

3 Cultural Historical Activity Theory (CHAT): Communicating Empirical Evidence

This section will refer to evidence which emerged from six years' research into the personal and professional development of critical global educators: academics (AC 1–4), international NGO practitioners (PN 1–6), teacher-educators (TE 1–4) and teachers (T 1–4). An opportunistic survey of around 335 PGCE student-teachers at the Institute of Education, six focus-group discussions with teachers at UK and mainland European universities, and around 35 face-to-face formal and informal semi-structured interviews enabled an iterative process, honed emergent findings, relating them to preconceptions from a literature search. The final 18 interviews, which lasted between 60 and 140 min, were transcribed and analysed in detail, as described in Chap. 6 of 'The Critical Global Educator'.

The Interview Schedule which was used is included as Appendix 2. The archaeology and genealogy of Engeström's Cultural Historical Activity Theory, (CHAT), celebrating a rich tradition which draws on Hegel, Marx, Habermas, Vygotsky, Jung and Bakhtin amongst many others, supported systemic analysis, extending psycholinguistic to socio-cultural dialectic. It portrayed the semantic and semiotic network around each participant, relating past to present, individual to community, word to deed. Although initially the questionnaire may have seemed to employ difficult terminology, interviewees who seemed uncertain or requested clarification, for instance of 'political economy' or 'cultural politics' in Q 2.1, were offered evidence of power,

money and ideology from the field of language education. Framed as shortcomings of the tool or research technique, brief personal revelations evoked deeper, empathic engagement, a generous flow of genuine interviewee narrative.

The most striking finding was the power of theory as theological process which strengthens learners across chiasm and chasm, relating intuition and attitude to opinion, knowledge and conviction. This was in sharp contrast to the popular myth of professional aversion to theory. Very definitely rejecting theory, administrators insisted it would 'turn teachers off'. However, observations of participants' responses when supplied with critical theorists whose writings supported *participants' own experiences*, indicated thirst for justificatory depth. Claims of 'I now feel ready to write for publication', at the end of lengthy interviews, raised my awareness of vital 'streams of consciousness', coherently integrating and empowering 'political' agency. Interviewees' enthusiasm engendered reconstruction of en'theos'iasm as personal theology, *beliefs* open to dialectic theorisation, accrued 'in-formation', coalesced knowledge, *justified true belief*.

Demonstrating the resonance of deep texts and voices, describing herself as 'daughter of a migrant', headteacher T4, referred to powerful influences on her 'soul', to inspiring 'soulmates', the Earth Charter as 'a prayer book', my 'soul's place', 'a father's Buddhist soul' having a 'resilient tolerance which at times was almost disengaging', creating 'a sort of personal complexion for me as an individual ...'. Data evidenced a depth of engagement that recalled G.K. Chesterton's belief, 'Education is simply the soul of a society as it passes from one generation to another' (Chesterton 1924).

Seamlessly absorbing theory in praxis, 'in that sense I don't specify [what] structural changes', methodically locking and unlocking fingers, AC1 gesticulated *gated* criticality as thwarted voice/vocation. Switches from third to first person, from direct to free indirect speech, reflect serious autobiographical investment:

When you give people permission to take their own story seriously, they will make very critical statements about society ... it's almost transgressive to do so, it's almost like you can feel them crossing a threshold ... because they are having to go against everything they have been told, all the silencing, all the people ... telling them shut up ... and their own internal voice telling you you've got no right to say, because who do you think you are?

A second finding was critical educators' strategic use of media, as cultural mediators enabling citizens to deploy diverse tools, toys, texts and technologies to independently project, explain and justify vision and mission. Framing 'intellectual labour' as necessary investment bound theory to political self allowed students confidence 'to name their own magical, naïve and critical consciousness'. Emphatically detailing how he valued intertextual reference as reverence, AC2 reported saying:

Learn how to use the semicolon: it will liberate you ... So we get them to think about first, second, third person why is this different, and why you might use these devices. Really crucial! We get them to do reflective writing and also to theorise ... involves moving between the first person and third person ... quite challenging ... to realise ... Referencing is as much an ontological question as it is a technical one.

Preliminary studies confirmed calls in the literature for honest naming of political agenda. Academics and more experienced practitioners aimed for and trenchantly

claimed collective transformation, whereas teachers and educators less equipped with theory focused on individual, personally transformative transactions: theoretical justifications sustained transformational global purpose. Reform initiatives which focus on implementation mask conceptual difficulties and internal contradictions, leaving interpretations uncontested and obscuring purpose. In the absence of talking time to theorise critical attitudes, learners ‘approximate’ rather than ‘appropriate’ truths. Political literacy entails Nietzsche’s will to power, ‘real’ising Freire’s historical vocation to be fully human. Participant recordings indicated sites of tenuous equilibrium; discursal shifts from ‘choice’, ‘volunteering’ and ‘engagement’ to ‘making a difference’, and ‘politics’ marked progressive epistemic agency.

A congested curriculum makes transdisciplinary education logical and ethical. The conviction which comes with formal theory confirmed abduction (Toulmin 1969). ‘Interdisciplinary approaches, while arguably less effective than traditional approaches for building the depth of single-subject knowledge, emphasise higher order thinking ... and seek meaningful connections between and among disciplines’ (Ivanitskaya et al. 2002: 97). Disciplinary experts addressing social problems cross borders (Shipway 2011), exposing ‘greenwash’ or obstructive political and economic structures. ‘Instigating questions of sustainability and EfS in particular in relation to the passions and responsibilities of each discipline’ means engaging them in their own sustainability dialogue (Hegarty 2008: 688–9). ‘Once this is effectively modelled, the momentum gained, the disciplinary authority revealed, can move like wildfire’.

Absent systems, structures and procedures for sustained consultation and collaboration (TE1) leave lone voices (T1) without academic confirmation, frustrated, broken, professionally vulnerable to scepticism (T3), resorting to union(s) only in times of distress. Sustainable policy acknowledges meta-reality, the jihad within, empowering citizens to distinguish raid, trade (drug, arms, human) from aid, to address tax havens, to ‘real-ise’ heaven, Ubuntu, political justice for all. Disinclined, unable to unravel genesis to genetics, epigenetics, Dawkins-Dennett memetics, teachers revealed a heavy dependence on personal conviction and ‘beliefs of the whole school’ (T2) rather than formal theory and sustained argument. Initially defensive towards ‘theory’, T1 posited: it just gives it more importance in the eyes of lots of other people if they think there are academics who think this is important ... rather than think it’s just some mad people like me who believes in something’.

Senior academics adopting Systemic Functional Semiotics reported strategies which built on their students’ secret history and sacred heritage. Fearless academics, communicating ‘in’forming truths, joining student project, practice and protest, revived the ‘ether-real’ role of community, Buddhist sangha, Islamic umma, Christian communion. Enlightening candles, Buddhism’s kundalini, awakened metaphoric coiled snake (saap in Sanskrit) at the base of the human spine, epiphanies to Sapiente Dechanet (1974). Journal writing merged deep autobiographical texts with critico-creative writing. Taking turns in class, social science graduates read aloud theoretical and narrative extracts judiciously chosen from Kant, Bourdieu, Foucault, even Habermas, fostering vital abduction. Theorised passion united academic and student conviction in social justice projects and protest. Producing community products, publishing ‘articles of faith’, disciples positioned personal heritage within human-

ity's long search, identifying, defining, divining the Go(o)dness of personal, professional and political transformation. CR's stratified framework gradually transformed consciousness, fostering strategic living, justifiable decision-making, performance which complemented professions of faith. Multimodal distinctions of space, time, material, sensorial, and symbolic modes made way for detailed critical discourse analysis.

Biblical, Koranic, Vedic texts comparatively and collaboratively read as politics and history, presents citizens with, not a neutral, neutered 'bland leading the bland' palette of multicultural offerings, but a chronologically sequenced narrative of developing theology, socio-culturally and politically oriented re-namings. Comparative linguistics highlights translations that prioritise noun clauses over transitivity; languages without future tense, articles, gender distinctions or neuter forms; syntactic contradictions of 'the only son' as against 'only the son', 'just a man' or 'a just man', positive 'a few' or negative 'few', all prompt critical analysis of Foucaultian (1972) regimes of truth.

4 Redefining Literacy: Multiple Intelligences, Multimodality and Systemic Functional Semiotics

This paper advocates an Applied Linguistic (AL) perspective, in keeping with Wittgenstein's assertion (*Tractatus Logico-Philosophicus* 5.6), 'The limits of my language mean the limits of my world'. French anthropologist Dan Sperber and pragmatic linguist Dierdre Wilson insist, 'Languages are indispensable not for communication but for information processing: this is their essential function' (1986: 172); activities involving language 'are not communicative but cognitive. Language is an essential tool for the processing and memorising of information.' (p. 173) It is important that this 'language' is not limited to 'word', but rather 'word made flesh that dwells amongst us' (John, 1:14): communication, semantics, semiotics, language in action, discourse or dharma, the performative drama of everyday life.

Tower of Babel limitations force multiple intelligences to choose from the philosopher's 'love', the engineer's 'power', the scientist's 'energy', the sociologist's 'beliefs', the artist's 'beauty', the poet's 'truth' and religious 'faith'. Polyglot language entails contradiction, necessitating vigorous critical debate which detects misleading synonyms, antonyms, elisions, evasions, enlargements within ecology of epistemologies. In keeping with Ricoeur and Habermas, Thompson (1990/2006) justifies interpretive 'depth hermeneutics'. Hermeneutic followers of Hermes, Greek Messenger of the gods, God of commerce, thieves, travellers, transitions and boundaries, open to revision, reversion, contextualisation, adaptation, indigenisation resist Latinate fossilisation or Classical control. Eco-linguists probe fault lines, curtailments inherent in each genre, ontological limitations, subsumed logics, hidden agendas which conspire in the politics of Unsustainability (Bowers 2011). Post-structural Applied Linguistics distinguishes literal from literate. Literacy requires appropriate

application of multiple intelligences, Greek ‘entelechy’, potentiality made actuality, or ‘fit for purpose’.

The Russian linguistic philosopher Mikhail Bakhtin (1991), addressing humanity’s ‘stream of consciousness’, used the notion of ‘genre’ and sub-genre to explain how form meets function across generations of global diversity, hybridity and innovation. His concept of heteroglossia, many-tongued fragmentation of geographic, cultural, disciplinary and professional multitude, treats Word as sacramental magma, ‘the universal semiotic material of inner life’ (Voloshinov 1973: 14 cited by Leiman in Engestrom et al. 1999: 430) confirming socio-psychologist Goffman’s (1969: 243) belief that ‘As performers we are merchants of morality’. Moral praxis, dilemma, participatory dialogue and debate balance Socratic with somatic education, immanent ‘educere’ with formative ‘educare’.

Whether done ‘ingenuously or astutely, separating education from politics is not only artificial but dangerous’ (p. 170). Seeing ‘no other road ... than authentic transformation of the dehumanising structure’ (p. 49), Freire believed ‘speaking the word really means: a human act implying reflection and action. As such it is a primordial human right and not the privilege of a few,’ (p. 50). Rejecting ‘lip service’, he persistently *named* this *process* of becoming ‘more and more critically conscious’ (p. 85) ‘conscientization’, ‘one in which to know and to transform reality are reciprocal prerequisites’ (p. 104). This AL approach rejects mystifying idealisation, abstractions which distance I-deals from daily performance of life, absolution. (Un)veiling abstract, proper, common or concrete ‘nouns’, *denouncing* social injustice, *announcing* fair dealing, *discovering/uncovering*, *pronouncing* one’s own truths gives Word incarnate ‘authentic dimension as thought-language in dynamic interplay with reality’ (Freire 1998: 47).

Taoist yin/yang, Marxist Dialectical Materialism, exposes inner tensions, contradictions, suppressed conflict, untold stories, the night-time of global production. Democratic deliberation relies on agonistic pluralism, investigating bonding, bridging, or boundary discourses (Habermas 1984). ‘Viewing education for sustainability as a contribution to a politically literate society is central to the reformulation of education and calls for a “new generation” of theorising and practice’ (Unesco 1997, paras 67 and 68). Toulmin’s ‘*The Uses of Argument*’ (1969) offers criteria to distinguish linguistic force from disciplinary data, warrant and backing, exposing Foucault’s ‘archaeology of knowledge’, epistemological ‘language games’ within regimes of truth followed by absence. From cheques to charters, curriculum, corporate mission statements, formal policy guidelines, regulation and law, critical discourse studies examine stated and implicit intention.

Michael Halliday’s Systemic Functional Linguistics, currently expanding to Systemic Functional Semiotics (Jewitt 2009; Kress 2010; Ellestrom 2010; Bowcher 2012), offers educators analytical tools which can be introduced at kindergarten and honed throughout the (st)ages of learning. Disciples in every discipline learn to identify material, sensorial, spatio-temporal, and symbolic modes beneath the manifest waves of global products, processes, performances. As students develop analytical skills to support theory and practice, critique focuses on details of tense, mood, modality, transitivity and transformation. Critical Discourse theory, analysis and practice

relates micro- to meso- and macro-politics, politeness to political correctness and policy, steadily enlarging personal transformative experience to professional transaction and political transformation. Appendix 3 provides frameworks which can be used to analyse text, moving image, music, film, architecture, dance, performance, even protest marches!

Karmic causality renders nirvana, no mere repetitive venting but renewal, crossing borders, ‘taking up one’s cross’ across time and place, disrupting geo-political, disciplinary and cultural history and national story. Merging Noah’s rainbow with holistic Holi (Hindu festival of colour), Linguistic anthropology traces etymology, flooding and submerging individual in collective, ontogeny in phylogeny. Proto-Indo-European theories substantiate sense, construct self, yielding epiphany. Vedic fire (Hindi *aag*), argument, episteme explains Ancient Aramaic, phonological diacritics, absent vowels in Hebrew and Arabic. Zoroastrian Mazda (wisdom) spirals Farsi/Pharisee/Pauline ritual to ‘spi-rituality’. Metaphor ‘airbrushes’ reality, merging *el sol*, soil and soul—Adamah (Hindi *aadmi*, man, layer of topsoil) or chthonic pinned-foot Oedipus to Eve (*hava*, Hindi air or wind, haven, Hebrew breath of life) and triumvirate Atman (soul, atmosphere). Brahmans reviving Creator God Brahma, Magdalenes of Maghdala reading Abraham and Sara(h) Yehudis from Ayodhya as AbuRam and Saraswati, Magi who wisely refrain from naming The One, relating Eloh and Elohi to Allah and Adonai, seeking Shalom/Salaam, must nevertheless beware ‘sitting Shiva’.

5 Conclusion

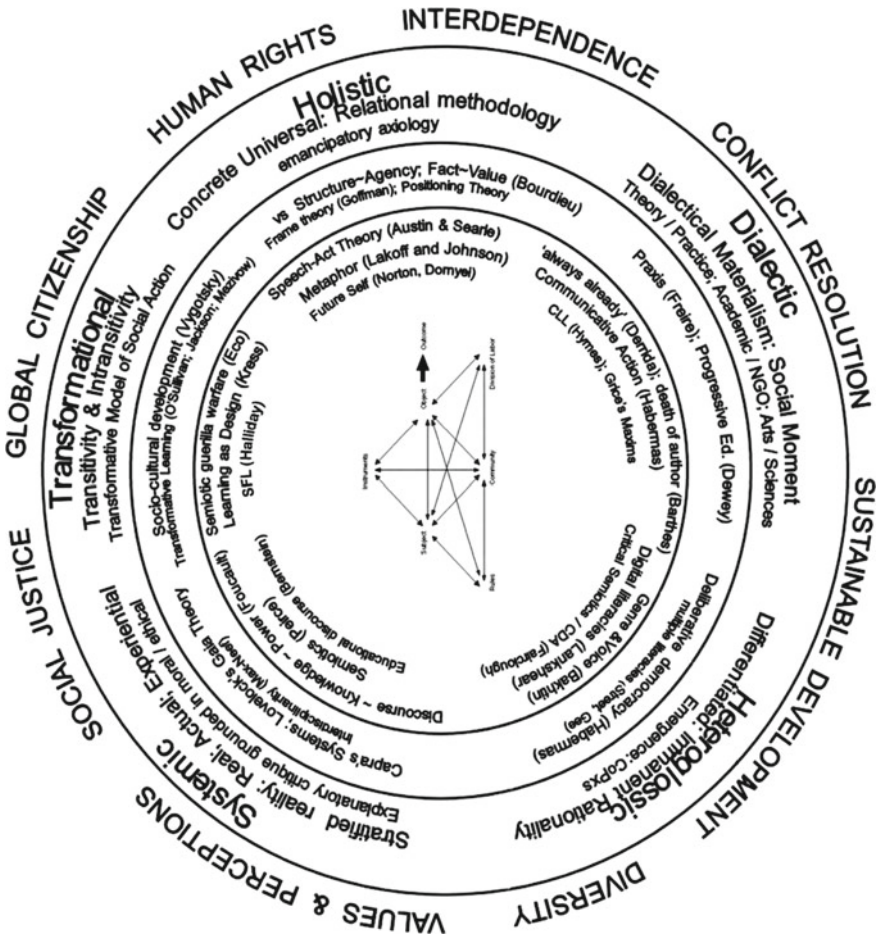
Jung, whose own searching self-realisation brought him dangerously near full-spirited Pleroma, divine madness, the abyss, states: ‘When the god is not acknowledged, egomania develops, and out of this mania comes sickness’. Jung’s (1933) anthropological studies highlight the need for critical educators to challenge archetypal ideology, values, virgin ‘assumptions’. ‘Nothing goes to show that primitive man thinks, feels or perceives in a way that differs fundamentally from ours. His psychic functioning is essentially the same—only his primary assumptions are different’ (p. 131) relating archetype Manu, first man in Hindu mythology, spiritual son of Brahma, to manna in the desert (p. 185). Word association offers coherence, knitting diverse global manners, relevant modern currencies, suturing humanity’s profound stream of consciousness with/in the Divine, Emmanuel, God with us.

Carved on the lintel of Jung’s home, the Delphic Oracle summarises political efficacy: ‘*Vocatus atque non vocatus, deus aderit*’—‘Invoked or not invoked, the god will be present’ (Storr 1998: 238). Extricated from the clouds of our own moral incense, ‘The gods whom we are called to dethrone are the idolised values of our conscious world,’ (Jung 1933: 216). A Brave New World awaits Calibans, Prosperos, Mirandas and Ferdinands willing to adopt altered visions of Utopia and learning to speak anew, as in Shakespeare’s *Tempest* of knowledge, language and power. Christians in Malta today affirming ‘Allah’ as God, resonate with St Paul, Peter, Jude, John and

James, self-designated 'slaves for Christ', literally 'Abd Allah'. Educational transparency, reminding, will empower Jung's collective unconscious, 'collective minding', avoiding society's current Lethe-wards sinking to dementia and bewildering Alzheimer's. Genuinely critical global education may yet bind Om (Sanskrit: manifest and yet unmanifested aspects of God); Aum/Amen (Aramaic: mother/father); Umma (Arabic: community); Titan/Olympian myths, hybrid Prometheus (stolen fire, before thought); Western Homer, the blind one who needed to be led (Sanskrit Umar: age, wisdom) to modern namings of Go(o)dness.

The overwhelming impact of global values, constantly exchanged and marketed, implicit and immersed, frequently disguised, even forgotten, requires cultivated multimodal discretion. A post-Truth age, global controversy over 'alternative facts' and related questions of Trust, offers educators an opportunity to develop political literacy, to focus on stratified, differentiated realities, varied nature of 'evidence', and the crucial role of discussion, debate, dilemma in a robust democracy. Most importantly 'spin' has drawn attention to multiple intelligences, the media, multimedia, cultural mediators expressing the Panoply of Arcadian, initially Mesopotamian Akkadian, truths which must be negotiated in Humanity's transfiguration from bible to bibliography, voice to vocation. Reluctant to 'shoot the messenger'; semantically engineering symbolic movement; managing mess, message, middle-men, media, mediators and messiahs; public intellectuals must not stand silent. Critical global educators, modern magi, may yet magic sovereign gold of authenticity, plain-speaking frankincense, myrrh for global pain.

Appendix 1: Philosophy and Theory for Critical Global Educators



Appendix 2

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The Critical Global Citizen

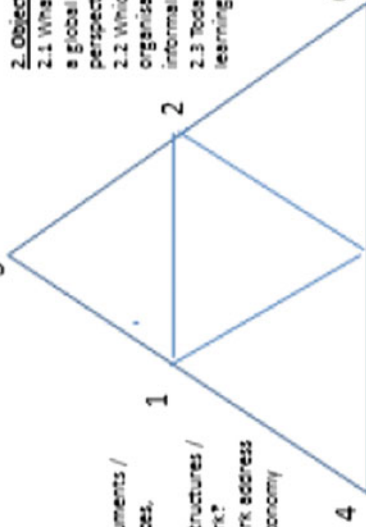
Cultural Historical
Activity Theory
(CHAT) Y. Engeström

- 3. Instruments, Tools, Toys, Technologies**
- 3.1 What media, multi-modal tools / voices convert you / yr students, from consumers to producers of systemic change?
 - 3.2 Which conceptual frameworks and contradictory texts, do you use to develop critical literacies?
 - 3.3 List 6-8 items for a personal portfolio which represents critical practice you are proud of.

1. Subject:
You / Your organisation

- 4. Rules: Regulations & Routines**
- 4.1 Which global initiatives/ documents / material resources / social practices, legitimise your work?
 - 4.2 Which global issues/ texts / structures / systems are critiqued in your work?
 - 4.3 How does your teaching / work address the cultural discourse, political-economy and ethics of your discipline?

- 2. Objectives: Theorizing, Passions**
- 2.1 What incidents, individuals, influences led you to a global then critical, or critical then global perspective?
 - 2.2 Which authors / theorists / institutions / organisations enable you / your students to merge informal with formal development?
 - 2.3 Today what are your aims for critical global learning? Why are these important?



- 5. Communities of practice & / or praxis**
- 5.1 Describe your most powerful CoP / CoPx which has effected policy or systemic change.
 - 5.2 (How) does your CoP work with other CoPs to combine theory w practice: link academe w INGO; extend power from campus to community or transform individual to societal change?
 - 5.3 Give examples of inter-institution / -discipline / -cultural / -national innovative coalitions bridging conflicts and tensions.

- 6. Division of Labour: Fields & Causes**
- 6.1 Where do you see obstacles or blockages in sustainable global learning policy / strategy / research / finance ...?
 - 6.2 Where would you say responsibility / potential / power lie for transformation of thought, word / in-deed?
 - 6.3 How have you been able to expose discourse contradictions or fault-lines between society's intentions, language and action?

Appendix 3: Halliday: Systemic Functional Semiotics **Maureen Ellis**

Analytical skills are crucial to democratic citizenship. Discourses unify and exclude. Dialectical, interactive, third-way political literacy can turn consumers into producers, distinguishing mere or manipulative rhetoric from deliberative discourse.

Halliday's framework applies a metafunctional approach to languages, separating elements of Field, Tenor and Mode, setting 'texts' in contexts, where they combine to create semantic density. SFL helps trace meaning (movement)—C. S. Peirce's iconic (denotation), indexical (association) and symbolic (connotation)-, and relates individual idiolect to public dialogue, variations in dialect and global dialectics. SFS has been used to read multimodal worlds of music, art, advertising, architecture, film, protest march and performance of daily-life drama.

Ideational

Field in which the activity or content belongs; topic choice/drift;

Participants: who or what—specificity or abstraction. Denotation/connotation; objectivation (e.g. 'the prankster'); anonymised; aggregated;

Processes: Transitivity/Intransitivity? Are activities described in material (e.g. throw), mental (e.g. believe), verbal (e.g. protest), or relational (e.g. be, have) terms?

Circumstantial information provided (time, place, manner, cause, etc.);

Lexis or vocabulary, the domain it represents, level of technical terminology, idiom, cliché.

Interpersonal

Tenor or relationships between speaker or writer and the receiver of the communication or text; reporting verbs reveal attitude; gaze offers or demands information or goods/services.

Mood: does the text use declarative, interrogative or imperative forms? To what purpose?

Modality: degrees of probability (dynamic), obligation (deontic), certainty (epistemic), e.g. must, should, can, will...; hedging, disclaimers, mitigation;

Polarity: positive or negative ideas? absent excluded actors/processes; omissions;

Distance: point of view, camera angle, vulnerable or empowered; Turn-taking, -allocation;

Vocation: terms of address, e.g. student, professionals, readers, Dear Sir, ...;

Person: first, second or third person, e.g. you, we, he, I, our, ...; pose/posture/positioning;

Speech function/performance: statements, invitations, warnings, offers, denial, complaint;

Attitude: Intimacy, Intensity, Affect, stance, e.g. unfortunately, luckily, + adjectives.

Textual

Mode and/or medium of communication, synchronic/diachronic coherence, cohesion, codes linking co-text to context; syntagmatic/paradigmatic choices; syntax (sentence structure).

Theme/Rheme: structural arrangement, e.g. known to unknown, presumed/shared knowledge, familiar to new indicates assumptions, desired emphasis;

Salience: foregrounding/focus/prominence: size, font, location/placement; colour saturation/purity/differentiation/hue, tone, brightness, music, sound fx, phonology, rhythm, stress, intonation, volume, exaggeration/hyperbole;

Reference: sources, cultural symbols, linking, deixis, e.g. specific times, places, people;

Framing: social distance, close/middle/long shot; frontal/oblique/high/low/eye level angle.

Metaphor, metonymy (substitution, e.g. top brass); synechdoche (part/whole); symbolism.

Conjunction: links of causality, time, contrasts, justifications versus factual statements categorically delivered indicate assumptions, i.e. epistemic vs deontic or boulomaic modality.

Discourse for Deliberative Democracy: Unlocking Cryptogrammar Maureen Ellis

1. Structural vs Discourse: A discourse approach to Language learning and teaching:
 - i. respects context, social relations, genre/hybridity, use over usage, agency, life;
 - ii. acknowledges 'voice', intertextuality, values, ethical, moral, social issues beneath dominant routines; distinguishes 'dead' texts, structures, mere rhetoric, from relevant, 'live', 'open' 'texts';
 - iii. skills communication: macro top-down alongside micro bottom-up;
 - iv. addresses today's semiotic glut of multimedia, multimodal 'text' forms;
 - v. satisfies learner-centred pedagogy, myth and holistic motivation.
2. Strategies for closer observation, oppositional reading and dialoguing with text:
 - i. Volume: proportion of attention, focus, balance; reference (anaphoric importance, cataphoric suspense, exophoric flattering); repetition, hesitation, repair.
 - ii. Generality or specificity: concrete/abstract; literal/metaphoric; individual/collective; immediate/mediated; present state, event, action, perception/history and background; permanent/temporary; short term/long term; local/global; subjective/objective; lay/technical; synonyms, gradable antonyms, euphemisms?

- iii. Prominence: form of argument, logic, strategies, functions, sequencing of propositions, e.g. generalisation, causality, conditionality, contrast, example ...;
- iv. Relevance/highlight: + - modifiers, adverbials, semantic prosody, discourse engineering. Corpus linguistics for lexical frequency, concordance, collocations.
- v. Implicit vs explicit: Assumptions, insinuation, presuppositions; given theme/new rheme; apparent denial, empathy, concession; Modality; Tense;
- vi. Inclusion vs exclusion: pronouns may identify collocational 'enemies' and 'friends'; dichotomies; social deixis; intertextual references;
- vii. Attribution of agency, responsibility, blame: nominalisation or functional honorific, passives, reifications; politeness and face; Speech Act analysis.
- viii. Perspective or point of view: schema, values, thoughts, perceptions, deixis;
- ix. Fact ~ opinion: mapping discourse structure; direct/indirect/free speech and thought representation; transitivity analysis; identifying attitude, irony, sarcasm, satire; Grice's maxims of Quantity, Quality, Relevance, Manner;
- x. Stakeholder voices: uni- or vari-directional voicing; silences, gaps, obfuscations, contrived congeniality, pluralist relativism or deliberation; accent, dialect, variety.

Remember: To practise these skills, you will need to provide your students with challenging multimodal, multimedia, open-ended 'texts' for discussion and debate. Advertisements, political manifestos, cartoons, conversations, songs, poems, posters, pictures, tweets.

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Exploring the Pentecostal Faith—Sustainability—Entrepreneurship Nexus in Zimbabwe



Allan H. Anderson, Mike Clifford, Roda Madziva, Juliet Thondhlana and Paul Goronga

Abstract The aim of this paper is to explore the intersection between sustainability and the humanities, specifically the Pentecostal faith—entrepreneurship—sustainability nexus in Zimbabwe. It focuses on The Zimbabwe Assemblies of God Africa (ZAOGA) and associated Forward in Faith Ministries International (FIFMI), which is one of Zimbabwe’s largest and most established Pentecostal churches with a global international presence. ZAOGA-FIFMI has a well-known faith-based entrepreneurship model, commonly known as *Matarendu* (talents), which is claimed to have a positive impact on the lives of poor Zimbabweans, both locally and internationally. The paper explores the Pentecostalism-entrepreneurship-sustainability nexus surrounding the *Matarendu* model and its basis in Christian faith, and its translation into practical entrepreneurship activity through the use of primary fieldwork comprising personal observations, semi-structured interviews and focus groups. In so doing it highlights the central role of education (both formal and informal) in entrepreneurial venture. By adopting an interdisciplinary and international approach, the paper focusses on the sustainability of the model in terms of economics, finance, human capital and theology. This paper will be useful to anyone interested in exploring the impact of African Pentecostalism and, more generally, religious practice on entrepreneurship and sustainable development.

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Keywords Pentecostalism · Entrepreneurship · Sustainability
Education · Zimbabwe

1 Introduction

The aim of this cross-university, interdisciplinary and international project is to explore the intersection between sustainability and the humanities, specifically the Pentecostalism-entrepreneurship-sustainability nexus, with a focus on one of Zimbabwe's most established Pentecostal churches, the Zimbabwe Assemblies of God Africa (ZAOGA) Forward in Faith Ministries (FIFMI), with an international presence in 132 countries. ZAOGA-FIFM has a well-known faith-based entrepreneurship model, commonly known as Matarenda (talents), which is claimed to have a positive impact on the lives of poor Zimbabweans, both locally and internationally (e.g. Maxwell 2007; Musoni 2013). Its theological, sociological and religious context, entrepreneurship activity and sustainability are issues that have not yet been explored.

The objectives of the paper are to:

- explore the theological teachings at the core of the ZAOGA-FIFM Pentecostal-entrepreneurship Matarenda model and their translation into practical entrepreneurship activity
- engage with examples of Pentecostal-entrepreneurship and development projects and assess their sustainability

We start by exploring the theoretical resources we mobilise in this paper. We then turn to our research design before exploring the key themes that emerge from the study, ending with a summary and conclusion that point to the potential significance of this study and future research direction.

1.1 *Pentecostalism/Pentecostal Faith*

Pentecostalism has become a subject of much interdisciplinary interest with the growing recognition in economics, sociology and other social sciences that religion has profound economic, political and social consequences (Berger and Redding 2010; Anderson et al. 2010). Nonetheless, the existing interdisciplinary literature on religion and economic development does not provide concrete evidence of a direct, dynamic causal relationship between religion and economic betterment in people's lives.

1.2 *Entrepreneurship and Sustainability*

There are many possible definitions of entrepreneurship. Here, we use the term in its broadest sense as an activity of setting up or starting a business, taking on financial risk in the hope of profit. We contrast the term “entrepreneurship” against “small business venture” in that entrepreneurship tends to be carried out with the aim of generating wealth rapidly, with higher levels of risk and innovation than simple trading. In the context of less economically developed countries including Zimbabwe, entrepreneurship in the informal sector is particularly important for economic growth, since it is the country’s largest employment sector, occupying 84% of the workforce (Crush 2017). Kumar and Liu (2005) see the changing international environment creating opportunities for entrepreneurial ventures to expand rapidly, whereas for many Zimbabweans, setting up their own businesses may be more a matter of necessity than through deliberate choice (Guta et al. 2017). Entrepreneurship also offers opportunities to women that are often not available in the formal sector. Kairiza et al. (2017) found that Zimbabwean female entrepreneurs were as able to access finance (often through the informal sector) as men. However, Mazonde and Carmichael (2016) note that women are profoundly affected by the traditional sociocultural context in which they operate and must balance their traditional roles as home-makers with the demands of being an entrepreneur in order to succeed.

Sustainable business models are gaining maturity in larger business organisations through corporate social responsibility and by signing up to ethical codes of practice. Just as with entrepreneurship, definitions of sustainability and sustainable business are myriad and subject to debate and discussion (Dentchev et al. 2016; Joyce and Paquin 2016). In the context of less economically developed countries such as Zimbabwe, sustainability may be viewed through different lenses. For instance, Rasmussen et al. (2017) found that the three pillars model of sustainability—economic, social and financial—were not appropriate indicators to track the sustainability of agricultural commodity production. The replacement of the Millennium Development Goals with Sustainable Development Goals refocused the Zimbabwean Government’s attention and resulted in the development of the Zimbabwe Agenda for Sustainable Socioeconomic Transformation (Shepherd and Elvin 2016). According to Graves and Lingnau (2016), at the grass-roots level, making sustainability “business as usual” requires considerable funding and cooperation between the public and private sectors. This may be particularly difficult in financially restrictive environments such as Zimbabwe.

2 **Methodology**

A semi-structured interview guide was constructed in order to explore the Pentecostalism-entrepreneurship-sustainability nexus. Questions on the structure, history and nature of the business, the role of religious faith in business and attitudes

Table 1 Case Studies Interviewed

Sector	Location	Staff	Running for (years)	Code
Healthcare	West Midlands, UK	30	6	CS1
Construction	Harare, Zimbabwe	15	12	CS2
Mining	Harare, Zimbabwe	600+	25	CS3
Banking	Harare, Zimbabwe	1000+	26	CS4
Pre-school	Bindura, Zimbabwe	5	5	CS5
Clothing	Chitungwiza and Harare, Zimbabwe	3	11	CS6
Mining, Office Rental, Canteen	Bindura, Zimbabwe	20	20	CS7
Primary Education	Bindura, Zimbabwe	20	2	CS8
Shop-Fitting	Harare, Zimbabwe	20	20	CS9

towards sustainability were formulated. The interview guide was piloted in the UK and refined before being used in fieldwork in Zimbabwe. A total of nine businesses were interviewed in sectors ranging from healthcare to mining, employing between three and over a thousand full-time employees. A full list of the interviews is given in Table 1. Ethical approval was obtained for the study from the University of Nottingham. Interviewees gave their consent to being interviewed and signed a consent form.

Interviews were recorded and transcribed prior to thematic analysis by the four team members. Each read the transcripts through using their own disciplinary lenses—from theology, sustainability and entrepreneurship, education and sociology. Individual interpretations of the data were discussed in team meetings and the paper then drafted and redrafted with different researchers taking the lead at different points in the iterative process.

3 Case Studies

3.1 *Faith, Theology and the ZAOGA-FIFMI*

ZAOGA-FIFMI is a Pentecostal denomination, with roots in the earliest forms of Pentecostalism in Zimbabwe. It is a large establishment, founded over 50 years ago

by Archbishop Ezekiel Guti, an energetic man now in his 90s but still the titular head of this multifaceted organisation. As an African Pentecostal denomination, ZAOGA is based on an emphasis on an experience with the Holy Spirit, one that resonates with the popular African spirit world that has permeated the lives of ordinary Africans from time immemorial. The Pentecostal message of the power of the Spirit, and especially its focus on healing, deliverance and abundant living, resonates well with people who live in constant fear of a threatening invisible world of spirits and malevolent forces. In Africa, misfortune, illness and all forms of trouble are attributed to a loss of power caused by witchcraft and curses. People feel trapped in a world from which there is no obvious escape. It is evidence of the widespread spiritual insecurity and fear that permeates societies, especially as experienced by people who are poor and unemployed. It follows that the opposite of this, success, prosperity in entrepreneurship, and health are seen as evidence of the blessing of God, of an increase of abundant life-force, and of being a person with more power to live life in enjoyment and security. No human being can be blamed for wanting that, especially in poverty-ravished Africa, where Zimbabwe is certainly no exception.

In recent years and for all the above reasons, it is little wonder that the “prosperity gospel” has become widespread in African Pentecostalism. Preachers throughout the continent proclaim a God who not only heals and delivers from demons, but promises success and prosperity to those who have faith, and especially in the case of ZAOGA, those who work hard with what they have. Christians are urged to “sow seeds” of their tithes and offerings to bring about the abundant blessing of financial and physical prosperity that is assured to every person who believes. Biblical promises, especially the prophet Malachi’s command (3:10) to bring in a tithe (tenth) so that God would pour out abundant blessing, are invoked to encourage the faithful to give generously. Promises about success were quoted by our case studies, such as CS6, who linked his success and the sustainability of his business in Zimbabwe to his ability to give: “As a Christian, I give to the Lord, this includes my offerings, pledges and tithes. In other words, some of my profits go to the Lord. This is the strongest pillar that I feel maintains my business”. CS1 quoted Deuteronomy 28:13 as justification for his success in business in the West Midlands: “the Lord will make you the head, not the tail... if you pay attention to the Lord’s commands...”, and Deuteronomy 15:6 “you will lend to many nations but will borrow from none”. It is true that some of the prosperity preachers include a crass emphasis on financial giving and increase their own personal wealth at the expense of their followers. Some of them can only be described as exploiting the aspirations of those who seek a life that is better than the dire circumstances they find themselves in. But some of these preachers, of which Guti is a prime example, also promote self-help schemes for better living, and business initiatives providing employment. These efforts are sorely needed and are to be applauded. That a positive message of God’s material provision is everywhere proclaimed by African Pentecostal preachers should not come as a surprise.

This is where Ezekiel Guti and ZAOGA have excelled; indeed, it might be argued that they have pioneered business enterprise more than any other form of religion in Africa has done. The particular way in which the “prosperity gospel” is promoted in this church is not a simple “name it and claim it” approach. As CS1 put it, “That

people, for them to come out of poverty, they have to work with their own hands, they have to do business". Prosperity had conditions; faith without works was dead. In some ways ZAOGA is unique in this regard. It is important to note the inseparable connections between faith and business ventures. All our case studies referred to their faith when speaking about their motivations and their journey into entrepreneurship. To take a few examples: CS4 said that his enterprise was a direct result of his faith: "I went into business because of my experiences of being born again". CS1 said that when he was praying, "I saw myself running this very big company in a vision". He made it clear that it was more than prayer, however, again with reference to the Bible: "even though God said he provides food for the birds, but he doesn't bring food to the nest. The birds have to go out and look for the food. So it's not just in fasting and praying and sitting, it's fasting, praying and action which is required". Similarly, CS6 said, "if you have a vision, it's not only about praying, you have to put action into that vision you are seeing in order for it to come alive. You can't just sit down and pray for things to happen without you taking any action". CS4 also received a vision when God spoke to him and "I knew that this was God calling into business". CS2 heard the teachings of the church when they realised that they could grow their business by giving what they had to God. They attributed their success to "the hand of God".

In ZAOGA the teaching of *matarendra* is based on Jesus' parable of the talents (Matthew 25:14–30), where three servants were given different amounts of money to use for their work. The two who increased the "talents" were commended while the one who did not use what he had was condemned. The key phrase is "each according to his ability". Guti expounded these verses to encourage his followers to use the little they already had to invest in small business enterprises, and the result was remarkable, as our case studies illustrate. CS1 put it this way:

So basically, when we are talking of talents, we are talking of people having ideas, skills, dreams, visions, they are supposed to follow. It's about trading your skill, or promoting your skill, so that maybe you establish an establishment or a business, so that maybe by the end of the day you end up employing other people, thereby reducing unemployment wherever you are.

CS3 was just as clear about his understanding of this teaching:

Talents is about something that is already invested in you. ... In other words, do something you like, not copy others. Focus on one thing where you excel in quality (Ecclesiastes 3). Research how to do your talents/business well. Hard work and branding are critical (it should be your own secret which can't be replicated). In all this, prayer is important.

CS4 gave another strong exposition of the relationship between *matarendra* and his business success, saying "*Matarendra* is a message about self-reliance, self-sufficiency and self-discovery. The talents reside within you". Similarly, CS5 told of how she moved from poverty into a successful business, and attributed it all to the *matarendra* teaching and biblical precedent:

The concept is about using what is in your own hands as the Lord said to Moses, 'what do you have and he said a rod and the Lord said to him throw that down and the rod turned

into a snake'. Through the word we are taught to work with our own hands to create wealth. Biblically we are taught that God will bless the works of your hands.

Later, this woman said that she had also been inspired by Proverbs 6:6, giving the example of an ant, who is self-motivated to work to care for its community. CS6 understood *matarenda* as helping him “understand that you can create something from nothing, by simply using the talent that God has given you. When you are starting you start small, but you need to set targets for yourself”.

Faith also motivated the entrepreneurs to care for their employees. As CS1 stated:

I think from the spiritual point of view, when I look at people, I see them as a creation of God, where the love which God has for them is the love which I also have to give them. So I have to make sure I'm not a pain to them, I'm not hurting them in any way. My actions, the way I talk to them, everything I do I have to make sure I look after these people.

The point of all this is that there is indeed an indissoluble nexus between Pentecostal faith and business enterprise in the ZAOGA examples. All our case studies based their businesses on a calling and vision from God and the *matarenda* teachings, giving them the motivation to use what they had, work hard, and achieve success as a sign of the blessing of God.

4 Entrepreneurship

The case study interviews produced a range of insights into the entrepreneurial models and methods employed by the business owners. Overall, there was a general trend of starting small and not relying on external capital/loans, which were discouraged. CS7 explained that “According to the teaching we get from our church, when you borrow money from someone you become a slave of that person. So that actually entered my head that I don't want to be a slave or a parasite”. Several businesses had begun as “church projects” which had expanded from informal beginnings to registered, formal businesses. CS9 commented, “Work... with what you have. It's just like getting money from microfinance and you start developing your business and coming up with some profits. Even housewives can go out and buy vegetables and sweets and sell them doing different things”. Steady, sustained growth was regarded as desirable, rather than quick results. CS8 explained: “They teach you about ‘mbichana mbichana’ (little by little). Don't swallow something too big for you. It took us four years to build the shop”. The interviewees also emphasised the need to build from their own God-given talents and to start businesses based around their experiences.

Basically, the church's teaching about talents is talking about the skill which you have, which you can then establish in terms of developing something big, or growing something big. Like, in this case, my skill basically is in care, and I've used that skill to establish the business. (CS1)

CS3 said, “Talents is about something that is already invested in you. You need to ask yourself ‘what is it that I enjoy doing for the whole day or whole night without

being paid?’ In other words, do something you like, not copy others”. CS7 stated, “God made me a miner” and with encouragement from his wife, he decided to start a mining business. He notes:

It’s important to go into an area of your expertise. Just like mining is my field, it’s within me. I understand it. Even when I’m asleep or dozing ask me a question about mining and I’ll give you an answer. We are born with gifts; some are born to be prophets and others to be pastors. So I was born with a gift to be miner.

As well as acknowledging the spiritual dimension of business, praying and fasting and asking God to speak through dreams and visions, interviewees placed a great deal of importance on hard work and human effort. CS4 explained that “God blesses maximum effort—the greatest miracle is hard work and branding”.

5 Sustainability

The businesses that were interviewed were asked a range of open-ended questions regarding the sustainability of their companies and the effect that their business was having on their employees, the environment and the local community. Most interviewees interpreted “sustainability” in terms of financial sustainability/profitability and the long-term prospects for their businesses and had to be probed deeper to ascertain the effects that their businesses were having within the broader context of sustainability. Most businesses had experienced financial challenges, particularly in the context of Zimbabwe’s political and economic environment, but had survived and flourished. CS6 mentioned that he had managed to build a large house for his mother and had bought two cars. CS5 commented that, “I used to sleep on the floor using a sack as a blanket. Now if you see the car I drive today, and all that I have, is because of talents.” CS3 had even acquired a private jet as a result of the mining business doing well.

On the environment, the two mining companies were most aware of the regulations and issues surrounding environmental protection, with the shop-fitting and construction businesses also indicating some knowledge in this area. The industry is regulated by the Zimbabwe Government’s Environmental Management Authority, which led to the creation of a Safety, Health and Environmental (SHE) manager role for CS2. The interviewee was aware of the health and environmental risks that his business poses such as the dust from blasting when a particular project is situated near built-up areas. In this regard their SHE manager engages the residents explaining the hazards and advises them on what can be done to minimise risks and protect themselves. Further to protecting the environment they make sure that they source environmentally friendly products such as sand and quarry stones from credible suppliers. In the shop-fitting business, CS9 emphasised the need to use recyclable materials and to make good use of any offcuts.

Most businesses noted the need to provide for the wider community, often through giving to the church through tithes and offerings to support the poor and the disad-

vantaged, specifically in terms of paying school fees. Interviewees also noted the need to provide a friendly, inclusive working environment. CS1 noted:

I can safely say our workers enjoy being a part of this organisation... Yeah, I think we are looking after them very well. ...we give some incentives. Like if someone stays with us for one year, we write a 250 pounds cheque just to say thank you. And if someone stays with us for more than five years, if they don't have a driver's license, we pay first ten lessons for them as a company. And also, if someone stays with us for five years, we also have a shield which we produce for them just to thank them, and we also give them a 500 pounds cheque. And if you introduce someone to our company and they stay with us for three months, we give you a cheque for 450 pounds. So basically, these are some of the incentives which we think maybe is causing them to stay... In my church we are taught that people are not working for you, but they are working with you. Because these are important stakeholders, especially in our company. So we have to look after them. Because without them, this business wouldn't grow at all.

6 The Links Between Entrepreneurship and Education

While not much in-depth qualitative research has been conducted on the interaction of education and entrepreneurship, the role and influence of education on entrepreneurship has received increased attention in entrepreneurship literature (e.g. Van der Sluis et al. 2008). Studies vary on the type of education from a general school education, tertiary education and more specific entrepreneurship education. In this paper we see education as relating to formal general academic and curriculum-based education leading to a qualification (e.g. certificate, diploma, degree, etc.) and vocational (often leading to a qualification) and non-formal (structured but not always leading to a formal qualification) entrepreneurship education.

Existing studies have revealed conflicting views about the impact of education on entrepreneurship. In this regard there are those who argue that formal education reduces a desire for entrepreneurship as individuals may have the option of lucrative wage employment (e.g. Shapero 1980; Van der Sluis et al. 2008) while others (e.g. Davidsson 1995) see education as increasing entrepreneurial intentions. Yet others see a greater propensity for entrepreneurship among the more highly educated than at lower levels of education (Davidsson and Honig 2003; Ertuna and Gurel 2011). For example Maycotte (2015, n.d.) has noted that “Completing a degree can work as one of the first and greatest lessons in setting a goal and achieving it, which is tested constantly when running a business”. In this case, higher levels of education have been seen as enhancing the ability to discover entrepreneurship opportunities and the successful exploitation of those opportunities through the development of skills and qualities such as problem solving, initiative, creativity, the use of modern communication technology, team work and a greater potential for productivity and efficiency (UNESCO 2005; Gauthier 2006). Also, education may promote managerial ability, which in turn may increase entrepreneurial intentions. In their study, Ertuna and Gurel (2011), for example, found that senior students were more likely to state an entrepreneurial intention than lower level students.

Importantly they also observed that education alone was not a determinant of entrepreneurial intentions and success but combined with other entrepreneurial traits such as “independence, locus of control, innovativeness, and propensity to take risks” (p. 395) as well as predictors such as an entrepreneurial background, for example, having an entrepreneurial family. Higher education was seen as providing individuals with levels of self-confidence and facilitating their exploration of entrepreneurial activity; those individuals would not be afraid of failure since they could more easily move back into paid employment should the business fail (Shane and Venkataraman 2000). Entrepreneurship education in particular has been argued to be one of the key tools for increasing entrepreneurial inclinations of both potential and nascent entrepreneurs. Here education is seen as stimulating start-ups as well as providing support at different stages of the entrepreneurial process. The value of education is signalled by the return to education of entrepreneurs.

Findings from our study revealed that education is also considered a critical element by our ZAOGA Christian entrepreneurs. As CS3 aptly highlighted:

Education is critical, you can do more because God uses what you have... So you should strive to learn more about the business you want to do in order to become an expert. The Bible says ‘my people perish because of lack of knowledge’ (Hosea 4: 6). You need to be knowledgeable in order to be successful. In the Bible, Paul was a lawyer and he did more than other disciples.

The value placed on education by the ZAOGA church through its talents ‘school’ teachings is demonstrated and symbolised by its founding of a number of educational institutions including several pre-schools, two primary schools, two secondary schools, a number of vocational schools, theological colleges in four countries and a Pentecostal university, the Zimbabwe Ezekiel Guti University (ZEGU), with a Faculty of Commerce linking into the ethos of the church as reflected in the *matarendu* model of Entrepreneurship.

The diverse forms of education found in entrepreneurial literature and noted above were all valued but as in CS3 excerpt above with a strong embedding of Christian Bible-based principles. Academic education, for example, was seen as helping to reveal participants’ God-given talents/gifts and business visions as observed by degreed mining engineer CS7

God made me a miner. It’s important to go into an area of your expertise. Just like mining is my field, it’s within me. I understand it. Even when I’m asleep or dozing ask me a question about mining and I’ll give you an answer. We are born with gifts; some are born to be prophets and others to be pastors. So I was born with a gift to be a miner.

Participants reported often starting their business having some academic education and work-related training (e.g. teaching) but soon realised the need to have relevant formal entrepreneurial-related training as in the case of Applied Scientist CS2:

I had to train in administration because I had come to join my husband in the business and so in order to be able to manage the business whilst he is in the field, because my husband is a civil engineer. So most of the time my husband is in the field, he’s at the sites, and I had to be here at the office and I had to be acquainted with whatever will be going on.

All our participants testified to having undertaken continuous non-formal church-based entrepreneurial education. This was largely underpinned by the *matarendu* philosophy including teachings about not borrowing but starting small and taking step by step of the entrepreneurship process. This teaching is Bible-based in Proverbs 22: 7 (“The rich rule over the poor, and the borrower is slave to the lender”). In his teachings, the Archbishop and visionary Guti (2012) teaches that instead of borrowing members should work with what they have: “You start small so that you can learn how to manage your business. Don’t start with a big thing which you don’t know how to manage. Start small and grow and grow and grow”. The value of the different forms of education is emphasised in the founder’s teaching as follows:

I encourage all our people to continue with education. It is education that will make you better. Now when I talk of education I don’t just talk of maths and so on. We encourage you to do a course, something you know. You need to have a diploma or something. Yes you have tried to do ‘O’ Level and failed three times; why not learn something to use your hands? That’s why we have opened a school of dress making to help those people so that you can do something with your own hands. So you say that you have ‘O’ Levels. ‘O’ Level is not a course. You must do a course; continue to learn. Unless you learn something to use your hands life will be hard.

While education was highlighted to be a critical element in entrepreneurial activity in terms of both stimulating participants to develop entrepreneurial intentions and in the creation and sustaining of the business, it was clear that on its own it was considered inadequate in the same way that the other elements such as prayer, faith and hard work were not stand-alones. The teachings are therefore holistic, combining academic, entrepreneurial and spiritual education. As concretised in the Archbishop and visionary’s narrative below:

You have to learn. You can study hairdressing. Don’t be lazy to study. You will not succeed. Don’t open the door to the enemy. If you really do what I’m sharing with you, read your Bible, pray, fight with sin, don’t sin, don’t tell lies, get away from bad friends. When you do that God will hear you. When you pray for something God answers. That’s why we are encouraging you to do these things. It is the will of God for you to prosper but there is a way that the Lord impresses upon us to use our hands. Don’t be lazy. Prepare to use your hands. Work hard, work hard and God will bless you.

7 Summary and Conclusions

We set out to explore the nexus between the faith, sustainability and entrepreneurship of nine case studies of ZAOGA, eight of which are in Zimbabwe and one led by a Zimbabwean immigrant to the UK. There were clearly discernible patterns, of which perhaps the most obvious was that their religious beliefs and the *matarendu* teachings of the founder of the church were the motivation for their entrepreneurship and were also given as the reasons for their sustainability. These entrepreneurs had received a calling and vision from God. Their concept of sustainability was a narrow one, but at least the two mining businesses had a keen awareness of environmental

sustainability. There were other common trends: faith did not exist alone, but had to be accompanied by hard work and human effort. External financing and loans were precluded. The case studies were encouraged to start with a little and to build up from those humble beginnings into a successful and wealth-creating enterprise. All seemed to be aware that their success was also for the benefit of the wider community, their employees, and the church. There was an awareness of the need for education in the skills needed for a successful business enterprise, and most of our case studies had had further education accordingly.

This research is ongoing. Financial constraints and working within a tight time frame has meant that here we have only been able to outline our preliminary findings from nine semi-structured interviews carried out mostly in Zimbabwe. We are keen to explore the effects of the *matarendu* model further, both in the context of Zimbabwe (particularly exploring less successful case studies) and in the UK. Qualitative research necessarily involves a certain amount of interpretation and the findings may be influenced by the positionalities of the authors.

It would appear that there is undoubtedly a positive effect on the lives of these Zimbabweans. Clearly, these businesses have contributed in however small a way to the economic growth of the country. They have provided opportunities, especially for women, in a context where private initiatives are not only to be welcomed but are a very means of survival. We think that this research has provided some evidence of the role this kind of Pentecostal faith has played in furthering economic growth in Zimbabwe. What has not yet been determined is whether or to what extent this has alleviated the widespread poverty that exists there occasioned by forces beyond the control of ordinary people. The sustainability of a positive impact on the environment is another issue that is not yet clear. So there are still unanswered questions to be addressed. Can the *matarendu* model be sustained in other, similar contexts? How sustainable are these businesses in the longer term? We hope to be able to probe these and other unresolved issues in the near future.

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Examining Evidence of How a Culture Values Nature, Particularly Its Spiritual Value



Nigel S. Cooper

Abstract What did nature ever do for us? So much more than the direct economic benefit of food and fuel. The major enterprise of valuing ecosystem services is aiming to provide robust arguments for environmental sustainability. Work in the arts and humanities can contribute to this. One output of the UK National Ecosystem Assessment Follow-On was ‘Shared, plural and cultural values: A handbook for decision-makers’ (Kenter et al. in *Shared, Plural and cultural values: A handbook for decision-makers*. UNEP-WCMC, Cambridge, 2014b), which included the disciplines of the Humanities in an overview of methods, specifically the interpretive technique of desk-based cultural history study. Few such valuation studies have so far been published. This paper reports preliminary results from inspecting three ‘cultural productions’: English village signs, street names and brief ‘stories’ about trees. Each of these will be examined for evidence of non-economic valuation of nature and, specifically, a spiritual or religious understanding of nature. The paper reports some preliminary findings, and will reflect on the methodological challenges involved. This will be of benefit to others (including students doing projects) wishing to analyse evidence produced by a culture of its approach to nature, evidence which may support arguments for sustainability.

Keywords Cultural ecosystem services · Critical discourse analysis · Spiritual value · Nature · Village signs · Charter for trees

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1 Introduction

1.1 Valuing Ecosystem Services

‘What has nature ever done for us?’ Even more than the Romans!—but it can be even easier to lose sight of what the more-than-human (Abrams 1997) does, taking it for granted, not including it in our calculations when making decisions. Thus, authors such as Juniper (2013) have set out for the general public what we rely on nature doing in order for human society to keep functioning in the way we have come to expect. In societies where so many decisions are financially led, how can we give nature a voice—or a price? If we are to make our decisions more environmentally sustainable for the long term in a money-dominated culture such as Britain, we may have to justify those decisions economically. This may also help link environmental sustainability with the economic through demonstrating the ways social institutions value their environmental context and future. The humanities, as a family of disciplines, have a distinct role in these demonstrations.

In Britain an important milestone in the economic valuation of nature was the publication of *Blueprint for a Green Economy* by Pearce et al. (1989) that influenced the then Conservative government to take ‘externalities’ into economic decision-making, i.e. add into the costings the price of natural goods and services that do not have a market value. Two global milestones were the estimate of Costanza et al. (1997, and their review of progress, 2017) of the monetary value of the world’s ecosystem services, and the production by the United Nations of the *Millennium Ecosystem Assessment* (2005. Abbreviated to MA) that attempted to characterise and assess all the services provided by nature/ecosystems to human flourishing.

The MA categorised these services, noting, among others, those that were provisioning services (e.g. providing food and timber), which were often included in the market economy, and cultural ecosystem services (CES, e.g. aesthetic and spiritual) that were much less likely to be traded. If non-traded ecosystem services are to be included in economic assessments in decision-making, such as a formal cost–benefit analysis, some sort of shadow price has to be established for them (Bateman et al. 2010, preparing for the UK’s National Ecosystem Assessment, NEA; see Ozdemiroglu and Hails 2016, for a recent overview of the method). Bateman et al. (2010) provide a table of the main methods economists use to do this. The chief category they list for non-use values and many non-consumptive uses, both typical of cultural ecosystem services, is stated preference methods. At its simplest, this is just a matter of asking people to state how much they value a natural service. However, even for those who believe in this approach, asking that question in a way that is presumed fair is full of complexities (Boyle 2003; Carson 2012).

For others, these difficulties with stated preference methods are indicative of the fundamental flaws in the economic approach to valuing nature. When asked how much they would be willing to pay to save an ecosystem service, a member of the public might not understand the science involved. If they do, the price they state may correctly reflect their personal preference-utility, but some will make protest bids (or

refuse to bid) because they feel uncomfortable with the way they are asked to express their values, while the exact sum may depend on their personal wealth, as well as on whether they are being asked for a notional contribution (willingness-to-pay) or offered a notional compensation (willingness-to-accept) (e.g. Lo and Jim 2015). The value of an economic assessment is particularly contested (e.g. Parks and Gowdy 2013; Winthrop 2014; Leyshon 2014). For these and other reasons, the argument is made for alternative, or at least complementary, methods that express people's shared values rather than their individual utility, e.g. gathering people together to 'deliberate' on their values (Kenter et al. 2015; Irvine et al. 2016; Strunz et al. 2017; Hejnowicz and Rudd 2017). This is particularly the case for cultural heritage (Hølleland et al. 2017). The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) recognises this (Pascual 2017).

The UK's NEA Follow-On programme included a work-package on cultural ecosystem services (Church et al. 2014) that explored methods of evaluating cultural value, particularly from this social science perspective. Interestingly, the UK's Arts and Humanities Research Council paid for a supplementary report in order to develop an arts and humanities (AH) approach to ecosystem services (Coates et al. 2014). Of course, the arts and humanities have been much exercised over environmental issues, but their engagement with the ecosystem services agenda has been much more limited. Among conceptual critics of the agenda have been philosophers (e.g. James 2015) and geographers (e.g. Jackson and Palmer 2015), and social criticism has come from anthropologists (e.g. Sullivan and Hannis 2017) among others. But Church et al. (2014: 8) aimed, 'not to chime in with the already loud chorus of voices (which includes those of many UK NEA researchers) that emphasizes the awkwardness of the fit between cultural values and the conventional tools of ES research.' Instead, they wrote,

One of the most productive roles we can assume is to involve ourselves in the research and development phase of operating procedures more appropriate to AH perspectives, modes of expression and communication than some of those that currently feature in ES research.

To support this AH contribution to the argument for sustainability, several disciplines in the humanities have sought to gather evidence of the 'value', perhaps 'importance' might be a more neutral word, of ecosystems and similar entities such as landscapes (e.g. Schaich et al. 2010) and places (e.g. Williams 2014). This may involve interviews and meetings, e.g. as conducted by the anthropologists Prévot et al. (2016), or involve participants in storytelling (Kenter et al. 2016), or draw on artworks to stimulate discussion (e.g. Fish et al. 2016). Or it may be more innovative, such as participatory arts-based exercises with the public, e.g. Fish et al. (2016) with school children sensorially investigating their environment and building a map to interpret their surroundings. While Edwards et al. (2016) used an arts-led dialogue to explore how local people valued a wood in provocative and open-ended ways.

However, asking people to state their individual preference/value, organising deliberative events at which people's shared values can be elicited, or leading arts-based exercises are all resource-hungry. Many staff hours are required to organise and

host meetings or to conduct interviews. Bieling and Plieninger (2013: 651) identify two drawbacks with interview techniques:

“People tend not to reflect on, for instance, the enrichment provided by landscape-based inspiration or aesthetic experiences, and as they are not or only partly conscious of these things, they are hardly able to readily articulate their thoughts about them for the interviewer....

“Second, even if interview partners are aware of non-material ecosystem benefits, they often find it difficult to express themselves about them in an interview context.”

It might be easier, and maybe more reliable (in that it precludes participants expressing the views they think they ought to hold, while perhaps their behaviour indicates otherwise) to look for evidence of revealed values. Bieling and Plieninger (2013) advocate recording visible evidence of non-material use of landscapes. In the economics literature this is the group of methods termed revealed preference (Bateman et al. 2010) and involves, for example, looking at the way proximity to a nature reserve might lead to an uplift in the value of a house property. When looking for revealed evidence of shared, non-monetary values, Kenter et al. (2014b) suggest three ‘interpretive’ methods: media analysis, desk-based cultural history study, and ‘others’ (including discourse, content and frame analysis of texts). The parallel full report for the NEA Follow-On (Kenter et al. 2014a) included an example of a media analysis and elements of a cultural history study, which was further developed in Cooper et al. (2016). In this way, arts and humanities methodologies are being used to interrogate evidence of value relatively available to researchers.

This paper explores how some of the suggestions in Cooper et al. (2016) might be developed further. The three types of evidence examined in this preliminary, desk-based study as examples of products of British culture are (a) village signs, (b) street names and (c) a corpus of ‘stories’ about trees submitted by the public to the Woodland Trust.

2 Methods

2.1 *Cultural Productions/Multimodal Discourses*

What Cooper et al. (2016) called ‘cultural productions’ could also be termed ‘multimodal discourses’ (Abousnougua and Machin 2011; Forceville 2016; Mayr 2016). This is a somewhat technical use of the word ‘discourse’: “‘discourse’ refers to all the phenomena of symbolic interaction and communication between people, usually through spoken or written language or visual representation” (Bloor and Bloor 2007: 6). The qualification ‘multimodal’ signifies that such symbolic interaction can use various modes, not merely verbal texts (as in the ‘stories’ contributed by members of the public to the campaign for a Charter for Trees—really very short snippets of text), but also three-dimensional symbolic objects like village signs and the implicit

advertising involved in the naming of streets by housing developers. As discourses, the methods of discourse analysis are applicable and, in particular, critical discourse analysis (CDA).

The ‘critical’ element of CDA refers to the interest the method takes in the context of discourse, their producers and consumers, and the power relations between them. Typically, practitioners of CDA view it as a programme to liberate societies (Wodak and Meyer 2009) by exposing the discursive methods powerful institutions use to shape societies in their interests, methods that obscure some aspects of what is going on, while highlighting others. An example of this would be the work of Abousnougga and Machin (2013), who analyse British war memorials, structures with much in common with village signs. Following good practice in CDA of making their own stance explicit (Wodak and Meyer 2009), they are highly critical of war and believe they show that, ‘The war monument... has been one important way by which discourses of war that reflect the interests of the powerful in society have been communicated in British society’ (2013: 2). They use social semiotics to deconstruct how war memorials do this, borrowing much from Kress and Van Leeuwen (1996). However, village war memorials and the commemorative practices around them are arguably more ambivalent, even potentially subversive, than Abousnougga and Machin anticipate from their perspective. This study attempts a somewhat more neutral stance, not that complete neutrality is possible. The study is looking for evidence that British society values the natural world, and its spiritual dimension in particular—to be explicit about this study’s preconceptions—but it is aware that the level of that valuation is highly varied, both positive and negative. The aim is to describe the variety of the evidence.

Discourse analysis began with the analysis of texts, before expanding to investigate other modes of communication. What do texts ‘say’ and how do they say it? Broadly, what words are used (lexis), how are they put together (syntax), and how are arguments made (rhetorical figures)? As illustration, considering the corpus of texts about trees, one can explore the difference in nuance made by the choice between using ‘wood’ or ‘forest’ (lexis); or the degree of explicitness of an agent, e.g. *the Forestry Commission felled...*, *they’ felled...*, or putting a verb into the passive, *was felled...*, or as a noun, *the felling of...* (syntax); or metaphorically speaking of a wood as a single, living organism (rhetorical figure) (Machin and Mayr 2012; Richardson 2007). This approach is useful in examining people’s stories about trees, but much less so for street names with their usual two-word structure. It can be adapted to the largely visual communications of village signs. Here the choice of words is paralleled by a choice of images (iconography), and how the images are placed and related (iconology) has been of particular interest to CDA. There are also rhetorical gestures in village signs, especially metonymy.

2.2 Methods

This level of detailed analysis is most appropriately applied to just a handful of case studies, but we have a plethora of material to study, 30,359 tree stories and innumerable village signs and street names. A manageable sample for village signs and street names is that of a county. For readiness of data access, this study analyses the village signs of Kent and the street names of Cambridgeshire, or, rather, subsets of these.

The tree stories, being text based, can be analysed using concordancing software, and this study uses *Voyant* (<https://voyant-tools.org>), as it is also being used by others studying the tree stories. This is a free online resource. The researcher using *Voyant* still has to select what questions to ask of the data and this raises important questions about how the researcher believes the values under investigation will be revealed by the discourses. For instance, which words might storytellers use when expressing an appreciation of nature, particularly its spiritual dimension? Using either software or human inspection, each discourse needs to be coded for aspects of interest, e.g. its choice of words, its syntactical strategies, or its rhetorical figures. Fletcher et al. (2014) use a somewhat similar analysis of text responses about the Black Sea.

People might appreciate and value nature for various reasons. The literature on Cultural Ecosystems Services includes various schemata for these. Those who interview people about place-based values often offer statements to interviewees, asking them to rate them, or using them to prompt conversations (e.g. Gould et al. 2014). Bryce et al. (2016) have provided a recent collection of such statements. They have also provided a theoretical rationale for some of these. The inevitable difficulty with these schemes is that they impose the researchers' prior classification on the interviewees, either by offering them a limited range of responses or by coding free-text responses according to the chosen scheme. Other than the theoretical underpinning, one is left wondering how arbitrary the schemes' impositions are. And the theory supporting the schemes is necessarily quite abstracted and it would be good to test it against the free responses of interviewees. Decision-makers, one imagines, would prefer a précis of the public's opinions with as little interpretation as possible. Using discourse analysis can reduce this level of interpretation in two ways. Lexically, it can demonstrate how particular words get used; their frequency, their collocations, their emphasis. Rhetorically, it can select particular semantic markers of strength of feeling.

Of course, the researcher's prior commitments still dominate the outcome, but in a different way to typical CES research. In the case of words, the researcher's selectivity is plain to see. Rather than ask, for instance, how much people agree with the statement, '4. *At these sites I feel part of something that is greater than myself.*' (Bryce et al. 2016: 261, who identify this as 'spiritual value', the only one of their 15 statements to be so categorised), we could look for every use of the word 'spiritual' in people's free texts. This has the advantage that the participants will be talking or writing about what they think of as spiritual. It has the disadvantage that people may differ in what they think the spiritual means and, in particular, fail to identify as

spiritual some things that the researchers believe to be importantly spiritual. Thus, a participant may speak about feeling part of something greater than themselves and yet fail to use the word spiritual with respect to it (either because they do not identify it as spiritual or because they see no need to so identify it at that point in their text—as in at least one instance from the tree-stories corpus: *I was always climbing up trees and feeling at one with the world, feeling as if I was a part of nature*). This is a limitation of this lexical method. In the case of the two other evidential samples there is no anticipation of finding either the word ‘spiritual’ or a longer text expressing the view of ‘feeling part of something bigger’. The genre of street names rules out that anticipation, while village signs, with a very few exceptions, only contain as verbal text the name of the village. Even in these two cases a lexical method will prove a good exploratory tool. With streets it is possible to categorise elements of their names that are words for fruits, trees, and other rural or natural features. With village signs there is fairly restricted ‘vocabulary’ of frequently used visual icons, e.g. the parish church, trees, and horse-and-plough, from which a set of icons can be chosen for investigation.

If we are looking for evidence of the value people place on nature in texts we might anticipate that it would have three elements. There would be the aspect or element of nature that they value, e.g. trees (element) or peace (aspect); the appraisal they make of that, e.g. enjoy (...the peace) or am awestruck by (...these trees); and, sometimes, the strength with which they make the appraisal, e.g. quite (...enjoy the peace) or truly (...awestruck by these trees). The diversity of all three elements will be immense, but expressions of strength of feeling and opinion in the English language may be somewhat more limited and, importantly, relatively neutral with respect to the feelings and opinions held. So, if searching within a database, or corpus, of over 30,000 ‘stories’, searching for a word like ‘very’ may highlight expressions of evaluation without imposing on the search a researcher’s anticipations of those evaluations. In a related way, when investigating images such as village signs, the strength of feeling ‘this is important’ about a particular element in the image can be assessed through examining an element’s position, size or colour within the composition as a whole.

This study has drawn on CDA in looking for evidence of strength of feeling, particularly in its use of Halliday’s Systemic Functional Grammar (SFG) (Halliday and Matthiessen 2014). For appraisal in verbal texts, this has been developed by Martin and White (2005) and Pounds (2011). Their system of appraisal has three domains: attitude, engagement and graduation. Engagement refers to the how people express where their attitudes come from and is not touched upon in this study. Attitude is classified into three subdomains: having feelings (‘affect’), judging people’s behaviour (‘judgement’) and evaluating things and situations (‘appreciation’). Graduation is about the ‘force’ with which these attitudes are expressed and how sharp or blurred their ‘focus’ is. Thus, this study has looked for lexical qualifiers signalling ‘force’, such as ‘very’. Martin and White (2005) term these ‘isolated lexemes’ and note that they are ‘grammatical’, belonging to a closed set with no referential meaning (2005: 142). However, force can also be signalled by the choice of the main appraising word, compare ‘love’ with ‘like’, (‘infused lexemes’, 2005: 143), metaphors and the

like. These belong to open sets and would be more difficult to search for. Rhetorical expressions generally would be hard to search for, apart from similes, which are often signalled by ‘like’, ‘just as’ and ‘as if’.

Kress and van Leeuwen (1990, 1996) also draw on SFG in their analysis of images, while pointing out the significant differences between texts and images. Appraisal in texts falls under the ‘interpersonal metafunction’ in SFG, which might be described as the ways discourses establish a personal relationship with the speaker/listener/viewer, including trying to establish a resonance in feelings and attitudes. As Kress and van Leeuwen (1990: 23) argue, although the common-sense position is that discourses ‘are about something’, the social relations of the producer and receiver of a discourse is always prior and determines how (and why) the discourse is produced, read and used. They go on to analyse how the interpersonal metafunction works in images, as opposed to in texts. Of relevance to this study, they describe how the impact of images is affected by the use, or not, of perspective and frames, the horizontal and vertical angles of view, naturalism, and signals of salience such as focus and use of colour. Many of these are important in the analysis of village signs and explain how a sign invites viewers to identify with its presentation of the village identity and share its evaluation of what is important in the village.

Critical Discourse Analysis, therefore, provides the theoretical framework for the analysis of the three data sets of village signs, street names, and the corpus of tree stories. CDA in this study is adapted to the nature of these three sets, and so used to identify the features of the natural world that are being appraised (often implicitly), the strength of the evaluation, and the social group providing the evaluation. Although there may be numerical elements to this, the chief way the results of this analysis are communicated (both in this paper and to potential decision-makers) is through a verbal and contextual account of what is revealed about the values held by society.

3 Results of the Detailed Studies

3.1 Village Signs

The origin of the custom of erecting a village sign is generally attributed to King Edward VII, who commissioned the Princess Alexandra School of Carving at Sandringham to produce signs for four villages on the royal estate (Addy and Long 2009). Further signs were produced, particularly in East Anglia, over the succeeding decades, but the recent flourishing of the oeuvre stems for 1977, when many villages decided to mark the Silver Jubilee of Her Majesty the Queen by erecting a sign. Further impetus was given by celebrations of the Millennium in 2000 and the Queen’s Golden Jubilee in 2002. So many villages began to have signs, that others, not wanting to be left out, erected signs in intervening years. With age, some signs have had to be replaced, sometimes with new designs.

Regardless of the royal sponsorship, the erection of signs has largely been an autonomous expression of local communities rather than at the behest of powerful elites—in contrast to Abousnnouga and Machin's (2013) account of war memorials. Addy and Long (2009), who founded the Village Sign Society in 1999, describe how local groups are 'formed to decide on the design, to raise funds, and arrange the placement.' Such groups often involve the statutory parish council (elected by residents) and voluntary societies such as Women's Institutes and Rotary Clubs, as well as keen individuals. Because of this, village signs represent how many local people wish to depict the special identity of their village. They are the evaluating social group, but a more detailed study would benefit from discovering the commissioning and design process for each sign. However, perhaps because of the social positioning of the commissioning groups, or because the message is one of continuity of tradition, the medium is also traditional, there is little innovation in the main elements of the genre.

Most are single flat or bas-relief (not fully three-dimensional) rectangles or ovals, about 1 m across, on posts just above head-height, placed either in a central spot or at the entrance(s) to the village. Although the majority are made of wood, wrought iron is also popular (when the image may be in silhouette), but there is an increasing diversity of materials used. Written text is usually restricted to the village name. Frequently, the main image on the post is a composition of several painted features thought to represent the village, with, perhaps, some subsidiary images in the spandrels, where extra text such as the date of erection may also appear. 'The designs, which range from the simplistic to the intricate, portray symbolically the history of their villages, their association with agriculture and other local industries and their continuity from pre-history to the present' (MacEachern 1993).

Although potential images on village signs are very numerous, the result of a quick inspection shows that some images are very common indeed. Table 1 presents the percentages of various images in signs in Ken Savage's database of village signs in East Anglian counties (personal communication). An image is coded (or recorded) in this database when it has a focussed role in the sign. In addition to these coded images, a very high percentage of signs have trees or grass in the back- or foreground, providing a matrix for the coded images. The interpretation of these statistics is very open, but certainly both church and countryside are highly important to those who commissioned and designed these signs. This is evidence of their social value. Presumably it is very likely that they would wish to retain the physical reality of these images in their villages.

A more detailed analysis of village signs may reveal iconological evidence of the degree the images invite viewers to identify with the scene and whether the church and countryside act in a visual hendiadys, signifying something like the spiritual dimension of nature. By this we may understand the basic attitude of rural English people, often unconsciously expressed (Panofsky 1970), to their being-in-nature. On the first point of identification, we can determine whether the sign is framed and whether the image is frontal to the viewer or, if in perspective, the vanishing point lies within the frame. On the second point of the relationship of nature and spirit, we can look at whether the relative positions of church and countryside affirm a relationship,

Table 1 Percentages of images in East Anglia village signs in the Savage database

Image	Percentage of signs with this image	Percentage of the total coded images of all types
Village church	48.6	21.5
Farming	33.8	14.9
Flora and fauna	22.8	10.1
River	12.0	5.3
All 'natural' images, including mills and canals	57.6	36.6
Totals in database	1721 signs	3887 coded images

e.g. foreground/background/in the same plane, and whether one or other gestures to the other, perhaps through graphic diagonals (see Kress and van Leeuwen 1990; van Leeuwen 2011). The analysis of the images relied on photographs of Kent village signs generously shared with me by Roger Smith and on Alan Bignell's two published books (2004a, b). The results of this are presented as a discursive analysis of three images. The results of a more substantial study would include many more analyses of individual images as well as a numerical analysis of coded signs.

Westbere's sign (Fig. 1) has a heavy wooden frame, but within this the images are silhouettes of fine metal, so that the overall effect is of looking through the sign to the sky or trees beyond, thereby integrating the image into the reality of the village. Bignell explains (2004b: 46) that the frame is 'a somewhat complex arrangement of geometric shapes, the outline of which mimics that of the church, All Saints. At the top, a hexagon frames three bells, like the three bells in the open bell-cote of the church.' In the two lowest panels there are wavy lines of thin metal, representing the water of Westbere Lakes. In the two central panels the wavy lines are continued in the lower third, being succeeded by wavy lines of a different shape to indicate the hills around, the top being empty for the sky. At the edge of both these panels are some leaves of water plants, with more leaves and two flowers (perhaps Iris) in one panel and a swan swimming in the other. There could hardly be a more intimate relationship of church and nature, with semi-natural nature being clearly delineated and the religious dimension symbolically embracing it. One should add that the sign is among the more aesthetically pleasing of the genre.

Lyminge sign (Fig. 2) is solid, but it undermines the framing effect of merely having an edge through it being wavy in outline and painted blue, to represent the sky, though a white cloud over the church tower in the upper centre of the image partially reinstates a sense of frame. The lower part of the church, all that remains of what had been the earliest abbey in England, is hidden by symbolic green foliage, with two white sheep in the centre at the bottom. To one side is St Ethelburga, who founded the abbey, and to the other a steam engine, representing the local railway that ran from 1899 to 1947, which enabled the development of the village. Beneath the village name are carved wavy lines to indicate the local stream. Apart from the steam engine, in simple perspective, travelling off to the left, all the rest is presented



Fig. 1 The village sign of Westbere, Kent (photo: Roger Smith)

flat to the viewer. Kress and van Leeuwen (1990: 31ff) claim that a lack of frame and perspective do not impose a point-of-view. The image is thereby much more integral to the whole scene, much as a pre-Renaissance mural; and this village sign has a good

deal of primitiveness about it. Similarly, all but the train are in frontal angle, which proclaims that what you see is part of our world (1990: 36) that we share with you: You are part of this natural world and are under the protection of what the church represents, as it occupies the space of the ideal at the top of the image (1990: 99).

The third example, **Boxley** (Fig. 3), is strongly framed in wood. Unusually, it has an image only on one side, so it is much more like a normal picture. The image itself is more painterly too. It is strongly gestured through a white horse (the emblem of Kent) on the right (as one views the sign), that takes up about a quarter of the space. It is looking down, over the village name-board, into the centre of the village which is approximately at the golden ratio on the vertical axis. At the very centre of this (the central focus) lies an old house, with the parish church on the left and, to the right past some trees, a pair of oasthouses. In approximately horizontal bands across the picture are crops, fields, trees and woods, with the horizon at the upper golden ratio. Apart from the horse, none is in perspective, except that the church reveals two adjacent sides, north and east. This sign can be interpreted as explaining that the humans dwell at the centre of things, supported by sociality on each side, both faith and alcohol (there are frequent references to pubs in village signs), and all embedded and embraced by a natural world that provides essential nourishment and beauty. It is the animal, the horse, that points out these truths to the village visitor by the gesture of its look.

These three examples demonstrate that there is much to read in village signs and, often, this will reveal a good deal of what the local people value about their home. A more numerical analysis of some of these iconographic images would indicate their proportional importance and value, but the statistics presented above indicate likely tendencies. The high proportion of natural images included in signs, relative to alternative image domains, indicates that village contexts of nature and farming are highly valued, as is the parish church—much more so than other buildings in the parish. The near-ubiquity of trees in the signs demonstrates their particular importance. The living elements are not directly correlated with the values of nature conservationists, but there is likely to be much shared common ground. The significance of the parish church may be as much about village identity, distinctiveness (each church building is different in detail) and sense-of-place as about spirituality as often conceived, let alone Christianity. Yet, having a collective identity around a shared focus of worth is more appropriately categorised as ‘spiritual’ than under any other of the MA’s categories of CES.

3.2 *Street Names*

These have proved less productive. So far it has not been possible to get a digital record of street names that one could interrogate with a concordancing package or a spreadsheet. There is also the difficulty of dating street names. Almost certainly there are changing fashions in street names and relatively recent names would reveal most about contemporary attitudes, at least what those who market new houses



Fig. 2 The village sign of Lyminge, Kent (photo: Roger Smith)

think appealing to potential buyers. With disproportionate labour, one could go to streets and date the buildings on it, or search record offices for evidence of planning permissions and such like. With a greater degree of error, one could estimate a date



Fig. 3 The village sign of Boxley, Kent (photo: Roger Smith)

of a housing estate through its street pattern and its location with respect to earlier streets in the street atlas. A housing estate at the edge of a town with very winding main thoroughfares and lots of even more windy small cul-de-sacs is likely to have been constructed since 1970, for instance. Yet even this, with all its uncertainties, is time-consuming and only justified if the results were promising.

Using the *Philip's Street Atlas* for Cambridgeshire (2001), a preliminary examination of the index for entries of streets beginning with A or B indicated that there were about 2030 entries. See Table 2 for a schedule of results.

Street names, for the most part, are binomials (in the reverse order to scientific names of species) with a 'descriptive' specific epithet (usually a noun in apposition rather than an adjective, e.g. 'Bramble') and a generic name, such as 'Street', 'Road' or 'Lane'. I term the two together as a 'headword' street name and these are in bold in the index on separate lines. Some popular epithets are applied to many different generic words (12 in the case of 'Bramble' and its allies); the average is to about two generic words, but the distribution is highly skewed, so most are only applied to one. The great majority of headwords were used in just a single location within the area covered by the atlas; some street names had been used in two or three different towns and villages (the average being about three per epithet); a few were very common and used in many locations (21 in the case of 'Bramble').

Of the total number of street names under the letters A and B (and this alphabetic sample may not be representative), several use 'natural' epithets. By far the most common are tree names (13). These are set out in Table 2. There were very few animal names: Blackbird, Bream, Buck, Buzzard; and a few wild-flower names: Bilberry, Bramble, Briar and Broom. There were slightly more names that are associated with countryside features: Acre, Bank, Barn, Breckland, Brook, Bush. This is a total of 27 specific descriptors, about 4% of the sampled descriptors, which might indicate a low saliency for evocations of the natural by those marketing new houses. Further analysis of the street names might indicate that alternative descriptors, particularly in older developments, are not real comparators for relative value, such as streets named after towns and people.

If the evidential base of street names were to be investigated further it would be important to establish an efficient method to date the naming of each street. This might confirm that natural features were used in a much higher proportion of recent street names than in the past. It would also be useful to make a comparison of these types of street names with other categories. Thus there are very many headwords incorporating 'church': Church Lane, Road, Street, etc. (see Table 2), but it would not be reasonable to infer from this a high level of contemporary Christian observance. It is likely that many of these streets with 'church' in the name are not recent. For instance, 'Lane' is not a common generic in modern housing estates (it occurs just the once in the sample of tree-street names) and yet it makes up 32% of all the 'church' streets; similarly, 'Street' also indicates an old street name and is found in 24% of cases. Clearly, this evidence requires intelligent discernment in its interpretation. Further work might confirm that housing developers (the evaluating group), in their marketing strategy, do frequently attempt to appeal to buyers' aspirations to live in a rural setting, if only in the image evoked by the street name. Sadly, sometimes

Table 2 Counts of street names in the Philip's Cambridgeshire Street Atlas (2001)

Specific descriptor/epithet, normally the first word	Generic street word, normally the second word	Number of headwords, i.e. generic words described by the specific word	Total number of streets across all settlements with the specific descriptor
TREES			
Acacia	Avenue, Grove	2	5
Acer	Road	1	1
Acorn	Avenue	1	1
Alder	Close, Drive, Road	3	4
Almond	Close, Drive, Grove, Road	4	5
Apple/Apple tree	Close, Green, Grove, Orchard, Yard, none	7	8
Ash	e.g. Close, Court, Green, Grove, Park, Road; Also combinations: Ashbeach, Ashburn, Ashbury, Ashcroft, Ashdale, Ashfield, Asjlea, Ashmead, Ashtree, Ashvale	28	39
Aspen	Close, Green	2	3
Beech/Beeches	e.g. Avenue, Close, Croft, Drive, End, Grove, Lane, Road, Way, none; Also combinations: Beechside, Beechwood,	16	28
Birch	e.g. Avenue, Close, Drive, Grove; Also combinations: Birches, Birch Trees, Birchen, Birchwood	10	13
Blackthorn	Close, court	2	4
Bramley/Bramleys	Avenue, Close, Court, Drive, Grove, Road, Way, none	8	13
Buckthorn	None	1	1

(continued)

Table 2 (continued)

Specific descriptor/epithet, normally the first word	Generic street word, normally the second word	Number of headwords, i.e. generic words described by the specific word	Total number of streets across all settlements with the specific descriptor
OTHERS	(as examples)		
Bramble	Close, Court, End, Lane and Walk, as well as The Brambles; Also Blackberry Way; Briars End, Way etc.	12	21
Church	e.g. Close, Causeway, End, Hill, Lane, Meadows, Road, Street, View, Walk; Also combinations: Churchfield, Churchgate, Churchyard	20	229 (73 for Church Lane alone; 55 for Church Street)
Orchard	Avenue, Close, Crescent, Court, Drive, End, Estate, Gate, Gardens, Lane, Mews, Pightle, Road, Row, Street, Terrace, View, Way, and none (singular and plural)	20	76
TOTAL for names beginning with the letters A or B:			
Total number of specific descriptors		Total number of headwords	Total number of streets
About 650		About 1250	About 2030
		Average number of headwords per specific descriptor	Average number of streets per descriptor
		About 2	About 3

the street name reveals what was lost to build the houses. One street in Cambridge, built on the water meadows, is named 'Misty Meadows'. One can also think of all the streets called 'The Orchard' or something similar, where generics like Lane and Street may indicate old streets that led to an orchard, yet the majority of the generics, like Close, Drive and Gardens, suggest modern developments on land that was once an orchard, but is no longer.

3.3 *Tree Stories*

The Woodland Trust, in 2015, invited all sorts of organisations to join them in calling for a Charter for Trees, Woods and People and over seventy organisations took part, as well as many local Charter branches established by the trust. Through these organisations, social media and events all around the country members of the public were encouraged to support the call for a charter by writing ‘stories’ about why they loved trees. These stories were to be used in drafting the Charter that was launched in November 2017 and they have informed the ten principles that underpin the Charter (see <https://treecharter.uk/>). The invitation was worded in diverse ways and the invitations were issued in various contexts, and the responses could be on paper, online or in other imaginative formats such as paper ‘leaves’ put on ‘trees’. As a result, different prompts and circumstances can be detected among the stories. The ‘stories’ may be narrations of happenings, but many are statements about the value of trees and woods. Most are quite short, a sentence or two, some are longer, and some are in verse. The database/corpus examined had 30,358 stories. On inspection a few of these are duplicates, one duplicate appearing in one of the searches of the data.

Using *Voyant* and the principles described above, two types of searches were conducted (Baker 2006). The first looked for short phrases leading with signalling words for ‘force’: very, extremely, awfully. ‘Awfully’ was not found in the corpus. The counts for the other two words are set out in Table 3.

This preliminary analysis does not reveal what the contributors were assessing; the phrases imply that some follow a negative impact on trees and others express positive things about trees, etc. Some are affects, expressing emotional states, e.g. relaxing/calming, peaceful, therapeutic; sad/stressed. Some are appreciations, e.g. beautiful/pretty, imposing, special. Expressions of judgement are indirect, e.g. concerned, upset(ing). The next step would be to examine the collocations of these phrases to discover what features were being evaluated with such strength. Because of the nature of the corpus, most of these features are likely to be about trees and nature.

To discover if the spiritual dimension was an important feature a search was made for words associated with spirituality, see Table 4. At first sight, these seem rather low numbers for such a large corpus. However, if one compares the 10 occurrences of ‘spiritual(ly)’ with the 38 occurrences of ‘very important’, which one might naively presume to be much used in the context of tree stories, perhaps the evidence is that the diversity of people’s language and thought is so great that even in a large corpus there is not much repetition. A simple inspection of these occurrences indicates a positive appraisal of the spiritual, but the sample is too small to make use of signalling words for force.

The third examination was for the rhetorical trope of the simile. Words signalling similes, such as ‘like’, can be used for purposes other than figurative ones, and so these have to be separated out by inspection. Searches were made, using the *Voyant* context tool, for ‘just like’ (5/11), ‘just as’ (0/9) and ‘as if’ (10/2)—(where the first

Table 3 Counts of short phrases in the tree story corpus

Phrase	Count	Phrase	Count
Very important	38	Very well	4
Extremely important	10	Very close	3
Very relaxing	22	Very different	3
Extremely relaxing	2	Very often	3
Very calming	16	Very pretty	3
Very beautiful	11	Very stressed	3
Extremely beautiful	2	Very tall	3
Very old	11	Very happy	2
Extremely old	4	Very imposing	2
Very special	10	Very keen	2
Very nice	9	Very long	2
Very sad	7	Very lucky	2
Extremely sad	2	Very much	2
Very peaceful	6	Very poor	2
Very concerned	5	Very refreshing	2
Extremely concerned	4	Very small	2
Very fond	5	Very soothing	2
Very interesting	5	Very stressful	2
Very young	5	Very strong	2
Very few	4	Very things	2
Very good	4	Very upset	2
Very large	4	Very upsetting	2
Very quiet	4	Very valuable	2
Very therapeutic	4	Very worried	2

number is the number of similes, and the second the number of occurrences of the phrase in the corpus that were not used to introduce a simile).

The concepts evoked by the similes are varied and set out in Table 5. The first three of these all imply that trees do not merely have a biological function, but have some human-like role in the world. The last three are evidence of a spirituality of being part of something bigger (Bryce et al. 2016; Kenter et al. 2016). That the contributors have chosen to construct a simile is evidence of the high value they put on the feature they elaborate in this way.

As with street names, comparative data on all three analyses need further examination. Although the tree stories corpus is hardly representative of the population as a whole, it does provide good evidence of the passion and care held by a significant number of people for trees and woodland (the evaluating group). This coincides with the widespread campaign protesting against the proposed sell-off of the public forest

Table 4 Counts of words linked to spirituality in the corpus

Word analysed	Count of occurrences	Description of the range of meaning(s)
Spiritual(ly)	10	4 about spiritual contentment; 5 about spiritual connection to something bigger; 1 listing spiritual value
Spirit	4	About feeding the spirit
Spirits	9	(spirits being lifted)
Religion	4	About religious teaching on trees
Feeling part	2	(... of something bigger)
Memorial	15	(... of a relative or friend)
Death/dead	6/33	6 where the reference was to a dead person or death as something more than biological; the rest were about dead trees and the decay process

Table 5 Counts of the concepts evoked in similes in the corpus

Concepts evoked by the similes	Count of occurrences of the concepts
Trees as living beings like us	4
Trees as maintainers the world	3
Trees as protectors	2
Trees as the location of 'magic'	2
Trees as home	1
"I" as part of nature	3

estate in 2011 (Irvine et al. 2016). Evidence such as this puts down a marker that those making decisions must attend to the strength of feeling of people to protect nature (in a wide sense), even if they are in a minority in the population.

4 Discussion

4.1 *Limitations in These Methods*

This has been a scoping study, a preliminary trial to discover if an investment in developing any of these methods would be worthwhile. They all necessarily suffer from the weaknesses of this.

CDA is insistent on understanding the contexts of discourse and not merely examining the discourses themselves (Richardson 2007). This study has relied largely on assumptions about the evaluative communities that have produced the discourses it has analysed. For village signs, for instance, the group of people most responsible for the iconology will have varied from commission to commission. It would be important to discover the relative importance of the artisan who constructed the sign (a limited number of such people have constructed a high proportion of signs), the commissioning committee, and any public consultation they conducted. House builders should be interviewed about their marketing strategies in naming streets. The data base of the tree stories may have demographic data associated with it.

Critics of CDA exist, e.g. Toolan (1997) (Machin and Mayr 2012). Of particular importance is its prior socially critical stance. Is it possible to use its methods in a more neutral way to produce evidence on non-hegemonic patterns of thought? This study has attempted to use the low-level, close-to-text methods of CDA without drawing on its political presuppositions—and yet this study does advocate the virtue of sustainability (which is not universally agreed by any means) and uses CDA to build an evidence base to persuade the ambivalent of the socially held values of nature to set against what such people might feel to be financial imperatives.

Other analytical methods to CDA would reveal further insights, particularly those not rooted in Halliday's Systemic Functional Linguistics, and the relatively simplistic nature of the three evidential bases cannot show off the complexities of CDA to full advantage. More time would allow further analyses, of course, particularly comparative ones to assess the relative prominence of natural and spiritual features and forcefulness of the evaluations. Decision-makers need to weigh up conflicting priorities and evidence of the relative strengths of feelings in the population is needed for this. This study has made no attempt to investigate whether such decision-makers would appreciate the evidence it has produced or how they might wish it presented for their purposes. It is not alone in this. Much work in CES studies is conducted in the hope of being influential. Yet, finding the best way to communicate the results of such studies is critical to their effectiveness.

4.2 The Contribution These Methods Make to Ecosystem Services Studies

Despite (or because of) laments over the difficulties of addressing CES values (e.g. Winthrop 2014; Hiron et al. 2016; Baveye 2017; Chan et al. 2016; De Vreese et al. 2016; La Rosa et al. 2016), there is much activity in the field. Hernández-Morcillo et al. (2013) provided a review of indicators of CES, finding no methodological consistency. Although they found only 23% of studies represented CES spatially on a map, mapping CES is a growing trend (Burkhard and Maes 2017), often through interviewing individuals or groups about places that are important for them (Brown et al. 2012; Brown and Fagerholm 2015; Willemsen et al. 2015; Kenter 2016). There

have been several studies of proxy mapping by examining the density of uploaded pictures of landscapes and other natural features on geographical internet sites such as Google Earth (van Zanten et al. 2016; Figueroa-Alfaro and Tang 2017; Gliozzo et al. 2016). Mapping can also be done by simply overlaying in a GIS (geographical information system) existing data sets, such as designated sites for nature conservation, species locations, or cultural features (e.g. Vorstius and Spray 2015; Swetnam et al. 2016; Tratalos et al. 2016). The study closest to this one is that of Bieling and Plieninger (2013). These researchers examined ‘cultural productions’ in the Swabian Alps, interpreting and mapping artefacts such as benches, hiking signs, hunting blinds and memorials. Unlike the current study, their main aim was to map the density of these artefacts rather than to explore their interpretation in depth.

These mapping exercises can guide decision-makers on where to locate developments in a way that will minimise their negative impact on CES. It may be that ecosystem services assessments, including cost–benefit analyses, are most useful at a local scale, where the changes, the economic ‘margin’, are easiest to discern (TEEB local policy 2011)—should a housing estate be built on this wood, or this field, or this brownfield site? None of the three sets of cultural productions has this level of geographical specificity. For instance, it would be unwarranted to presume that village residents with a village sign that referenced history rather than nature was necessarily less concerned about its natural setting than villagers nearby with a nature-based sign.

What they could contribute to is decision-making at national scale, both with policy-making and with protocols for local decision-making. They provide evidence on the intensity with which people value CES and the manner of their valuing. As well as investigating these three data sets more intensively, other cultural productions could be studied, such as planted trees or memorial benches. Cultural productions may not be physical but may be stories about places, or nature more generally. The Native American chief who asked, ‘If this is your land, where are your stories?’ pointed to this (Chamberlin 2004). The attachment of people to their local setting may be indicated by the number and power of such stories. The collection of stories by Guy (2006, and others in the series) is an example. The annual MENE survey asks people how and how much they engage with the countryside. This could be complemented by investigations of behaviours such as flower festivals and open-gardens visiting. There has been an upsurge in what has been termed New Nature Writing (Cowley 2008), and this literature is attracting the attention of ecocritics (e.g. Garrard 2012), but it would also be worth investigating sales data and promotional intensity for this genre. Historical studies into the trajectory of British or European thought about nature, e.g. Schama (2004) and Thomas (1983) are also illuminating.

However, contrary to the desire of environmental economists, the current investigation (and these other suggestions) would not provide figures that could be inserted into a Total Economic Value (see Bateman et al. 2010). TEEB in National Policy (2009) recommends a hierarchy of procedure for each ecosystem service: characterise, quantify, monetise. These investigations contribute to a characterisation of CES, with some quantification that may indicate relative strength of importance. Despite criticisms of ‘narrative’ values (McShane 2012), there is increasing recog-

nitition that mixed methods are needed in the assessment of ecosystem services, especially CES (Daniel et al. 2012; Chan et al. 2012a, b; Heydinger 2016; Bennett 2017). A fuller investigation of the three cultural productions in this study could contribute to this non-monetary account, either through the academic literature, or by being incorporated into a valuation tool or a commissioned study. It would not be commensurable (i.e. able to be added into some totalising assessment) but a narrative describing these values will contribute to the characterisation of CES that can be provided as evidence to decision-makers that people value nature and their relationship with it in non-obvious ways and may be prepared politically to defend what they value.

5 Conclusions

- This study argues for the use of cultural ‘discourses’ in characterising, and partially quantifying, Cultural Ecosystem Services. They have the distinct advantage of being revealed evaluations rather than stated ones, so that their results are less susceptible to being artefacts of either interview or group-work methods. That the study does not readily fall under any of the categories of methods for CES assessment in either Hirons et al. (2016), or La Rosa et al. (2016), is evidence of its originality.
- It is unique in analysing village signs and street names for evidence of the value society places upon nature and its spiritual dimension.
- It also contributes to the available methods for doing analyses, particularly by adapting Critical Discourse Analysis to the distinctive imagery of village signs and the challenges of investigating a large corpus of short ‘stories’ contributed by the public.
- It demonstrates that three constituencies (village communities, house building companies and their customers, and members of the public who care about trees) do value features of nature and the countryside, particularly trees, and they value the spiritual dimension, though somewhat less. The strength of these evaluations is indicated by the relative frequency and extent of these features in these discourses, as well as by the force-level of the verbal texts about trees.
- The combination of readily and cheaply available data with an analytical method that does not use complex mathematics makes this study a good model for student projects.
- With further development of the analytical methods, the same feature of ready and cheap data makes this study a valuable model for further contributions to professional evaluations of the importance of Cultural Ecosystem Services to society. Such accounts may assist decision-makers and, reflected back to the communities that produced them, they may affirm and encourage communities to defend what they value.

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Approaches for the Implementation of Water-Related Cultural Ecosystem Services in Teaching Programs on Sustainable Development



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Abstract The focus of this contribution is on cultural ecosystem services (CES), and how their aspects could be included in teaching programs. CES consider nature's contribution to people such as spiritual, recreational, and cultural benefits. Outgoing from the appreciation of nature's contribution to people in different cultures and religions concluded from case studies, are proposed approaches for the implementation of CES in teaching programs on sustainable development. The contribution focuses especially on water, which over millennia represents life in religion, art, and philosophical thinking. Water-related CES are expressed by three dominant themes: the origin of life, the means of purification, and the center of regeneration, subjects which are also relevant in supporting, provisioning and regulating services. The contribution proposes a framework for CES teaching under the Spaces—Practises—Goods Nexus, based on the general curricula framework for education for sustainable development according to OECD (2008), which leads to the sustainable consumption of locally produced goods representing the regional identity. In this regard, the dialogue under the Spaces—Practises—Goods Nexus could be part of the already existing Nexus Dialogue.

1 Introduction

Even there are strong links between sustainability and the humanities, which go well beyond the mere inclusion of the social sciences, there are only a few literature sources which discuss these aspects, like LeVasseur (2014). Some representatives of the social sciences point out that cultural aspects are not taken into account in

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Fig. 1 Conceptual approach of the QBL. Source www.nps.gov.au



the current definition of sustainability (LeMenager and Foote 2012), referring to the Triple Bottom Line (Elkington 1997). To close that gap, Roetman and Daniels (2011) proposed an approach going beyond this: the Quadruple Bottom Line (QBL), which means “Adding purpose to the mix”. LeMenager and Foote (2012) introduced a new term, the sustainable humanities, to suggest that sustainability and humanities have always been compatible approaches. As Roetman and Daniels (2011) pointed out, conventional three bottom lines (people, planet, profit) are said to be “transparent”, while the fourth bottom line, called purpose, is often expressed as spirituality or culture. The approach of Roetman and Daniels (2011) assumed that sustainable development includes cultural continuity and cultural well-being. The QBL implementation need in the frame of sustainability curricula in Higher Education was underlined by Schneider et al. (2017a), even forming a challenge as the mindsets are usually fragmented between humanities and natural or engineering sciences (Fig. 1).

Also the European Commission (EC) recognised the “*The need to integrate the Social Sciences and Humanities with Science and Engineering in Horizon 2020 and beyond*” (European Commission 2016). As the EC (2016) highlighted, the social science and humanities (SSH) may play many future roles, like opening up new policy questions and identifying new societal needs. In this context, the holistic discussion on intellectual and moral aspects of sustainable development is still underdeveloped, even linking social values, theology and spirituality would support sustainable development, as well as the resolution of environmental conflicts like transboundary water management disputes.

The introduction of cultural aspects into the sustainability approach through the QBL does not only upgrade the concept of Elkington (1997), but provides also the link to the concept of ecosystem services (ES). ES are services produced by ecosystems through the function of the compartments of the respective ecosystem, that provide essential benefits to human (Millennium Ecosystem Assessment (MEA) 2005). The MEA (2005) derived provisioning, regulating, cultural, and supporting services. Cultural ecosystem services (CES) consider spiritual, recreational, and cultural benefits, e.g., that are making humans happy and give meaning to life, and with this attribute link to the QBL. In practice, CES include cultural identity, heritage values, recreation

and tourism, inspiration, aesthetic appreciation, and spiritual services. Introducing ES into the QBL concept might foster the linkage between SSH, natural sciences and engineering in Higher Education. As supporting tool was introduced the Relational Footprint (Hadders 2015) being a comparable approach to the Ecological Footprint (Rees 1992). The QBL concept provides means to measure, value, and assess the addition of culture, spirituality, and faith in reporting, as the Adaptive QBL Scorecard (Hadders 2011) and Relational Footprinting, underlining that sustainability is about the quality of relationships (Hadders 2015). Already Milcu et al. (2013) stated that CES have the potential to foster new conceptual links between alternative logics, relating to a variety of social and ecological issues. Referring to human perceptions, attitudes and beliefs, CES represent the linkages with the SSH (Milcu et al. 2013).

Many ecosystems deriving from human land use are part of Europe's cultural heritage (ECH) and identity. Interest in cultural landscapes has culminated in the adoption of the European Landscape Convention through the Council of Europe (2000), as well as the Recommendation of the Committee of Ministers to member States on the European Cultural Heritage Strategy for the 21st century, which was adopted on 22 February 2017. However, conventional approaches to the preservation of heritage landscapes particularly neglect those values which connect elements to landscape practices and the importance of cultural heritage as part of human identity (Palang et al. 2011). The past decades have witnessed expanding interest in the protection, management, and planning of cultural landscapes, motivated by the widespread concern about their rapid change. Many appreciated landscape features enhancing connectivity and potentially being elements of Green Infrastructure (GI) have been lost (Lindborg and Eriksson 2004; Zimmermann 2006). The speed, scale, frequency, and magnitude of landscape changes in Europe in the past 60 years have been unprecedented (Antrop 2005; Plieninger et al. 2015). A set of "drivers of change" fundamentally reshaped previously prevailing landscapes, including demographic, macro-economic, and sociocultural changes (Hersperger and Bürgi 2009).

The UN Decade of Education for Sustainable Development 2005–2014 provided the scope of the development of teaching and learning practices for sustainable development on all educational levels (Leal Filho and Salomone 2006; Cambers et al. 2008, and others). In this context, the Organisation for Economic Co-operation and Development (OECD) held a Workshop on 11–12 September 2008 on Education for Sustainable Development, and pointed out the priorities for the teaching on sustainable development: (1) developing strategies for education for sustainable development, (2) devising curricula for education for sustainable development, (3) promoting sustainable schools, and (4) educating for sustainable consumption. This contribution explores also the potential role of SSH in the development of motivations for sustainable development. According to the UNESCO's World Action Program "Education for Sustainable Development", this means an education that enables people to think and act in the future (UNESCO World Action Program "Education for Sustainable Development" 2017).

This contribution focuses on the water-related CES as one ecological source, and as sample for the exploration of CES implementation options in teaching programs on sustainable development as stipulated in the SDG 4 on university education and

lifelong learning. The SDGs have a special focus on Integrated Resources Management, such as Integrated Water Resource Management. The upcoming “International Decade for Action—Water for Sustainable Development”, 2018–2028 has highlighted the importance of promoting efficient water usage at all levels, taking into account the water, food, energy, environment Nexus (Avellan et al. 2017).

2 The Role of Water in the Cultural and Spiritual Context

Water is human’s most basic need, needed for the physical metabolism. Beside its fundamental role for life, water has also an important spiritual, cultural, and religious meaning. Many traditions, rituals, rules and stories are connected with water as source and essence of life, representing itself in the form of springs, rivers, lakes and waterfalls. Further, surface waters and wetlands have a high attractiveness for many people because of their aesthetics and health-promoting climate. These intangible aspects have led to the fact that CES have been the least operationalized so far and the operationalizability is also questioned. The criticism of the concept of CES points to the fact that essential cultural values of the natural and culturally shaped environment are based on the unique character of areas which are not covered by general scientific parameters. Practically, the assessment of the intangible aspects leads to the conclusion that water as an ES is invaluable, which causes limits in the operationalization.

Water plays a fundamental role in all religions (Abrams 2001; Fossey 2003; Fisher-Ogden and Saxer 2006; Maliva and Missimer 2012). While each religion may have different rituals and beliefs, there are some consistent views on the natural significance of water (Abrams 2001; Steward 2008). Water is considered purifying in most believes and religions. For example, baptism in Christian churches is made with water. In addition, a ritual bath in pure water is made to those who died in several religions, including Judaism and Islam. The Hindus, constituting the majority of the Indian population, consider the Ganges River as a sacred river as “soul purifier” to obtain the “purification of sins”. The similar situation applies to the Jordan river, a sanctuary place in the Christian religion. In the Jewish religion, the concept of purification and sanctity of water is mentioned in the book Leviticus. Water is mentioned in the Bible 442 times, and 363 times in its international English versions. In synodism, water is used almost in all rituals to clean a person or place. In Islam, the five daily prayers can only be performed after washing the body with clean water. Water that cleanses physical impurities will also contribute to moral cleansing, “count me among those who purify well”, during the ritual of cleansing. “*You who believe, if you want to do your duty to pray, then wash your face and hands to the elbow, shake your head and feet to your ankles.*” (Coran 5-6). Further, in the islamic world are practised particular water management principles (Abderrahman 2000; Atallah et al. 2001; Faruqui 2001; Shah et al. 2001).

In the classical Chinese philosophy, water is an element of philosophy, one of five constituent elements of nature, along with earth, fire, wood, and metal. Water

is the matrix of all possibilities of existence, the first element and the richest in representations. Further, it is the principle of the undifferentiated and virtual, the foundation of any cosmic manifestation, symbolizing the primordial substance from which all forms that are born and come back, through regression or cataclysm. Water reunites the mythical formulas of the same metaphysical and religious reality: life, vigor, and eternity reside in the water. Water purifies and is purifying, has a moral value: it becomes the substance itself of purity, a few drops of water being enough to purify a world (hence the symbolism of baptism). The Chinese believe that the small water pot held in the hand of the Goddess of Mercy Kuan Yin, is the one thousand blessings of the cosmic elixir of immortality. It is said that Kuan Yin's bowl also contains the fertile waters, so that anyone who floats in that water bowl will definitely enjoy health and will have a great generosity soul. This vessel creates a special kind of wealth, born of generosity in heart and mind.

3 Methodology

The methodology used for the development of the water-related CES in teaching programs on sustainable development consisted of a background analysis with literature review, which was supported by the collection of case studies on CES. The research topics for the background analysis considered the CES state of the art, interrelation between natural and social sciences, and teaching approaches for sustainability implementation. As the development and structuring of teaching contents for CES is still a challenge, the general curricula framework for education for sustainable development according to OECD (2008) was used as guidance for the development of relevant contents and approaches, see Table 1.

Scope of the case studies was to analyze which practical applications and contents can be concluded for CES teaching programs. Following case studies have been studied in detail:

- Lake Bederkesa, Germany,
- Glacier Rettenbachjoch, Austria,
- Jordan river in the Middle East,
- Healing and holy springs in Romania,
- Lagoons of Siecha and Chingaza, National Park of Chingaza, Colombia.

The case studies were evaluated in terms of CES values considering cultural diversity, spirituality, religious values, transcendental values (Raymond and Kenter 2016), traditional and formal knowledge systems and education, inspiration and aesthetics (Cooper et al. 2016), and social relations, home feeling and cultural heritage, as well as recreation (see also Stalhammar and Pedersen 2017).

Table 1 General Curricula Framework for Education for Sustainable Development according to OECD (2008; www.oecd.org/greengrowth/41372200.pdf)

	Courses	Concepts	Systems	Measurement	Practices
Primary School	Single pillars taught broadly in general lessons	(a) Economic (b) Environment (c) Social	(a) Markets (b) Ecosystems (c) Society	(a) Wealth (b) Eco-footprints (c) Voters	(a) Fundraising (b) Eco-schools (c) Citizenship
Secondary School	Integration of two (or more) pillars taught in existing courses (e.g. social studies)	(a) Economic/environment (b) Economic/social (c) Social/environment	(a) Carbon trading (b) Human capital (c) Transport	(a) Costs of climate inaction (b) Income distribution (c) Measures of well-being	(a) Green entrepreneurs (b) Poverty reduction (c) Fairtrade
Tertiary Level	Integration of three pillars taught in stand-alone units (sustainable development studies)	(a) Economic/environment and social (b) Inter- generational concerns (c) Participatory processes	(a) Sustainable development strategies (NSDS) (b) Sustainable consumption and production strategies (SCP) (c) Education for sustainable development strategies (ESD)	(a) Capital-based indicators (b) Sustainability indices (c) Sustainability impact assessments	(a) Sustainable production (b) Sustainable consumption (c) Corporate responsibility

4 Presentation of the Case Studies

4.1 Lake Bederkesa, Germany

Lake Bederkesa is located in the north of Lower Saxony in the district Cuxhaven in Germany. The lake is bordered by the town Bad Bederkesa, the “Hörner Bog” and the nature protection area “Forest of Holzurburg“. The total catchment area is about 26 km², of which the lake itself occupies an area of 1.7 km² (Schneider et al. 2017b). Figure 2 provides a visual impression. In the investigation area are further



Fig. 2 Impressions of Lake Bederkesa near Bad Bederkesa



Fig. 3 Detail impressions of the catchment of Lake Bederkesa: bogs, and educational information on the fish fauna in the lake

located the landscape conservation area “Forest area near Bederkesa” and the nature conservation area “Holzburg at Lake Bederkesa” as well as a FFH area (Fig. 3).

The Lake is located in the north German coastal landscape and offers best conditions for a relaxing holiday. A 400 km signposted cycling and hiking trail network invites to explore forest and lake. The lake is a center for touristic leisure, offering various walks and other water sports facilities, the nearby castle Bederkesa with museum (see Fig. 4), the mouth of the Weser river with a view to the Lower Saxony Wattenmeer National Park, a Dutch gallery wind mill with butter cake baking, the monastery Neuenwalde, a crafts museum, the nostalgic railway, the Moor-Therme spa with sauna and wellness area, as well as any touristic events. The lake has a high attractiveness for tourists.

Due to its shallow depth, the lake tends to land. On the lake are found numerous birds, among them housebirds, loch gulls, herons and pond pipe singers. Near the lake are further found archeological sites, like an old Saxon Ringwall. The lake is



Fig. 4 Bederkesa castle and leisure facilities at lake Bederkesa

very popular as a fishing area as it is rich in eel, perch, bream, pike, carp, reddish, roach, sleet, whitefish and pikeperch.

Conclusions from the case study:

Lake Bederkesa provides a sample for cultural diversity and natural beauty. Due to its natural settings it provides values for inspiration and aesthetics. Based on this attributes, the lake has a high value for recreation and tourism. The trail network is equipped with educational information on the lake's ecosystem, and the interaction of the various parts of the ecosystem. The CES context to be included in educational programs is the understanding of ecosystems and their cycles, nature as source for energy, food and mental equilibration.

4.2 Glacier Rettenbach, Austria

The Rettenbach glacier is located near Sölden in the Ötztal Alps of Tyrol, Austria, on the ridge of the Pitztal, between the Schwarze Schneid (3367 m asl), the Gaislachkogel (3058 m asl) and the Tiefenbachkogel (3250 m asl). The glacier extends downwards from the Innere Schwarze Schneid, to the north of the Rettenbachjoch (2990 m asl), north-eastward to a height of about 2680 m asl. The glacier reaches a length of about two kilometers and a width of about one kilometer. During the winter, the glacier is accessible by cable car and from spring time by car (Fig. 5).

The Rettenbach and Tiefenbach glaciers are one of the largest glacier areas in Austria that have been developed for winter sports. Eight state-of-the-art lift facilities with a transport capacity of about 16,500 passengers/h and 34.3 km of slopes guarantee exceptional ski fun in the pre-winter months. The Tiefenbach glacier is characterized by its gentle and wide slopes and is therefore very suitable for less experienced winter sportsmen or those who do not like it so steep. The Rettenbach Glacier offers challenging and steep slopes for advanced and sporty skiers. With the Europe Test & Exhibition Center at the Rettenbach Glacier and the Amer station, Sölden is the only glacier ski area in the world to have a test center of all leading winter sports equipment manufacturers. In late October, the FIS Alpine Ski World



Fig. 5 Impressions of the Rettenbach glacier and it's trouristic infrastructure

Cup season opens with a giant slalom for both genders on the glacier. The glacier is an attractive area for skiers and plays an important role in connecting the main ski area of Sölden with the Tiefenbach glacier.

Conclusions from the case study:

Glacier Rettenbach provides a sample for social relations and cultural use of a landscape for recreation and tourism. The glacier has a high Relational Footprinting impact, as people meet on large- and small scale for sportive activities and competitions in peaceful atmosphere. The CES context to be included in educational programs are respect for traditions, mutual respect and appreciation between people interacting with each other and their environment, benevolence, as well as self-determination and power development. Another point of CES to be mentioned in relation with the glacier is the respect for giant nature inventory and the reflection for means for the stimulation for self protection.

4.3 Jordan River in the Middle East

The Jordan River flows roughly north to south through the Sea of Galilee and on to the Dead Sea. The sources of three rivers form the origin of the largest river in Israel, the Jordan, which ends after the flow through the Sea of Galilee in the Dead Sea, after a total of 251 km. Biblically, Jesus' baptism took place in the Jordan river by John the Baptist, and is considered the greatest event in connection with the river, see Fig. 6.

From the perspective of agriculture, Jordan is the most important supplier for irrigation of fields and plants in greenhouses. Dan is the middle tributary of Jordan and originates in Tel Dan Nature Reserve near the Lebanese border. A sign marks the main source, because actually hundreds of springs from the soil bubble in a forest floor. Thus, a small trickle also develops within a few hundred meters to a rushing brook, which makes its way into the valley, and finally makes up half of the entire Jordan river. In Lebanon, the Hasbani, a confluence of Wazzani and Haqzbieh, stretches some 35 km, until it crosses the border with Israel and becomes the Nahal



Fig. 6 Al-Maghtas ruins on the Jordanian side of the Jordan River are the location for the Baptism of Jesus and the ministry of John the Baptist. *Then Jesus came from Galilee to John at the Jordan to be baptized by him (MATHEW 3:13)*

Snir in Hebrew. After Sede Nehemiah, the Jordan flows through the fertile Hula plain, which was formerly swampland. Millions of migratory birds are hiding twice a year in this region. The Jordan flows into the Sea of Galilee at the Biblical-historical site Bethsaida and fills Israel's largest water reserve. Near the Yardenit baptism site, the river leaves the lake and continues southward in the Jordan River, forming the border between Israel and Jordan from Bet She'an. Southeast of Jericho ends its river in the Dead Sea.

The Jordan river is the most important fresh water source for both Israel and Jordan. Thus, from 1200 mio m³ of water carried by the Jordan river each year, 500 mio m³ are taken from Israel alone from the Sea of Galilee. This water is mainly used to irrigate agriculture in the Negev desert and to supply the cities with drinking water. Due to the continuous abstraction of the water, the Jordan river degenerated. Each year, only 200 mio m³ of water flow into the Dead Sea, resulting in a dramatic reduction in its water level. Jordan receives 50 mio m³ of water from the river, a quantity which is regulated by the 1994 peace treaty with Israel. This water is pumped out of the river at its exit from the Sea of Galilee and directed through a pipeline to Jordan.

In the upper part the Jordan is used as a wild water flow of paddlers. Between Sea of Galilee and Dead Sea the river used is not because the Jordan is the main border crossing between Jordan and Israel and is due to the heavy water extraction for agriculture and water supply of the population only little water.

The river has a fundamental significance in Judaism and Christianity, as Al-Maghtas is the site where the Israelites crossed into the Promised Land and where Jesus of Nazareth was baptized by John the Baptist. In the Palestinian territory, there is a baptismal place, the more well-known baptism site Yardenit is just beyond the



Fig. 7 Jordan River Baptismal Site



Fig. 8 Cultural goods from the Jordan river Baptism Site

exit of the Jordan from the Sea of Galilee. There, people regularly go into the water to be baptized according to biblical examples (Fig. 7).

The Jordan river is a frequent symbol in folk, gospel, and spiritual music, and in poetic and literary works. Because, according to Jewish tradition, the Israelites made a difficult and hazardous journey from slavery in Egypt to freedom in The Promised Land, the Jordan can refer to freedom.

Further, due to its special political situation, it requires peaceful solutions for a common use. In the relationship between Israel and Jordan, the river could contribute to peace. Article 6 of the Israeli-Jordan Peace Treaty signed on October 26, 1994 provides the contractual assurance that Jordan will may take greater amounts of drinking water from the Jordan river. In the relationship between Israel and Syria, Jordan is more likely to contribute to the crisis: the concern that Syria could “dump Israel” is a major reason why Israel refuses to return the Golan Heights (Fig. 8).

Conclusions from the case study:

Jordan river provides a sample for spiritual and religious values as well as cultural heritage. Due to its historical settings, the Jordan river plays an important role in the hydropolitics of the Middle East and has a value for education for peaceful

conflict resolutions and for the sharing of common resources and values. Of special importance are the social interactions to create a win-win-situation for sharing transboundary water resources through treaties based on benefit sharing approaches (Irvine et al. 2016). The Jordan river is a sample for cultural diversity, ethical considerations, tolerance, traditional knowledge systems, and spiritual inspiration. The reference to the value of freedom is an important aspect of self-determination, an attitude which serves also mental equilibration.

4.4 Healing and Holy Springs in Romania

Romania is a semi-presidential republic in South Eastern Europe. According to the current population and housing census as of 2016, 19.87 million people lived in Romania. As a secular country, Romania has no state religion, even 86.7% of the population are members of the Romanian Orthodox Church. Romania is one of the most religious states in the European Union, and even during socialist time there was no decrease. The life of the Romanians has a strong tradition of a deep sense of religion, and it is the country of churches, hermitages and monasteries. According to a representative survey conducted by the Eurobarometer in 2005, 90% of people in Romania believed in God, 8% believed in a different spiritual power. Only 1% of respondents believed neither in God nor in another spiritual power, and 1% of respondents were undecided. The life of the people in every settlement is naturally grown around a church, considered the center of the world. Romanians have always sought support in the church in hard times.

During the fifteenth to eighteenth centuries, monasteries in Wallachia and Moldavia were erected. Monasteries became the main promoters of art and culture, with schools, training centers, libraries, and printing facilities attached to them. In Romania there are springs considered miraculous and healing, from where can be taken the so-called “water of life”, and which are recognized by the Romanian Orthodox Church. Many monasteries and churches in the country protect holy springs, which are said to have performed wonders and healed heavy diseases (Fig. 9).



Fig. 9 Impressions of nature in the Retezat Mountains National Park and a healing spring



Fig. 10 Holy spring at Tismana monastery

There are more than 33 healing springs in Romania where believers from all over the country come to pray for their bodily and soul health. Suffering people come to pilgrimage to these locations with the conviction that their desires are being fulfilled. Further, there are numerous thermal and mineral water springs. Romania has also a remarkable network of spa resorts: one third of Europe's thermal and mineral waters can be found in Romania, some founded by the ancient Romans. The therapeutic value of the natural cures available in Romania has been recognized by locals since ancient times. Archeologists have discovered numerous mineral and thermal baths from the time of the Roman Empire. In 1924, the Romanian Institute of Balneology was established, the second of its kind in Europe, and researchers and physicians turned their attention to the treatment using natural cures. As such, healing and holy springs play a fundamental role in Romania (Fig. 10).

The Orthodox Church urges the preservation of nature as the gift of God: *Do not harm the earth, neither the sea nor the trees!* (Revelation 7: 3). Holy water is considered good for the soul in churches, monasteries and homes, the sanctification of water in the early days of the month is practised through sprinkling in monasteries and cellars. This holy water, which is considered the Holy Spirit sanctifies through the prayers of the priests, has many forms of works, as the very sanctity of Sanctification and prayer. As by sprinkling it, the vile spirits of all places are gallant and forgiven of the little sins of all the days, that is, the devilish mournings, and the evil thoughts. Also the mind is cleansed of things that are defiled and directed to prayer; but it is considered also to bring security, multiplication of gain and indestructibility; diseases go away and give body and soul health.

Conclusions from the case study:

The healing and holy springs in Romania provide a sample for strong spiritual and religious values, traditional knowledge systems as well as for the purpose of religious practices related to water. The springs provide values for spirituality, inspiration, aesthetics, and peaceful contemplation. The CES context to be included in

educational programs is physical and mental health, mental stimulation, dedication and motivation. Important is also to mention the support of personal motivation through religious believes. Beside this, the healing thermal and mineral springs have great importance for the economy and the medical system in Romania.

4.5 Lagoons of Siecha and Chingaza, National Park of Chingaza, Colombia

The National Park of Chingaza is located in the Páramos of the Andes, east of the capital Bogotá. The area is of great importance in terms of water resources, since important rivers such as the Guatiquia have their spring there (Gora 2016). In the park are important mountain lakes such as the Lagoons of Siecha and Chingaza. 70% of the drinking water of the capital Bogota and the surrounding area comes from this catchment. Partially the park is governed by the Ramsar Convention (Gora 2016). The Páramos are a vegetation typical of the South American Andes, which can be found at altitudes from 3200 m asl upwards (Gora 2016). Typical for this vegetation form is the high humidity. The Páramos are regarded as complex, strategic ecosystems, as they capture and store surface water and groundwater and regulate the flow of water (Gora 2016). Moreover, they are of great biological importance since they are the habitat of many endemic species.

In the mountain range of Chingaza there are 40 lagoons. At an altitude of 3250 m, in the southwest of the park is the largest of the lagoons, Laguna de Chingaza with an area of 88 ha (Gora 2016), see Fig. 11. It belongs together with the three lagoons of Siecha to the most famous lagoons, due to the worship of the Muisca people (Ministero de Ambiente y Desarrollo Sostenible 2013) and is important today for drinking water production, as water flows from here to the Chuza reservoir.

The main lagoons are Chingaza Lagoon, located at an altitude of 3250 m in the southeast of the park, as well as the three lagoons of Siecha in the north (Teusacá, Cuchilla de Siecha, Sagrada de Siecha), surrounded by the mountain formation



Fig. 11 Lagoons of Siecha and Chingaza, National Park of Chingaza, Colombia (Gora 2016)

“Cuchilla de Siecha” at an altitude between 3350 and 3750 m asl (Parques Nacionales 2016). The region of Páramos in Chingaza and, in particular, the lagoons of Siecha and Chingaza, were sacred places of the people of the Muisca, which inhabited the region until the arrival of the Spanish conquerors (Parques Nacionales 2016) and held ceremonies of respect and admiration at these places. Even today, these sites serve reflection and spiritual experience with nature. Páramo still has cultural importance for the descended Muisca people. The Muisca had a good relationship with nature and its resources (Ministero de Ambiente y Desarrollo Sostenible 2013). Recent findings suggest that Chingaza was called “Chim-gua-za” in the language of the Muisca, which means “Mountains of the God of the Night” (Parques Nacionales 2016).

Conclusions from the case study:

The Lagoons of Siecha and Chingaza provide a sample for spiritual experience with nature. Due to its natural settings they serve inspiration, home feeling and spiritual reflexion. Even the lagoons and the whole catchment have an invaluable value as provisioning ES for Bogota’s water supply as well, the sites still serve the spiritual experience with nature. The CES context to be included in educational programs is the strong relation between provisioning, regulating, cultural, and supporting ES. The Lagoons of Siecha and Chingaza are a teaching sample for the need of an equilibrated relation between users and providers to avoid overexploitation, and in this way have a values for education and environmental awareness.

4.6 General Conclusions from the Case Studies for Teaching Programs

The conclusion from the case studies is to recognize the role of water-related ES, as (a) source and sink function, (b) provisional and service function, and (c) cultural and spiritual function. Referring to the CES, there are several key messages which can be concluded from the case studies to be considered in teaching programs (key words are used based on framework for the conceptualizing of CES according to Fish et al. (2016), who provided a novel framework for the conceptualisation of CES, see Fig. 12):

Environmental spaces

- understanding of ecosystems and their cycles, nature as source for energy, food and mental energy; equilibrated relation between users and providers to avoid overexploitation,
- interrelation between provisioning, regulating, cultural, and supporting ES,
- aesthetic appreciation of natural and cultivated landscapes.

Cultural practises

- respect for nature and other people and relationships, including tolerance and generosity,

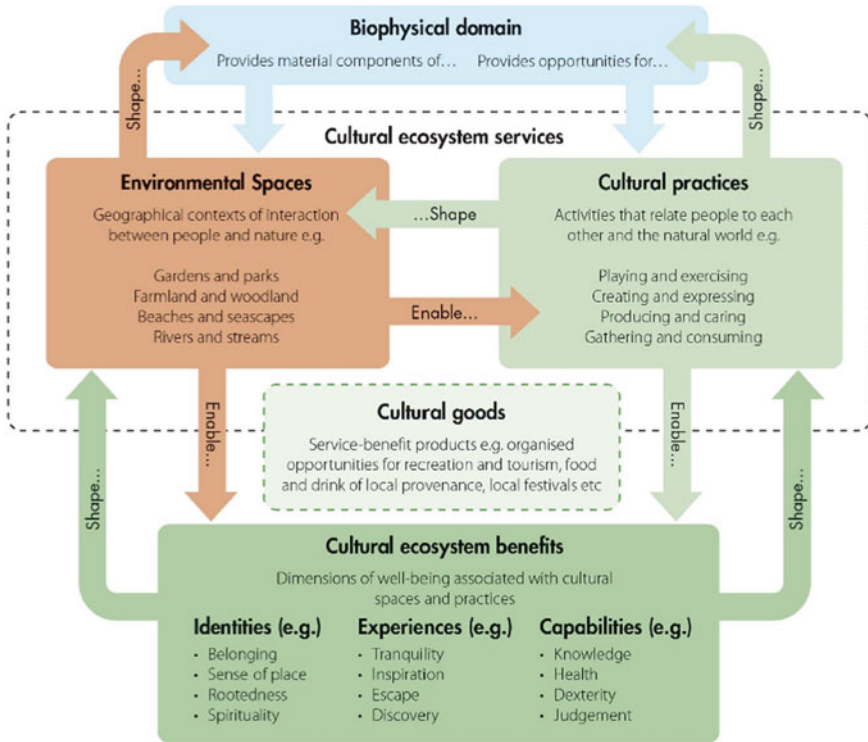


Fig. 12 Framework for the conceptualizing of CES according to Fish et al. (2016)

- education for peaceful conflict resolutions and for the sharing of common resources including social interactions to create win-win-situations,
- self-determination, power development, mental stimulation and motivation, equilibration, as well as dedication,
- appreciation and respect for traditions and traditional knowledge systems,
- inspiration, and the use of natural motifs or artefacts in arts, folklore, etc.
- sacred, religious or other forms of spiritual inspiration, as well as peaceful contemplation,
- ethical considerations (see also West 2007), and education on environmental awareness.

Cultural goods

- tourism, food, drinks, medical products, crafts, religious devotional objects etc.

The summary conclusion is that nature provides a context in which we learn what it is to be human.

Fish et al. (2016) concluded the interactions between humans and ecosystems as main characteristics of CES, and outlined especially the knowledge generation,

presumed as relational, nonlinear and place-based perspective on CES. By its nature those interactions are not measurable so far, but the framework helps to navigate the CES operationalization and points to a more relational understanding of the ES framework as a whole. As CES do not have a wide practical application by now, the inclusion in teaching programs means also transformation management, particularly to unlock the potential of adapted policy questions and the identification of societal needs in a globalized environment, also with relation to the cultural heritage and nature conservation, even there are still limits for the CES operationalization. Green infrastructure offers large options for the practical implementation of transformation management, including the integration of ES with the cultural heritage. The integration of CES with ES and GI fosters the de-fragmentation of natural and social sciences, and their re-integration. Nature conservation provides lessons on re-integration. These strategies go beyond “classical” spatial and conservation planning, a process of securing Europe’s natural and cultural capital on the long term.

Finally, having a CES sustainability scope we conclude the *Spaces—Practises—Goods Nexus*, which focuses to the sustainable consumption of locally produced goods representing the regional identity. This is a new term based on the concept of the Water—Energy—Food Nexus (Hoff 2011). The Nexus approach has as scope the re-integration of related aspects, and a participatory approach, the Nexus dialogue. The Nexus approach is a paradigm shift, from a pure sectoral approach to solutions that embrace a cross-sectoral, coherent and integrated perspective. The knowledge transfer on the respective methodologies will be future teaching tasks.

5 Implementation of Water-Related Cultural Ecosystem Services in Teaching Programs

The main conclusion for the implementation of water-related CES in teaching programs is that teaching in all disciplines must take into consideration a holistic, reflective and participatory approach under the QBL focusing on the interrelation between human and natural environment. LeVasseur (2014) provided a chance for students to talk about their own commitments as citizens of a biotic and a cultural community, and he put the following questions:

- What motivates their identity as a student and as a community member?
- How can they become more self-aware of these motivations, and why might they matter?
- How can they use their college investment to become a sustainability change-agent, and what skills do they need to make this happen?

Having in view the current discussion on sustainability, these are the questions which should be answered by the respective generation first. The proposed content for education for CES is concluded from the case studies, and the practical experi-

Table 2 Proposed content for education for CES

	Courses	Concepts	Systems	Measurement	Practices
Primary School	Single pillars taught broadly in general lessons	(a) Ecology (b) Heritage (c) Identity	(a) Ecosystem (b) Values (c) Society	(a) Closed cycles (b) Non-monetary value (c) Home related people	(a) Awareness (b) Esteem (c) Membership
Secondary School	Integration of CES subjects taught in all types of existing courses	(a) Environmental spaces (b) Cultural practises (c) Cultural goods	(a) Equilibrium between users and providers (b) Win-win-constellations (c) Renewable local resources	(a) Costs environmental damage (b) Measures of well-being (c) Income through CES	(a) Green entrepreneurs (b) Benefit sharing (c) Fairtrade and local trade
Tertiary Level	Integration of three pillars taught in stand-alone units (sustainable development studies)	(a) Environmental spaces/Cultural practises/Cultural goods (b) Inter-generational concerns (c) Participatory processes and Nexus dialogue	(a) Sustainable development strategies and cultural identity (NSDS) (b) Spaces—Practises—Goods Nexus (c) Education for sustainable development strategies (ESD)	(a) Relational Footprint (b) Sustainability indices (c) Sustainability impact assessments	(a) Level of de-fragmentation and re-integration (b) Sustainable consumption (c) Teaching-Research-Practice Nexus (TRPN)

ence. Intentionally is used again the general OECD curricula framework (2008) as structure, having a modified content with focus on CES teaching (Table 2).

The tertiary educational level refers to the participatory processes and Nexus dialogue under the Spaces—Practises—Goods Nexus. The communication mechanisms cover holistic, collaborative learning methods and tools (e.g., problem based learning, QBL, Ecological and Social Footprint, gamification, online collaborative learning, etc...). Important is also a re-orientation and training of educators on the approaches for linking theory and practice, as well as transdisciplinary. Important will be also, that subjects like

- Historical perspective of changes in the world over time,
- Geographic perspective of events and problems take on different complexities,
- Human and gender equality perspective,

- values perspective of individuals, cultures and countries under the cultural diversity perspective

will not be anymore discussed and taught in social sciences programs only, but also in non-social fields to raise awareness. Also religion must be considered carefully in the discussion on implementation strategies. Chuvieco (2012) pointed out, that even if religious traditions are not currently a leading force behind national environmental policies, they might have a large potential for shaping new attitudes to nature.

6 Conclusions

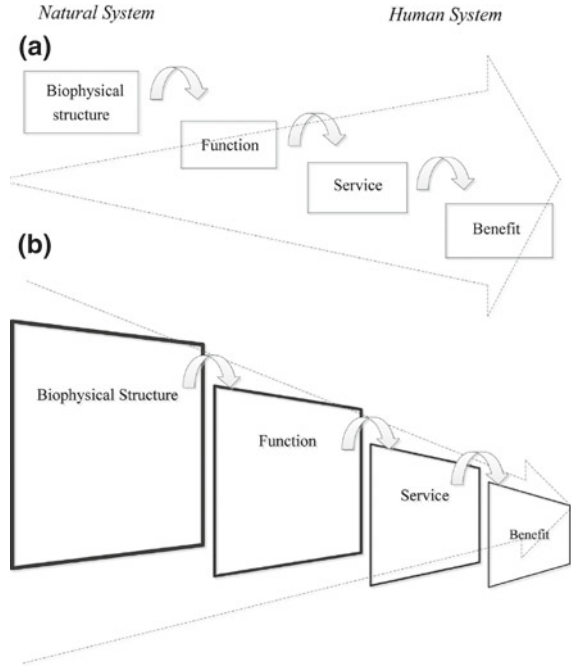
With the Spaces–Practises–Goods Nexus approach, based on Fish et al. (2016), which introduces CES into the sustainability approach under the QBL concept, might be developed the linking between SSH, nature sciences and engineering. Important is a re-orientation and training of educators on the approaches for linking theory and practice, as well as interdisciplinarity and transdisciplinary to initiate a holistic discussion on the intellectual and moral aspects of sustainable development (Barth and Rieckmann 2012). To achieve those scopes, the future development of a social and participatory research cluster would be indicated. This is consistent with some existing frameworks, e.g. the Ecosystem Approach (Convention on Biological Diversity), where four of its 12 principles state that

- (1) ecosystem management is a matter of societal choice;
- (2) decentralization of decision-making;
- (3) consideration of all forms of relevant knowledge; and
- (4) the involvement of all relevant sectors of society and scientific disciplines (see also Orchard-Webb et al. 2016).

Looking back to the historical roots of the ecological crisis as highlighted by White (1967), its needed to ask if in last decades the cultural values and services got out of sight and awareness. The teaching for CES for sustainable development must have a focus on shares values under the Spaces—Practises—Goods Nexus, and the creation of benefits for the involved stakeholders. Shared values are the basis for shared benefits in the frame of sustainability implementation strategies. Irvine et al. (2016) stated, shared values thus do not necessarily exist a priori; they can be deliberated through formal and informal processes through which individuals can separate their own preferences from a broader metanarrative about what values ought to be shared. La Nottea et al. (2017) underlined that achieving benefits is a cascade approach, which is required to be re-interpreted, as shown in Fig. 12. The focus must be re-orientated to nature and the biophysical structure, away from the anthropentric system and maximizing benefits. This requires a sustainability transition, and the people who will have to implement this transition are to be trained now (Fig. 13).

Kull et al. (2015) stated that ES are also highly political, due to the question: Who (or what) benefits from the concept, and who loses? These are social questions

Fig. 13 Ecological system according to La Nottea et al. (2017); **b** Systems Ecology re-interpretation of the cascade framework, with emphasis on the underpinning complexity of the ecological system according to La Nottea et al. (2017)



which need to be answered carefully. CES educators have a high responsibility as they, beside parents and family, lay cornerstones for cultural practises and “relational footprint building” approaches. The overall scope is to link SSH research for solving social problems to achieve sustainable development, to encourage scholarly collaboration, to identify indigenous needs, and to enhance interdisciplinary research between SSH, nature sciences and engineering. In this regard, the water-related CES were used to initiate the scientific discussion.

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Towards an Integrated Disciplinary Narrative and an Enhanced Role for Geography in Education for Sustainability: Reflections on South African Higher Education



Rudi Pretorius

Abstract As a bridging discipline between the humanities, social and physical sciences, the claim by Geography that it focuses on interactions between the ‘human’ and ‘natural’ world, positions it well to play a leading role in Education for Sustainability (EfS). Despite the prominence of the twenty-first century environmental dilemma and the increasing importance of sustainability and associated discourses, the international literature provides evidence that not all geographers attach the same importance to the synergy between the human-environment identity of the discipline and sustainability and thus do not necessarily align their teaching and research accordingly. As highlighted in the international literature, the extent of the contribution by Geography to EfS depends on the interpretation of the human-environment identity by geographers and how this is transferred to students during their undergraduate studies. Utilising undergraduate curriculum information obtained from 19 departments of Geography in South Africa, this chapter reflects on the dominance of the dualistic treatment of the human-environment identity in Geography curricula through the separation between Human and Physical Geography. However, Integrated/Thematic Geography, through which the human-environment identity is approached in a more holistic way, is under-represented in the curriculum. This largely one-sided approach to the human-environment identity in South African undergraduate Geography curricula may lead to over-simplified conceptualisations of the twenty-first century issues humankind is grappling with, and cannot be afforded much longer. The paper concludes with some options for transformation of Geography to move from the dualistic treatment of nature and society towards a more integrated approach, which will not only be true to the higher goal of the discipline, but also increase its utility in the context of EfS. This transformation which will ensure a continued role for the discipline in the increasingly cross-disciplinary context in which teaching, learning and research has to be conducted in order to be relevant in the twenty-first century.

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Keywords Nature-society dualism · Human-environment identity Transformation · Integrated approach · Education for sustainability

1 Introduction and Aim

1.1 Dealing with Twenty-First Century Environmental Change and Sustainability in Higher Education, with Specific Reference to the Humanities

The challenges faced by humankind in association with the twenty-first century environmental crisis necessitate a re-orientation towards environmental sustainability in all spheres of life, including the higher education sector. This is easier said than done, since the problems faced by practitioners in the field of sustainability are mostly ill-structured and ‘messy’ and also have no single, clear-cut solutions (Mpofu 2015). While such problems clearly require systems thinking, the structuring of higher education in terms of the humanities, social and physical sciences makes it difficult to bridge disciplinary boundaries (Smith 2011). The humanities have a definite role in highlighting the interface between cultural praxis and human-environment interactions, and the values guiding human activities (Levasseur 2014). In this context sustainability learning exposes students to ideas on cultural authority and environmental management, critical thinking about environmental and other beliefs and to reflect on their own culturally connected and value driven environmental conceptions. The challenge remains to imbed learning experiences as these in inter- and trans-disciplinary programmes that span across the humanities, social and physical sciences, as required by sustainability learning (Godeman 2008). Deliberate efforts towards creation of more integrative, holistic and collaborative problem focused approaches are therefore required, with a definite role for community-focused and place-based learning to make sustainable development more meaningful to students (Manteaw 2012).

1.2 A Role for Geography in Education for Sustainability (EfS) or an Opportunity Lost?

Geographers generally agree that a unique aspect of Geography involves the way in which the discipline incorporates a variety of explanatory constructs (Turner 2002). This inclusivity has the potential to assist in bridging the divide between the physical sciences and the humanities that continues to threaten the rationale that keeps the discipline together. Apart from the divide between the physical sciences and humanities, leading to the well-known division between Physical and Human Geography, geographers tend to partition knowledge in terms of objects of study, leading to the

further diversification of Geography into sub-fields as Climatology, Geomorphology, Urban Geography, Economic Geography, etc. The question is how well this disciplinary self-definition and its rationale serves capacity building for sustainability in the twenty-first century and to what extent it fits the identified need for giving more attention to EfS in Geography. In this regard O'Brien (2010) points out that although the contribution of geographers to the discourse on teaching, learning and research on global environmental change cannot be denied, many specialisations in Geography are not performing according to expectations. However, the growing need for a fully integrated approach to human–environment interactions presents a golden opportunity for Geography to fulfil its role as a discipline that bridges the humanities, social and physical sciences, rather than to get stuck in divisions and turf wars between sub-specialisations (Skole 2004).

1.3 Aim, Methodology and Value of This Chapter

Although Geography is well placed to address the sustainability challenges associated with twenty-first century environmental change, the observation is that the discipline is under-represented in EfS (Grindsted 2013; Liu 2011). To understand the value of Geography in the twenty-first century, Simanden (2002:264) argues for clarity on the understanding of the discipline, both as a 'tradition of thought' and a 'tradition of practice'. Within the context of 'What it takes to be a good geographer' (Simanden 2002), this chapter reflects on how EfS is dealt with in undergraduate Geography at universities in South Africa. The work reported on in this chapter formed part of the PhD research of the author, which aimed to propose a suitable approach for a drive to strengthen the position of EfS in the undergraduate Geography curriculum in South Africa (Pretorius 2017). This research was conducted within the context of Integral Theory as a theoretical framework, which aligns with calls for adoption of a multidimensional worldview, and acknowledges the interrelatedness of realities confronting humankind in the twenty-first century (Laszlo 2008). Reflecting on South African Geography curricula within a framework of integral pluralism, with attention to relationships between 'the Who' (epistemological distance), 'the How' (methodological variety) and 'the What' (ontological complexity) (Esbjörn-Hargens 2010:143), is bound to reveal new insights on the integration of EfS in Geography. The results obtained are useful not only to show to what extent Geography fulfils expectations about the incorporation of EfS in higher education in South Africa, but also supplements results of related research conducted in Europe and North America.

2 The Human-Environment Identity of Geography and EfS

2.1 *Evolution Over Time and Current Position of This Identity*

Many scholars are of the opinion that an integrated view of phenomena on Earth, including elements from the humanities as well as the social and physical sciences, comprises a core element of Geography—with Harvey (1969) who is often quoted in this regard. This position, referred to as the human-environment identity of Geography (Turner 2002), has taken many turns over time, and is currently under reconfiguration once again (Grindsted 2013). Analysis of the history of Geography's human-environment identity shows that it did not develop in isolation but evolved over time in terms of conceptualisation as well as preferred methodology (Grindsted 2015a). This varied from the recognition that landscapes are bounded areas and need to be analysed as such by Von Humboldt (1769–1859) and Ratzel (1844–1904), to the fusion of the human-environment identity with the spatial-chorological identity of Geography by De la Blache (1845–1918) and Brunhes (1869–1930). The latter two scholars both emphasised the necessity of place-based approaches, especially if the human-environment condition is indeed to be regarded as the substance of Geography (Turner 2002).

The current prominence of twenty-first century environmental change, combined with developments in geoscience and growing awareness of the impact of human activities on the Earth, aligns well with Geography's human-environment identity (Castree 2015). While different framings of human-environment interactions are indeed possible and have to be encouraged, Harden (2012) emphasises the need for geographers to cross the physical-human divide, which will empower them to produce the integrated and relevant knowledge and insight that is required to address issues related to environmental change. Despite the prominence of the human-environment problematic not only in higher education, but also in the world at large (Castree 2015), some geographers seem to prefer to engage with the human-environment theme more or less ad hoc (implicitly or explicitly), whereas others organise it according to constructs separating humans from nature (Grindsted 2015a). At the same time, however, some geographers not only aspire to, but also practice engaged pluralism, thus contributing to reconfiguration of the sub-disciplinary matrix that has become a distinct characteristic of Geography (Castree 2012).

2.2 *Different Forms Taken by This Identity*

Although the nature-society nexus features as a focus in the undergraduate curricula of many Geography departments, a division between Physical Geography and Human Geography is apparent (Ziegler et al. 2013). While this ontological dualism has been organising teaching, learning and research in Geography over a long period of time

(Castree 2015), recent trends in the structuring of undergraduate Geography curricula resonate with calls for the discipline to improve its alignment with the integrative nature-society narrative. This includes the need to engage with the many possible forms of enquiry that are available to frame issues that Earth and humankind are grappling with (Demeritt 2009). Some refer to this as ‘Geography’s new turn to synthesis and holism’ (Sui and DeLyser 2012), with so-called ‘hybrid geographies’ positioned well to give form to the required synthesis by displacing boundaries between divisions, thus working towards creation of something ontologically new (Rose 2000).

The reality in many Geography departments is that while some staff continue to specialise in Human or Physical Geography (or even sub-specialisations thereof), other staff are working towards increased integration within the discipline. This unfortunately contributes to undergraduate Geography curricula that appear to consist of a proliferation of a number of weakly interacting and fragmented component parts, with no overall, binding narrative (Castree 2012). What is required, however, is not simply more collaboration between these sub-fields or the mere addition of extra courses or modules. A merger of the different epistemologies and narratives is instead required, thus creating a revamped human-environment tradition that integrates ‘the social, economic and political debates in Human Geography with the expertise of and debates among physical geographers and among geographic information scientists’ (Yarnal and Neff 2004:29).

2.3 Links Between This Identity and EfS

Despite the support pledged by the International Geographical Union (IGU) to EfS as long ago as 2007, evidence related to the development and implementation of human-environment pedagogy in the discipline is weak (Yarnal and Neff 2004). While some geographers view the human-environment theme as a suitable vehicle to link Geography and EfS (e.g. Jahn et al. 2011), the dilemma is that others have criticisms regarding the validity of sustainability and sustainable development as concepts (Grindsted 2015a). Other observations include that sustainability features implicitly in Geography, or that other concepts may be better suited to study geographical phenomena (Grindsted 2015b). The results of research on teaching and learning in Geography (e.g. Bonney 2012; Gress and Tschapka 2017), point towards the paradox that although sustainability themes are accepted to be central in the education of geographers, there is a significant reluctance among geographers to use sustainability in an explicit way in curricula.

Although evidence points towards the reconfiguration of the human-environment identity of Geography towards more direct association with sustainability (Grindsted 2013), the incorporation of sustainability in undergraduate Geography curricula faces challenges on a practical level. First, it has to be accepted that the systematic sub-specialisation in Geography over a long time had the effect to alienate Human from Physical Geography, to the extent that this division will not easily disappear

(Demeritt 2009). Secondly, it has to be considered exactly how sustainability can be incorporated in Geography, so that it can fulfil expectations of an integrative, meta-narrative and not slip into the position of another sub-discipline. Thirdly, the politics associated with the representation of nature–society relations (Grindsted 2015a) need to be carefully considered when introducing sustainability themes into curricula, so as to make sure that teaching and learning can take place within the context of unbiased critical engagement.

3 EfS in Undergraduate Geography in South Africa

3.1 The Context of Undergraduate Geography in South Africa

In line with developments internationally, undergraduate Geography in South Africa developed an identifiable structure and organisation over time (Fairhurst et al. 2003). Initially this was closely aligned with practices in the Anglo-American academic sphere (Nicolau and Davis 2002). Anglo-American models of geographic thought were therefore taken over and used uncritically by South African scholars in teaching and research, despite the irrelevance of these models for the African context (Simon 1994). However, growing distance between South African Geography and its roots gradually set in and continues to guide South African geographical discourse. During the peak of the political struggle in South Africa in the 1980s, associated with academic boycotts and calls for disciplinary repositioning, heated debates on the direction of Geography in the local context were common (Ramutsindela 2002). Socio-political conditions in South Africa required geographers to redefine their take on society and space to engage with the challenges forming part of the democratic transition of South Africa (McCarthy and Rogerson 1992).

It stands to reason that the progress in South Africa over the past fifty years or so, from viewing Geography within a positivist spatial perspective towards considering space and society within a more critical framework, served the standing of the discipline well (Oelofse and Scott 2002). This transformation improved opportunities for geographers to challenge the status quo and to explore and develop the theme of nature–society relationships, which is regarded as an important thread to integrate the different sub-disciplines of Geography (Ibid). For Geography to be regarded as role player in environmentally related fields, this referred to integration is crucial (Sandham and Retief 2016). The several environmental challenges faced by South Africa are a key research focus of many South African geographers, and were incorporated in the undergraduate Geography curriculum over time. However, perpetuation of the Physical and Human Geography divide and the lack of theoretical debate among local geographers (Ramutsindela 2002) constitutes an opposite force that continues to limit the contribution by Geography (Ramutsindela 2001).

3.2 Methodology for the Assessment of the Contemporary Undergraduate Geography Curriculum

In total 19 departments of Geography were considered for an assessment of the syllabus of every undergraduate module being offered, as obtained from faculty brochures/yearbooks (Pretorius 2017). The aim was to determine the alignment of each of these modules to the following divisions/approaches in Geography: Human Geography (H), Physical Geography (P), Integrated/Thematic Geography (I), Environmental Science/Management (E), Spatial/Quantitative/Qualitative Analysis (S), GIS/Cartography/Remote Sensing (G) and 'Other' (O)—including Meteorology (M) and Tourism (T). The protocol for this assessment (Ibid) provided for the fact that many modules are complex, and can therefore not be allocated fully to a specific division/approach. Also taken into account was that not all modules in a specific department necessarily have the same credit loading. The results of this assessment of the undergraduate Geography curriculum in South Africa (2014–2015) are shown in Fig. 1.

3.3 Results of the Assessment of the Curriculum Composition

With reference to Fig. 1, a trend originally observed in 2000 (Fairhurst et al. 2003), and which is continuing to grow in importance, is the contribution by Category E (e.g. 47.7% for the University of Zululand). The growing demand for a skills focus is continuing (Ibid), which explains the quite high contribution by Category G for some departments (e.g. 41% for Nelson Mandela Metropolitan University). Regarding vocational training, some departments offer subjects in addition to Geography, as Tourism (e.g. University of the Western Cape), while mergers lead to Geography being included in bigger departments or schools (e.g. University of Pretoria). An interesting trend is that departments with high weightings for Categories E/G, do not have high weightings in the traditional categories of P and/or H (e.g. University of Pretoria: H–8.7%, P–7.7%, E–8.2% and G–35.7%). Integrated/Thematic Geography is a newcomer, focusing on the holistic treatment of real world issues, with a frontrunner in this category the University of South Africa. The view of Geography supplied in this paragraph, illustrates an important New Age characteristic of the discipline, namely an astonishing diversity in curriculum composition and approach between various departments and universities.

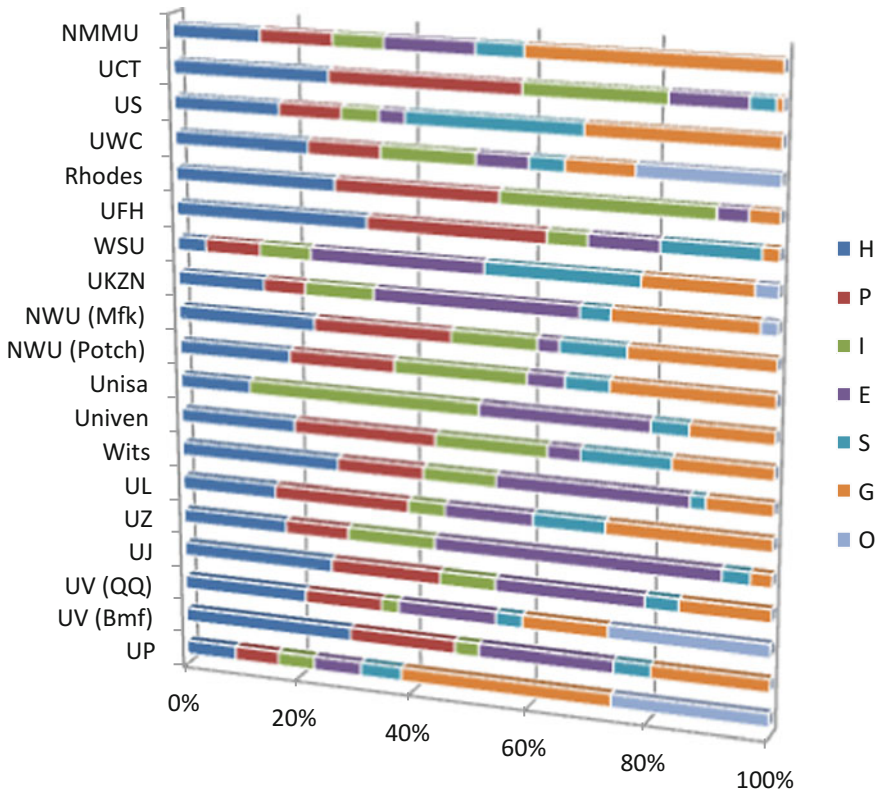


Fig. 1 Stacked column presentation of the contributions of various divisions/approaches to undergraduate geography in South Africa, 2014–2015 (Pretorius 2017). (**Divisions/Approaches:** H—Human Geography; P—Physical Geography; I—Integrated/Thematic Geography; E—Environmental Science/Management; G—GIS/Cartography; S—Spatial/Quantitative/Qualitative; O—Other. **Universities:** UP—University of Pretoria; UV (Bmf/QQ)—University of the Free State (Bloemfontein/QuaQua); UJ—University of Johannesburg; UZ—University of Zululand; UL—University of Limpopo; Wits—University of the Witwatersrand; Univen—University of Venda; Unisa—University of South Africa; NWU (Potch/Mfk)—North-West University (Potchefstroom/Mafikeng); UKZN—University of KwaZulu-Natal; WSU—Walter Sisulu University; UFH—University of Fort Hare; Rhodes—Rhodes University; UWC—University of the Western Cape; US—University of Stellenbosch; UCT—University of Cape Town.)

3.4 Results of the Assessment of the Sustainability Coverage by the Curriculum

The results of the assessment of the undergraduate Geography curriculum in South Africa (2014–2015) in terms of inclusion of sustainability are shown in Fig. 2 (Pretorius 2017). This assessment utilised the sustainability characteristics of the *Sustainability Tracking, Assessment and Rating System (STARS)* (AASHE 2012).

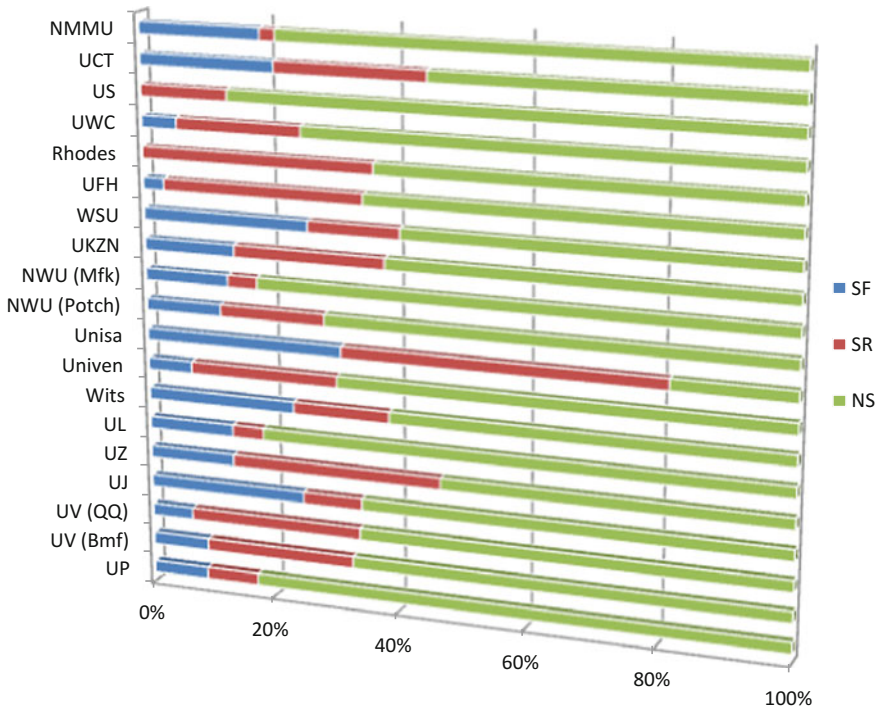


Fig. 2 Stacked bar presentation of the sustainability component associated with undergraduate Geography in South Africa, 2014–2015 (Pretorius 2017) (**Universities:** Refer to Fig. 1 for abbreviations. **Sustainability measures:** SF—Sustainability-focused; SR—Sustainability-related; NS—Not sustainability-focused or -related)

The *STARS* curriculum section (Category 1, Education and Research—ER) distinguishes between sustainability focussed and sustainability related courses/modules. Despite criticism on lack of clarity about the ‘sustainability related’ category, it was included in this assessment to make sure no important information is omitted, since it was suspected that the ‘sustainability focused’ category would not rate very high. From Fig. 2 it is obvious that the sustainability contribution to the curricula of many, if not the majority of Geography departments in South Africa is not very substantial. The average sustainability-focused contribution to the curriculum per department is 13.5%, with the average sustainability-related contribution 20.1%. Taken together, the average sustainability-focused and sustainability-related contribution per department is 22.9%. However, significant variations are observed, such as the sustainability-focused contribution varying from as low as 0% (Rhodes and University of Stellenbosch) to as high as 31.35 (University of South Africa). The sustainability-related contribution shows equally significant variations, from as low as 5% (University of Limpopo) to as high as 50% (University of South Africa).

Focusing on the departments with very high- or very low-sustainability contributions, associations can be drawn between these characteristics and the way in which the curricula for such departments have been compiled. The first important permutation that can be distinguished in Fig. 2, is that departments with a relative high weighting for Categories E and/or I, such as for the University of South Africa, University of the Witwatersrand, University of Zululand, University of KwaZulu-Natal, Walter Sisulu University and University of Cape Town, are inclined to show the highest sustainability contributions. For a department as at the University of South Africa, with a relative high weighting for both Categories E and I, this effect is rather pronounced. The second important permutation is that departments with a relative high weighting for Category G, such as at the University of Pretoria, University of Stellenbosch, Nelson Mandela Metropolitan University and University of Limpopo, show relative low sustainability contributions.

To conclude, it appears as if the sustainability contribution may feature in the curriculum primarily along on or more of the following three avenues:

- First it may feature in an ad hoc way as a sub-theme in modules, wherever it might be applicable and/or relevant. This, however, is not well-planned, lacks visibility and is not the type of engagement foreseen by the Lucerne Declaration.
- Second it may feature as individual modules packaged in such a way that it clearly showcases the sustainability association. Such offerings typically address themes as human impacts on the environment, management of the environment or sustainable development.
- Third it may feature as sustainability being used as a thread, binding all the modules in the curriculum together, with the University of South Africa as example, although this is not very common in South Africa.

4 Linkages Between the Human-Environment Identity and EFS in Undergraduate Geography in South Africa

4.1 Methodology for Assessment of Linkages

The same protocol as described in the previous section of this chapter for the assessment of the syllabi of undergraduate modules offered by departments of Geography in South Africa, was used to explore the nature of connections between the human-environment identity and EfS (Pretorius 2017):

- For the exterior, third person perspectives, it was assumed adequate to focus the assessment on modules that contain aspects of Categories H, P and I (as elements representing the human-environment identity).
- For interior first person perspectives, data was sourced from eight individual interviews with South African geographers (Ibid).

Upper Left (UL)	Upper Right (UR)
<u>Methodology used: Individual interviews</u> Interior view Individual; 'What I think or experience' Intentional Subjective, inward view of the 'self' First-person perspective	<u>Methodology not used</u> Exterior view Individual; 'What she/he or it does' Behavioural Individual objectively viewed Third-person perspective
I	It
We	Its
Second-person perspective Inter-subjective dynamics Culture and world view of group Collective; 'What we think or should do' Interior view <u>Methodology used: Focus groups</u>	Third-person perspective Inter-objective dynamics Social and environmental systems Collective; 'What they do' Exterior view <u>Methodology used: Curriculum assessment</u>
Lower Left (LL)	Lower Right (LR)

Fig. 3 AQAL basics—mapping of the four quadrants of integral theory Adapted from Esbjörn-Hargens (2009):3–4, Figs. 1 and 2

- Interior, second person perspectives were obtained from focus groups conducted at four South African Geography departments, representative of different schools of thought on the undergraduate curriculum (Ibid).

These methodologies are associated with respectively the following quadrants of the AQAL model of Integral Theory: lower right (objective; third person), upper left (subjective; first person) and lower left (inter-subjective; second person). As explained by Esbjörn-Hargens (2006), it is possible to form a coherent picture of the problem been investigated through triangulation and cross-correlation of the data obtained by the various methodologies, while making inside/outside observations of the collective interior/exterior and/or individual interior/exterior. This can be achieved by using as few as three different methodologies (one per major category—listed in Fig. 3), which is indeed the case with the research reported on in this chapter.

4.2 *Assessment of Exterior, Third Person Perspectives*

Based on an extensive curriculum assessment, Pretorius (2017) reports that the human-environment identity is alive and well in Geography in South Africa, with the combined presence of Categories H, P, I exceeding 50% of the undergraduate curriculum for more than half of the departments, and even reaching 82.1% (University of Cape Town) and 90% (Rhodes University). The bulk of this contribution, however, lies with Categories H and P, for which the combined presence varies between 12.2% for the University of South Africa to 62.8% for the University of Fort Hare. Varying between 3% (University of the Free State—QuaQua) and 39.4% (University of South Africa), Category I manifests as a much smaller, although significant component.

In terms of the sustainability component, Pretorius (2017) shows that the relative sustainability contribution in the subgroup of modules featuring Categories H, P and I, is significantly higher than for the full curriculum for some departments, but indeed not for all of them. The sustainability contribution is therefore not necessarily concentrated in the H-P-I group, but may also occur in significant proportions in other parts of the curriculum. Comparison of the sustainability contribution of modules featuring Categories H and/or P with that of modules featuring Category I, leads to more insight. This comparison flows from the observation that modules featuring Categories H and/or P are usually oriented towards sub-disciplinary demarcation and lacks an integrative human-environment narrative. Modules featuring Category I, on the other hand, are inclined to blend better with the integrative narrative and with EfS. Figure 4 serves as confirmation that the relative sustainability contribution of modules featuring Category I by far exceeds that for modules featuring Categories H and/or P. In terms of EfS, Integrated/Thematic Geography is therefore the preferred approach, with sub-disciplinary oriented Physical and Human Geography less suitable.

4.3 *Assessment of Interior, First Person Perspectives*

Interior, first person perspectives have been obtained during a series of individual interviews in order to obtain an outside view of individual, subjective perspectives regarding the position of EfS in relation to the human-environment identity of Geography (Pretorius 2017). Examples of some of the lines of thought that emerged appear in Quote Box 1. Virtually all interviewees attached significant importance to the human-environment identity as a characteristic of Geography. Although this positions Geography well in terms of EfS due to the links between the human-environment identity and the physical, or social and human sciences, not many of the interviewees regarded this as a specific advantage. The need for integration between Human and Physical Geography was expressed by a number of interviewees, although some seemed to be happy with maintenance of a clear division between these major sub-disciplines. Some pleas for closer cooperation and integration were also voiced, with examples included in Quote Box 1.

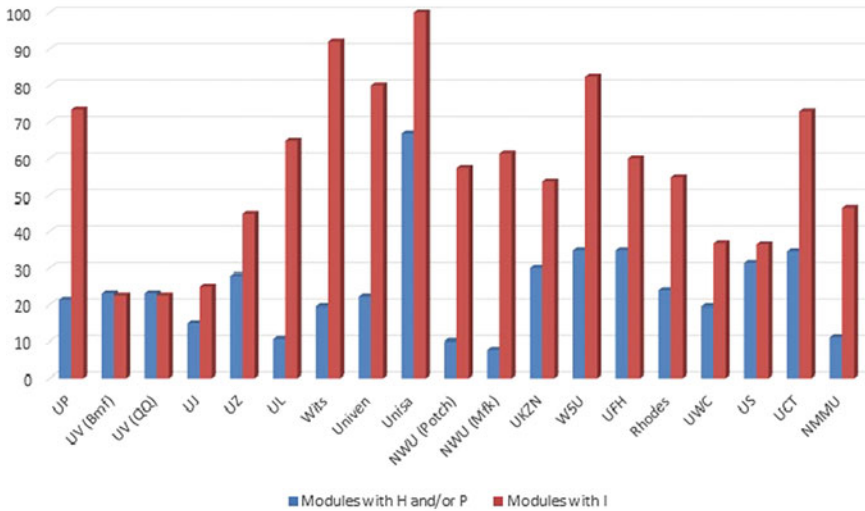


Fig. 4 Sustainability contribution (%) for modules in which categories H and/or P are present, compared to modules in which category I features, South African undergraduate Geography (2014–2015) (Pretorius 2017)

Another important aspect about the human-environment identity that formed part of the interviews concerned the need for possible transitions required in this identity to stay relevant in view of the challenges posed by twenty-first century environmental change. The message emerging from responses in Quote Box 1 points towards acceptance that not only more integration is required between Human and Physical Geography, but that various pathways exist and are preferred on how and at which stage the required integration should be sought. Some are of the opinion that a certain level of expertise is required before it will be possible to challenge students with tasks requiring integrative thinking. The value of sustainability thinking and EfS to facilitate and support the required integration is not only alluded to, but directly supported, although some geographers remain sceptical about the potential which sustainability really holds for Geography and regard it as one of several themes that can be dealt with in Geography, and that it should therefore not receive any preferred treatment.

**Quote Box 1 – First person perspectives:
Geography's human-environment identity and EfS (Pretorius 2017)**

Topic 1: Associations between the human-environment identity and EfS in the undergraduate Geography curriculum

"There's the human side, there's the physical side and even in just those there are so many different sub-disciplines ..."

"Because we deal with space, we deal with environment, we deal with people and sustainability and sustainable issues are often located in that interface between humans and environments ..."

"No, I think they go separate into Human Geography and Physical Geography, but at honours there's a possibility of integration."

"What I don't like though is the distinction between Physical Geography and Human Geography. I think that that's too wide a distinction and it sets up really a kind of ... bias I guess in how you think and where you should be located. I think you should be a geographer and then have a specific specialisation."

"But I think it is very important for the human environment to be linked to the physical environment in some kind of fashion. ... I think we deal with them too separately still. I mean there's mention of the relationship between the two, but the relationship I think is more like a Tudor game."

"I think the whole concept of sustainability is a fairly weak one because it's used so broadly and generally and it's become fairly meaningless because it's just ... pulled out for almost everything ..."

Topic 2: Transitions required in the human-environment identity of Geography in order to stay relevant in view of the challenges of 21st century environmental change

"... at the undergraduate level you still have to teach the new student coming from matric to see things in an integrated way, ... , not to see in one perspective and you think that's all, it is not all. Whereas sustainability offers a possibility ... of an integrated approach."

"... I think it's very difficult because you need ... the skill of lateral thinking, be able to identify relationships between things and ... systems thinking is very tricky, because you really need an in depth knowledge of each component before you can see the synergy as to how they impact each other negatively or positively."

"... Physical and Human Geography can be quite different at times. Taking a thematic approach does allow the two topics to sort of blend into each other, particularly in topics like sustainable development ..."

"They intended to maintain the physical ... and the human component ... but also working towards integration which actually becomes, let's call it a third leg But you need like the expertise of the one and ... of the other actually to make this thing work. It doesn't exist by itself."

"... if you go and speak to any geographer, they're aware of this link between the human and the physical, ... but I'm not sure whether that is explicitly communicated ... So everybody accepts it's like that, but it's not really explicit. I think it's taken as obvious ... I mean that's where our problem comes in."

Quote Box 2 – Second person perspectives: Geography's human-environment identity and EfS (Pretorius 2017)
<p><i>Topic: Associations between the human-environment identity and EfS in the undergraduate Geography curriculum (Translated responses: indicated with a star)</i></p> <p>I am happy with way how we currently present it (... sustainability ...) by referring to/introducing the concept at this stage, but not to have it as specific aim ...*</p> <p>... perhaps there are themes ..., but it is not the intention ... the intention is to really do the traditionally strong components of Geography on first and second year level ... the themes are the traditional strong foci of Geography.*</p> <p>"... I do water pollution, environmental degradation, landfill sites, waste water treatment works ... and all of these (are) sustainability issues but it is never under the banner of sustainability. It is under the broader banner of environmental issues."</p> <p>I think the Millennium Development Goals provide better direction for the content of Human Geography modules than specifically only sustainability. It was not a specific point of departure when you selected content.*</p> <p>And I think sustainability is easier to incorporate in a program that is integrated between people and environment ...*</p> <p>"Philosophically and theoretically the human-environment relationship as one of the streams in Geography are probably best suited to focus on environmental and sustainability studies or issues and that association is as clear as daylight. If someone is not handling that in his or her course, then I don't know where they ..."</p>
<p><i>Topic 2: Transitions required in the human-environment identity of Geography in order to stay relevant in view of the challenges of 21st century environmental change</i></p> <p>I think we are on a journey, but not at the destination yet. This thing of the big themes – the "Big Questions" – is something we need to make stronger. This is the one thing I can think about now and the other thing is to continuously work to sharpen the focus points.*</p> <p>I know about a module when I was in third year, Environmental Geography, with aim to bring all the physical and human aspects together ... but I must say, that it was not a very successful module because it was on very superficial level ... "bits and pieces". And in it sustainability was quite central. F1: It is not necessarily superficial, it is more about the space to be able to lecture it, I think.*</p> <p>It is easy for us since we do not have a sub-disciplinary approach. If I lectured Geomorphology, I would not really have known to how to work sustainability into it. Most of our modules have a focus on human-environment relationships somewhere, and the moment you mention those, it becomes an automatic thing for me ...*</p> <p>"... we do have that strong artificial divide between Human and Physical Geography ..."</p> <p>"... but we are pretty much in silos in Human Geography and Physical Geography at first year level and integration is taking place, I would say almost on a staff member basis"</p> <p>"I want to do it differently, but the structure won't allow it."</p>
<p>A star (*) indicates a response translated by the researcher from Afrikaans to English.</p>

4.4 Assessment of Interior, Second Person Perspectives

To supplement the outside view obtained by individual interviews, a few focus groups were conducted to obtain an inside view of the collective interior through study of the inter-subjectivities emanating from discussions between focus group participants (Pretorius 2017). To facilitate direct comparison the same themes than for individual interviews were used for focus groups. Although some individual interviews highlighted the uneasiness of some geographers with notions of sustainability, the focus groups spent more time on this issue with stronger opinions about it eventually put forward. Some of these are included in Quote Box 2. Despite these strong opinions, the collective view that emerged is that sustainability is covered in undergraduate Geography but mostly implicitly, and sometimes even explicitly, but geographers do not necessarily attach an important role to it.

Concerning possible transitions required for the human-environment identity to stay relevant in view of the challenges posed by twenty-first century environmental change, several views flowed from the focus groups, but none made the connection that a transition to a greater focus on sustainability might be required. This fits with the general reluctance to adopt sustainability in the first place as expressed in their discussions of the first topic of the theme ‘Geography’s human-environment identity and EfS’. The value of having bigger themes or questions and to plan and arrange the curriculum accordingly, came though quite strongly in one of the focus groups. Conversely, in another focus group the view was expressed that thematic modules, in which sustainability fits quite well, are inclined to be on a superficial level and therefore not held in high regard.

5 The Contribution of Geography to EFS in Higher Education in South Africa: Key Issues, Findings and Discussion

5.1 Status of EfS in Undergraduate Geography in South Africa

The research results presented in this chapter suggest that the sustainability contribution to the undergraduate curricula of the majority of the Geography departments at South African universities is not very substantial. This is despite the fact that a significant number of South African universities have already or are in the process to adopt sustainability policies at institutional level (Leal Filho et al. 2018). Although significant variations can be observed, the average sustainability-focused contribution to the curriculum per Department of Geography has been estimated at 13.5% (but varies from as low as 0% to as high as 31.4%). The average sustainability-related contribution has been estimated at 20.1%, but varies from as low as 5% to as high

as 50%. An interesting observation is that departments with relative high weighting for Categories E and/or I, tend to show the highest sustainability contributions. On the other hand, departments with a relative high weighting for Category G, tend to show relative low sustainability contributions (Pretorius 2017).

5.2 South African Experience of Geography as Bridging Discipline

The perspectives on the human-environment identity and its linkages with EfS in undergraduate Geography in South Africa which surfaced in this research have important implications for the view of Geography as a bridging discipline. The frequently reported ontological dualism between Human and Physical Geography (i.e. Castree 2015) is very clear in South Africa. This aligns well with the value attached to become a specialist in either Human or Physical Geography or in one of their further sub-specialisations and to get recognition and be rewarded as such (Ziegler et al. 2013). The negative side to this is that it limits not only the integrative capacity of Geography but also its role as bridging discipline. Integrated/Thematic Geography provides a much better prospect in this regard, but is still in a developmental phase at South African universities and unfortunately seems to be regarded as either superficial or too general to be of real value—a viewpoint expressed during the focus group and interview sessions which have been conducted as part of this research.

5.3 Interpretation of Results in the Context of an Integral View of the Human-Environment Identity and EfS in Geography

According to Integral Theory, the validity of all approaches are acknowledged and valued (Brown 2005), with mutual understanding between perspectives regarded as crucial to effectively address the challenges associated with twenty-first century environmental change (Esbjörn-Hargens 2005). From this viewpoint it is problematic that the human-environment identity in undergraduate Geography in South Africa is dominated by the dualistic treatment of Human and Physical Geography, while Integrated/Thematic Geography is largely under-represented. This unbalanced approach is not suitable to reveal the full dimensionality of the world, and may lead to oversimplified views of the twenty-first century issues such as environmental change, that humankind is grappling with, and which is something that cannot be afforded much longer. EfS can assist with transformation towards a more comprehensive framework, although underrepresentation in the curriculum, combined with reluctance by geographers to embrace the concept, presents a challenge.

5.4 Implications of Results for a New Vision for the Human-Environment Identity of Geography

This research highlighted that although some good examples of individual modules with an integrated human-environment approach form part of the undergraduate curricula of a number of Geography departments in South Africa, evidence of comprehensive human-environment undergraduate curricula is still largely lacking. Calls in this regard, e.g. Yarnal and Neff (2004), therefore do not seem to have affected undergraduate Geography curricula in South Africa yet. However, recent developments (in South Africa and worldwide) indicate more support for the need for restructuring, so that the discipline can improve its alignment with the integrative nature-society narrative. This includes the need to engage with as many as possible of the forms of enquiry that are available to frame the issues Earth and humankind are grappling with. In line with the new turn to synthesis and holism, so-called ‘hybrid geographies’ are well placed to give form to the required synthesis by displacing boundaries and working towards creation of something ontologically new.

5.5 Implications of Results for Teaching and Learning in Geography

Active learning pedagogies such as problem-based, project-based and inquiry-based learning are suited to support the development of higher order thinking skills required to move towards an integrative nature-society narrative for the human-environment identity of Geography, while ensuring that sufficient depth is achieved. The implementation of these pedagogies is necessary in order to counter the allegations of superficiality of integrative approaches in Geography, which surfaced during the focus groups and interviews which formed part of this research. The depth that is achieved during teaching and learning is therefore not simply associated with the study material being dealt with, but is also related to the type of engagement that students have with it during formative and summative assessment. Since assessment can be regarded as one of the main drivers of the learning process, it has an important role to play in the realisation of the envisaged outcomes of an enhanced role for Geography in EfS.

5.6 Limitations of This Research

Limitations are part and parcel of most, if not all research, and in the case of this research first refers to the ‘snapshot’ nature of the curriculum information as well as the perspectives of participants about the curricula at the various institutions. The mostly qualitative methodology that was followed may also be regarded by some

scholars as a limitation, although the type and depth of data that was obtained served the aim of the research well. The utilisation of an integral research design served to counter many of these limitations since it provides for the inclusion of research methods associated with various paradigms and acceptance of differences across a variety of research traditions, without necessarily reconciling or integrating these differences, which is contrary to the blending of differences into a whole associated with singular paradigmatic research.

6 Concluding Remarks

The first important finding of this research (based on curriculum information for 2014 and 2015) is that the explicit sustainability contribution to the undergraduate curricula of the majority of Geography departments in South Africa can be regarded as very low. However, significant variations exist between departments in terms of respectively the sustainability-focused and the sustainability-related contribution. To become a noteworthy role player in EfS, the relatively low percentage contribution of sustainability to the curriculum, especially the sustainability-focussed category, needs to be addressed. The second important finding relates to the fragmented, dualistic treatment of the human-environment identity in the undergraduate curricula of many departments, which implies that the transformation towards more meaningful engagement with sustainability in Geography will not be easy, although not impossible. The third important finding is that as a result of the presence of the indicated dualisms in Geography, the discipline appears to find it challenging to fulfil expectations to play a useful role in bridging the humanities, social and physical sciences.

Concerning future prospects, some choices regarding the approach to and the composition of Geography curricula are required before Geography will be able take up the position of a truly integrated discipline and will be recognised as such. Geography cannot continue to perpetuate separateness and sub-disciplinary specialisation, while at the same time presenting itself in terms of a narrative of integration. Before Geography will be able to function effectively as a bridging discipline, it will need to come to grips with its own built-in 'intra-disciplinarily', referring to the inclusion of humanities, social and physical sciences in one discipline. Although not implying the disappearance of sub-divisions in Geography, more focus is required on making connections across divides. Adoption of a sustainability focus, which requires an integrated approach, can greatly assist with this transformation. In addition, the Geography curriculum should not be viewed as a canon of topics to be studied, but rather in terms of the different ways of knowing, discovering and doing that are associated with Geography.

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Conjuring a ‘Spirit’ for Sustainability: A Review of the Socio-Materialist Effects of Provocative Pedagogies



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Abstract Evidence suggests that wider sociological structures, which embody particular values and ways of relating, can make a sustainable living and working problematic. This chapter introduces ideology critique, an innovative methodological perspective crossing the fields of theology, cultural studies and politics to examine and disturb the subtle and hidden ‘spirit’ which is evoked when we engage with everyday objects and interactions. Such a ‘spirit’, or ideology, embodies particular models of how humans relate to other humans, animals and the planet more broadly. This chapter aims, first, to document and demonstrate the subtleties of how the hidden ‘spirit’ can render attempts at sustainable working futile in the context of education, and then, second, to demonstrate how it can be used to intentionally evoke alternative ‘spirits’ which afford new relationality amongst humans, animals and the planet. In a broader sense, therefore, this chapter explores how concepts and political commitments from the humanities, such as ideology critique and ‘spirit’, can help (1) analyse how wider social structures shape our values and beliefs in relation to sustainable learning, living and working, (2) explain how these behaviours are held in place over time and (3) provoke insight into how we might seek to disrupt and change such persistent social structures.

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1 Introduction: The (*Ideological*) Problem with Pedagogy

In 2005, The United Nation's launched the Decade of Education for Sustainable Development initiative, which aimed to focus sustainable development efforts in the context of education. In reviewing the achievements of this initiative, Wals (2014) reported that although universities were 'beginning to make more systemic changes' (p. 8), 'profound' changes to learning processes were 'still scarce around the globe' (p. 14). More recently, evidence suggests that the integration of ESD into teaching and curricula is still problematic and limited, and that more needs to be done to realise the potential that universities can make within communities and broader educational systems (UNESCO 2016; Wu and Shen 2016). As such, there are continued calls for a greater focus on the implementation of sustainability in practice contexts and for more applied approaches which are more sensitive to local and cultural contexts (Leal Filho 2011, 2014; Leal Filho et al. 2017; Perrault and Clark 2017; Wall 2017b; Wall et al. 2017a).

Examining the implementation of ESD integration, evidence suggests that other competing imperatives such as 'efficiency, accountability, privatisation, management and control' can take precedence over, and thereby limit, sustainability within educational reform (Wals 2014, p. 8). This is reflected in evidence which attributes university administration and management in universities as the greatest obstacle to integrating sustainable development at the organisational level (Leal Filho et al. 2017). Importantly, the enactment of such imperatives are not limited to university administrators and managers, but can be understood as a wider set of sense-making frames or co-ordinates which shape how professionals conceive of and institute educational reforms at any level (Wall and Perrin 2015; Wall et al. 2017a; Wall 2017b), and which shape broader education-organisation structures and strategies (Akrivou and Bradbury-Huang 2015; Wall and Jarvis 2015).

Ideologies are conjured when we engage with everyday situations, interactions and objects, exist beyond direct capture and operate in ways which are likened to an omnipresent and omnipotent 'spirit' (Reason 2007; Wall 2016b; Žižek 2000, 2002). They encompass naturalised (taken for granted) social structures which embody particular values and ways of relating to each other, the earth, and its co-inhabitants (Wall and Perrin 2015). For example, Wall and Jarvis (2015) argue how teaching practices in the classroom, assessment criteria and assessment strategies can embody subtle and naturalised *individualistic* and *economically* driven notions of thinking, acting and contribution (also see Wall 2016a, b, c). Indeed, the pervasiveness of such individually and economically oriented sense-making frames, or ideologies, has been identified as making ethical consumption in contemporary capitalist societies challenging if not futile (Carrington et al. 2016). As such, even more, knowledge about sustainability is insufficient to change action and may even lead to dissatisfaction with

any current sustainability accomplishments in addition to inaction through paralysis (Longo et al. 2017).

Such evidence highlights the focal point on the subtle, hidden or taken for granted ways in which the world around (and in) us shape how we relate to that world (and ourselves). Juxtaposed with the aforementioned calls for greater progress in ESD integration, this highlights the need for research into ‘the ideological’ (Akrivou and Bradbury-Huang 2015; Wall and Perrin 2015). An innovative and interdisciplinary methodological perspective, which targets change at these deeper levels is ideology critique (Wall 2016a, c, 2017b). The critical tasks of ideology critique are to (1) examine the ‘spirit’ and its constituent implicit theories of person and task which embody particular ways of relating to other humans, animals and the planet more broadly, and (2) generate alternative ‘spirits’ which conjure alternative ways of relating (ibid).

This chapter aims, first, to document and demonstrate the subtleties of how the hidden ‘spirit’ can render attempts at sustainable working problematic in the context of education, and then, second, to demonstrate how it can be used to intentionally conjure alternative ‘spirits’ which enable new relationality amongst humans, animals and the planet in educational settings. In this way, therefore, and in a broader sense, this chapter explores how concepts and political commitments from the humanities, such as ideology critique and ‘spirit’ can help (1) analyse how wider social structures shape our values and beliefs in relation to sustainable learning, living and working, (2) explain how these behaviours are held in place over time and (3) provoke insight into how we might seek to disrupt and change such persistent social structures.

The chapter is structured as follows. The next section outlines and discusses the conceptual and analytical framework of this chapter, and is followed by a discussion of how this apparatus has been set to work in the methodological approach adopted in this chapter. This, then, provides a platform to examine three vignettes to exemplify the ways in which educationalists have introduced provocative pedagogical practices to disrupt some of the ideologies (‘spirits’) at play. The final section, then, discusses how educationalists can develop deeper provocative educational perspectives to conjure up alternative ‘spirits’, which are more attuned to sustainability.

2 Ideology as Guiding ‘Spirit’

The study of ideology permeates many disciplines including the political sciences (Žižek 2006), media studies (Taylor 2010), cultural theory (Holland et al. 1998), organisation and management studies (Wall 2016c), marketing (Carrington et al. 2016) and education (Brown and Higgs 2011). Ideology refers to the ideas, concepts, beliefs or doctrine (Žižek 2006; Holland et al. 1998) that are activated or *conjured* when we engage in the world, for example, through conversations or through delivering a pedagogical activity in the classroom. As such, ideology provides a ‘perceptual, cognitive, affective and practical frame of activity’ (Holland et al. 1998, p. 63), which, subtly but deeply, taint how we understand ourselves, the world we participate in and, therefore, how we think we should act. As such, there is an assumed, powerful and

unquestionable ‘Big Other’ (Žižek 2014) or ‘social repository of collected and projected beliefs’ (Taylor 2010, p. 73) directing how we think and act. Indeed, research has indicated how the academic frameworks and regulations in universities can take on an omnipotent Biblical status (e.g. ‘The Code’), which subsequently frames the material emotional and physical responses of professionals working in this space (Sparkes 2007; Wall and Perrin 2015). This includes problematic stress responses when the professional believes they are at risk of breaching The Code (ibid).

Ideology exists beyond direct capture and operates in ways which are likened to an omnipresent and omnipotent ‘spirit’ (Reason 2007; Wall 2016b; Žižek 2000, 2002). Indeed, Native American people refer to *wétiko* as a sickness of the spirit, driven by individualistic gain and greed (Luna-Firebaugh 2010; Crist 2013; Borrows 2016). These ‘spirits’ ‘divide and relate ... [through] position or rank’, and as such, embody implied ‘theories of person’ and ‘theories of task’ (Holland et al. 1998, p. 122). For example, the material design of a *tack* hammer has a small head and handle (making assumptions about the for the delicate tapping task and the respective size of the person doing that task), whereas a *sledgehammer* has a large head and long, thick handle (making assumptions about a person of sufficient strength and build to be able to hold it with both hands and swing the heavy object from a height) (ibid). Similarly, in the context of education, when academic assignments (the tool) are designed as individual pieces of writing about their personal knowledge of a theory, the individual and their ‘objective’ reproduction of theory are positioned as important, thereby negating or de-emphasising other aspects including: (1) their relationality or connectedness with others, the planet and its co-inhabitants, (2) their role in applying the ideas in practice or changing practice and (3) collective notions of thinking, knowing and learning (Žižek 2006; Wall and Jarvis 2015; Wall 2016b).

In the same way, how humans position themselves in relation to animals can be explored through Christian understandings rooted in the Bible (Clough 2012, 2017). For example, in Genesis 1, God declares all creatures good and assigns a plant-based diet to humans and other animals, but also grants humans dominion over other creatures. Genesis 2 gives humans the role of tending to the earth, and creation material in the Psalms emphasises God’s ordering of creation for the benefit of all creatures. For Thomas (1984), the Christian consensus from medieval times onwards was that humans were entitled to use other animals for food and clothing, but not to cause them unnecessary suffering. However, he also argues that some early modern Christian perspectives saw creation as provided entirely for human benefit. Such positioning can also be witnessed in modern history, whereby Christians in Britain were prominent in successful lobbying for the first legislation against animal cruelty and campaigns to abolish vivisection in the nineteenth century (Li 2000; Preece 2003). The concern for animals has become a much less prominent faith concern in the twentieth century (Clough 2017).

However, though powerful, these ideological forces are never ‘hermetically sealed’ (Holland et al. 1998), and the implied theories of person and task ‘can appear in entirely different light the moment the modality of his/her relationship to the big Other changes’ (Žižek 2008, p. 330). In examining how ‘spirits’ (and the Holy Spirit

as an example) acquire and preserve omnipresence and omnipotence, Žižek (2009, p. 60 original emphasis) argues:

the finite existence of mortal humans is the only site of the Spirit, the site where Spirit achieves its actuality. What this means is that, in spite of all its grounding power, Spirit is a *virtual* entity in the sense that its status is that of a subjective presupposition: it exists only insofar as subjects act as if it *exists*... it is the substance of the individuals who recognize themselves in it, the ground of their entire existence... something for which these individuals are ready to give their lives, yet the only thing that really exists are these individuals and their activity, so this substance is actual only insofar as individuals believe in it and act accordingly.

In other words, the ideological ideas, concepts, beliefs and doctrine generate material effects in the world, insofar as the subject *acts and relates to them as if they exist*. As another example, people treat a king with royal treatment because people believe that the king is 'already in himself, outside the relationship to his subjects, a king' (Žižek 2012, p. 309). Similarly, the person who trains to be and who then accepts a job as a pest control exterminator is *constructed* as someone a company can relate to, through payment, as a professional who can efficiently and effectively exterminate animals or insects the company decides to be pests, infestations or simply unwanted (Hindley and Wall 2017, 2018 forthcoming). Although this exemplifies a particular way of humans relating to animals or insects which leads to dominance, such effects can also be seen in terms of how humans relate to each other, for example, students being treated as 'second-class' citizens or slaves (Wall et al. 2017c). However, the corollary of the virtual character of the Big Other means that it is *possible* to conjure alternative 'spirits' which evoke different ideological frames which, therefore, position us differently, shift our relationality, and, therefore, generate material effects in the world (Brown 2008).

The intentional conjuring of alternative 'spirits' is the imperative of some forms of provocative education (Wall and Perrin 2015; Wall 2016a). Here, engaging a sense of 'play frees people from the generic forms that govern... actions' (Holland et al. 1998, p. 237), to be able to notice different and new relationships with each other and the world around us (Wall 2016b). As such, educationalists purposively adopt new and alternative 'spirits' as a mediating device to conjure alternative responses (Holland et al. 1998). For example, Ramsey (2014, p. 479) proposes 'provocative theory' as a device to reimagine learners 'dancing' with theory as 'a relational process ... whereby academic theory stimulates, incites and promotes changed practice' (Ramsey 2011, p. 469). Similarly, as a rebuttal against a 'deficit' view of learners, asset-based 'reciprocal pedagogies' have emerged which (1) position every learner as bringing valid assets such as experiences from different contextual and cultural settings to every learning situation, and which (2) position the tutor also as a learner alongside the learners in a learning journey (Wall and Tran 2015, 2016; Wall 2017a, 2018 forthcoming).

3 Methodology

The previous section outlined the methodological origins of ideology critique, which ultimately aim to disrupt ideology (or ‘spirit’) in practice settings. As such, it is an openly political form of research, in line with political and critical ‘turn’ research movements akin to forms of action research, which aims to change practice (Reason 2007; Ramsey 2011, 2014; Wall et al. 2017b). This research was prompted by the lead researcher’s dissatisfaction with pedagogical approaches which *maintained* rather than *disrupted* social structures in terms of sustainability, informed by action research over the last 15 years. A research project was established with the guiding research question: ‘*what pedagogical practices can generate alternative ways of relating in educational settings?*’, specifically in terms of relating to other humans, animals and the planet.

Using a convenience snowball sampling approach, the lead researcher identified high-profile practitioner–researchers in the humanities who had developed pedagogical practices relevant to the research question. Practitioner–researchers from theology, education and business and management studies, across three countries (UK, Spain and Sweden) were selected. Then, vignettes of (1) pedagogical practices and (2) the apparent results of such practices were then developed collaboratively with the practitioner–researchers, drawing data from their respective critical reflective practices and any other evaluation research work related to the pedagogic practices (such as surveys and questionnaires).

As such, this research employed a theoretical sampling frame, which focused primarily on selecting vignettes in relation to their salience to the politically oriented research question above, rather than an empirical sampling frame (i.e. based on the frequency of the data per se) (Stokes and Wall 2014; Wall et al. 2016). Therefore, rather than producing statistically valid cases, ideological analyses function to generate provocative prompts to inculcate and entice action in the research stakeholders (Brown and Heggs 2011; Wall 2017b). Indeed, the resultant vignettes and analyses aim to prompt the consumers of research to find their own learnings and insights from the research in a provocative, dialogic fashion (MacIntosh et al. 2017; Wall 2016a). The next section, now, documents and examines the pedagogical practices.

4 Vignette 1: The Cockerel and the Professor

One newly appointed professor, from a department of theology and religious studies, sought to deliver a public lecture on the ethical case against the intensive farming of animals. He was inspired by a personal experience which changed his own relationality with animals—a memory of him holding a single hen in a huge broiler shed of 20,000, aged 17 days old and already halfway through her life. He was struck by how the presence of a live chicken might help those present at the lecture to relate to the issue, so he decided he would ‘co-present’ with a cockerel.

He found a co-presenter with experience of being in crowds of people through a local woman who rehomed caged hens. The woman caring for the cockerel assured the professor that his co-presenter would be fine roaming free at the front of the lecture hall, with some food and water. The professor also borrowed a battery cage from a local farmer of caged hens, as another way of *showing* the harsh reality of the lives of most chickens raised for eggs globally.

The co-presenters delivered their lecture, and two particular moments give insights into the experience. First, at the start of the lecture, even before the professor had reached the podium to speak, his co-presenter was *already* on stage making an impact: there were lots of smiles as people watched him strut, flap, eat and drink and—it has to be said—shit. The professor realised that he and his talk had *already* been positioned in relation to the brute and immediate reality of the situation, and that this contributed to a sense of levity in the audience.

The second symbolic moment happened during the lecture. The small battery cage was on a table on the stage, and midway through the lecture, the cockerel decided to explore it. He flew up to it in a way that made the professor seriously concerned that he was going to deliberately confine himself in it, thereby subverting the point that cages were not congenial places for chickens. Happily, instead, he perched triumphantly on top of it, giving him an improved view of the audience, and vice versa. Symbolically, he was being allowed to explore in his own way, choosing his own path, and make his own statements.

Even years later, participants in the lecture still recall it as their favourite lecture of all time, often reporting how it influenced them to avoid the products of intensively farmed animals. It seems that the non-negotiable presence of the cockerel, and the way he had been positioned in relation to the professor and his talk, opened up the possibility of participants relating differently to animals in a mode beyond the reach of statistics, reasoned argument or rhetoric.

5 Vignette 2: Embodying the Sustainability ‘Spirit’

Educationalists in Sweden and Finland developed a 2 day ESD workshop as professional development for practicing teachers. The workshop utilised a variety of interactive drama processes which used the body in explicit fantasy or play states in the context of ESD (Österlind 2012). This vignette focuses on two linked activities used in the workshop which exemplify the sorts of drama processes utilised in the workshop.

The first activity was a *guided relaxation and introspection* around global challenges. This process aimed to create an open state for the teachers to become aware of their own relationships with, and understandings of, sustainability. The stages involved the teachers (1) collectively brainstorming global challenges, (2) reflecting on the question ‘what do you feel in front of these problems?’, (3) finding an object (in their imagination) that symbolised their feeling, (4) taking a close look at the object and (5) ‘storing it’ (in the imagination) for later in the day. This process was

an individual and silent task which was not disclosed in the group in order to maintain a private and safe space. Then, in small groups, the teachers (6) explored the causes of the problems at a human level, (7) prepared a still *image* or a physical, bodily *statue* (using the body as a representation), (8) showed the image/statue to the other groups and then (9) explored interpretations, causes, resolutions and action plans.

The second activity was a *role play*, where the teachers were asked to contribute to a fictional environmental conference. The teachers choose a role to play (e.g. activist, politician, business leader or researcher), and then prepared and delivered a ‘presentation’ in that role. The role play ends with another guided relaxation and introspection where everyone returns to their object (stored in their imaginations), and agrees on something, no matter how small, that *they are able to do* for a sustainability problem.

The feedback from the workshop suggested the pedagogical processes brought an immediacy and intimacy of sustainability issue to the teachers, shaping how they related to various sustainability issues, and specifically their role in them. For example, some teachers reported that they became much more aware of their ‘attitudes’ towards the issues, which included some saying they had been ‘closing their eyes’ to planetary issues. As a result, some of the teachers felt that they had gained ‘clarity’ and were motivated to ‘do even more [than] I’m doing now’ and even ‘change my lifestyle for the environment’. These indicated a shift in them *becoming part of the issue and resolution*. Some even indicated the salience of the still images/statues as a mental imprint to act, for example, one teacher wanted to ‘creep’ into the ‘don’t hear, don’t see, don’t say’ image ‘and stay there, not be aware of this’. Although not as positively charged as others experiences, this form of comment is indicative of a new *relationship* between the participant and the issues.

6 Vignette 3: Pedagogical Ladybirds

Within the context of business and management, stories are recognised as effective in mobilising people to act, and are therefore applied in a range of learning and change contexts. One (true) story has recently emerged as a pedagogical device related to ESD across various business education learning contexts such as doctoral training and a European project disseminating innovative pedagogical practices in Spain and the UK (Hindley and Wall 2017, 2018 forthcoming). A version of the story is told below by Tony Wall (and involves Ann Hindley), and gives an indication of how the story can *initiate* an ESD discussion.

“Where have all The Ladybirds gone?”

One day, Ann and I were in my office.

As usual, we were talking about climate change.

We were frustrated: “So many people just aren’t interested!”.

We decided that *we* needed to do *even more*.

Just as we were planning planetary salvation, there is a knock at the door.

The door edged open and an unfamiliar face peered in:

“I believe you have an infestation?!” the man asked.

Perplexed, I asked, wearily “Excuse me?”

Still peering intensely around the edge of the office door, he said:

“You have an infestation. You’ve reported an infestation”.

Again perplexed, I wondered what on earth he was talking about.

Lost for ideas, but sensing a tense pressure to reply to the hurried man, I gambled on whether he was talking about the three communities of ladybirds that co-inhabited my office... the ones that lived at each of my two windows and in the corner.

“Are you talking about the ladybirds?” I asked.

“Yes, do you want them removed or not?” he said, in a rush to do his job.

“No...” I said immediately “...are they creating any damage?”

The man says “No” and swiftly walks away, closing the door behind him.

Ann and I finish our meeting and we both leave.

Moments later, when I return from running a short errand, I notice three puddles:

one at each of my two windows and one in the corner.

I felt physically ill. The ladybirds had been killed.

Once the story is told, aspects that are relevant to the learning context are explored. For example, one common discussion relates to the alternative ways in which Tony and the man at the door *relate* to the ladybirds—*co-inhabiting communities* versus an *infestation*, and *killed* versus *removed (or exterminated)*. The story also highlights the material effects on the individuals of relating in this way, for example, the physical manifestation of feeling ill when co-inhabiting communities have been killed, versus, the frustrations of not getting permission to do one’s job to remove the infestation. The learners who have engaged with the story so far have reported that they have (1) shared it with their wider family and work networks, leading to additional information, resources and networks being actively shared, (2) become aware of the problematic ways in which we can relate to wildlife in and out of work contexts and (3) become involved in more sustainability and responsibility work and research.

7 Discussion

Counter to Wals (2014) findings, and in line with Leal Filho’s (2011) call for more applied sustainability work, the vignettes highlight how educationalists are delivering forms of education which aim to disrupt deeply held conceptions, beliefs and

ideas (or ideology). The vignettes also document the ways in which educationalists purposively conjure alternative ‘spirits’ which activate alternative ways of relating to each other, the earth, and its co-inhabitants. A theme that drives the vignettes appears to be ‘spirits’ or ideological ideas which bring a new awareness, and more specifically, new potentialities to ways of living *with and alongside others*. There is a shared shift in these ‘spirits’ to move away from individualistic, separated and perhaps human domination over the planet and wildlife, *towards* a more collective and holistic perspective which positions humans (or the learners more specifically) as connected and equal: as a co-presenter or a co-inhabitant.

These provocative educational forms seem to generate a shared socio-materiality in that the ‘spirits’ shape how we think we should act, and thus generate feelings, motivations and actions in context: they can call us to buy more ethically produced poultry (vignette 1), they can call us to change our lifestyles (vignette 2), and they call us to share information about and love for ladybirds (vignette 3). These reflect a counter response to the predominantly economic framings of education, which dominate contemporary educational activity (Carrington et al. 2016; Wals 2014; Wall and Perrin 2015). However, they can also call us to ‘close our eyes’, as the ‘spirit’ has given us a newfound awareness, which says we are not doing enough. In this way, and reflective of Longo et al.’s (2017) findings, there is still the possibility for paralysis to occur, albeit from a different source, that is, one’s *relationality* in the world, rather than increased sustainability *knowledge*.

The possibility for conjuring up ‘spirits’ through reflective practices is both the *potential* of ideology critique and provocative education but is also the *problem*. The potential of ideology critique to disrupt an educational system and envision new forms of education stems from its use in teacher education contexts (Brown 2008; Brown and Heggs 2011), where it is used to challenge reflective and narrative accounts of experience. However, the problem is that it is possible to create new supposedly provocative forms of education which, only when resultant behaviours are examined, continue to embody the originally prevailing guiding ‘spirit’. For example, if we *assessed* the learning of the fictional conference contributions (vignette 2) through individualised and knowledge-related outcomes, this conjures the ‘spirit’ which was seemingly creating some of the sustainability issues in the first place (Carrington et al. 2016). Žižek (1994, p. 6) refers to this as a *cynical* mode of ideological engagement, where as soon as we think we are ‘stepping out of (what we experience as) ideology is the very form of our enslavement to it’. This highlights the salience of noticing the *behavioural responses* to new forms of provocative education as an indicator of the ‘spirits’ being conjured (Wall and Perrin 2015; Wall 2016c).

In one sense, these findings exemplify the kinds of educational practices that Akrivou and Bradbury-Huang (2015) call for, to conjure ‘spirits’ towards more collective and holistic notions of education (and life). However, it also extends it by highlighting that although educationalists may want to conjure more collective and holistic ways of being in practice, such practices will *always* be held in a wider ideological system which might trick us into believing our practices are provocative and disruptive. For example, Longo et al.’s (2017, p. 14) recommendations for overcoming paralysis included ‘the organisation of more ‘inner transition’ workshops,

aimed at sharing positive and negative experiences'. Without conjuring alternative 'spirits' through the subtleties within this form of educational activity, such 'inner transition' endeavours might simply *reproduce* the sorts of paralysis that it aimed to abolish. Nonetheless, the vignettes presented here are evidence that new 'spirits' for sustainability can, and are, being conjured across different pedagogical traditions, and that they are creating new ways of relating in the world.

8 Conclusions

This chapter responds to calls for sustainability research to take a more applied focus and to examine the implementation of sustainability projects and pedagogies. There are three key lessons from this chapter. First, in a broad sense, it highlights that there are omnipresent and omnipotent ideological structures, or 'spirits', that are conjured in and through practices and that these can render efforts towards ESD, as well as sustainable living and working, problematic. Second, and more specifically, ideology critique can help examine and disturb this 'spirit' and thereby offer alternative ways of relating to other humans, animals, and the planet more broadly. Educationalists seeking to conjure alternative 'spirits' for sustainability can consider a number of prompts when considering their practice: (1) what are the implied theories of the *person* here? (2) what are the implied theories of the *task* here? (3) what assumptions are made about how the person and task relate to the earth and its co-inhabitants? (4) what *alternative* theory of the person or task do I want to conjure? (5) what might I *do* which embodies this alternative theory of person or task? (6) what am I noticing in others' behaviours in relation to? (4) However, and finally, even though we think we may be conjuring an alternative spirit, it may be the *same* spirit in disguise, so it is important to observe how others behave in response to the provocation (it is possible that it might produce no change in behaviour).

This study demonstrated the possibility of implementing provocative pedagogies across different disciplinary traditions and countries and exemplified how educationists deploy them to conjure alternative 'spirits' for sustainability and the related socio-material effects through cognitive, emotional and physical responses of learners in these settings. However, there are a number of limitations to this study: (1) it engaged a theoretical rather than empirical sample frame, which means there are other concepts and perspectives in humanities which will generate additional understandings and insights into ESD and sustainability; (2) it sampled the application of concepts in a limited range of disciplines, which means there will be other perspectives with more or less efficacious outcomes in different disciplinary contexts; and (3) it referred to only one period of time (2015–2017), which means that the nature, reach and impact of the pedagogies may not be fully explored as yet.

The future prospects of research in this area are, therefore, fertile ground for further and deeper exploration. There are three areas that would be fruitful to explore: (1) research across, between and above disciplinary boundaries and cultural contexts (Wall et al. 2017a), as each cultural context will have different 'spirits' evoking

different relationalities, (2) research into the behavioural changes associated with the provocative pedagogies over longer periods of time, as some practices may have more or less efficacious outcomes and (3) research the experiences of the educationalists who seek to disrupt wider structures, given that such politically disruptive work can be emotionally and personally challenging. Although this chapter has begun to explore the links between humanities and sustainability, these future prospects provide landscape for greater innovation, more ‘profound’ pedagogic and ESD work, and in turn, more sustainable futures.

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Engaging Intuition and Imagination for Solutions to Confounding Science and Societal Problems



Valerie A. Luzadis

Abstract Global demographics suggest a dire need for higher education to address issues of sustainable development in ways that address the needs and capture the attention of all populations, beyond those with political power at present. Including the humanities in the discussion of sustainability has the potential to not only bring a more holistic exploration of the topic, but will likely increase its accessibility to populations as yet rarely involved. In addition, engaging more diverse groups has the potential to add novel thinking to the consideration of sustainability. This paper expands the basis of teaching and research to include imagination and intuition in ways that improve learning experiences and bring to light new considerations of sustainable development that are likely to be more effective with non-traditional audiences. Powerful approaches such as storytelling and future scenario development allow academics, especially those focused on science, to go beyond the limited and impersonal “rational” approaches to teaching and research commonly used thereby enhancing the debate on sustainability.

Keywords Imagination · Intuition · Education · Sustainability · Storytelling

1 Introduction

Higher education is paying greater attention to sustainability through such efforts as the United Nations Higher Education Sustainability Initiative, the American Association of Sustainability in Higher Education (AASHE), and the many other initiatives focused on education (e.g., McKeown et al. 2002). While these efforts address important institutional physical and educational needs, greater impact and more articulation of relevancy to under-represented populations are needed in light of global demographic trends. Engaging multiple ways of knowing within and among groups to

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address sustainable development may better engage diverse populations while also stimulating new and potentially more powerful approaches for society.

Sustainability courses and programs have tended to be affiliated with environmental science and engineering programs (Vincent 2015), often focused to a fairly limited audience and using traditional science approaches to studying and teaching it. Complex issues like sustainable development necessitate new ways of thinking together for better long-term solutions. Collaborative interdisciplinary scholarly efforts are a move in this direction, as are transdisciplinary approaches that bring together scientists, policy makers, and citizens. More effectual ways to productively involve groups with diverse values are needed to successfully address confounding global challenges like climate change and sustainable development. In addition, communication about sustainability and the frames we use to address it must be compelling to people everywhere, in all situations and conditions. Employing imagination and intuition along with intellect is likely to make the sustainability debate much more broadly accessible and compelling.

Scientists infrequently articulate when, where and how imagination and intuition inform the scientific endeavor and often this subject is not addressed at all in the teaching of science. This leaves students of science with incomplete knowledge and possibly an inaccurate impression that imagination and intuition have no value in science and with the resolution of complex problems including sustainability.

While it is possible, and in some venues desirable, to distinguish science from other ways of knowing, it has become far too commonplace for science to ignore altogether anything outside its own approach to knowledge. Complex challenges such as sustainable development provide reason to reconnect science with other scholarly pursuits as well as with intuitive knowledge. Intuition, as a way of knowing something directly without analytical reasoning, (Cholle 2011) can be paired with intellectual efforts for distinctly different and arguably better outcomes. It follows that scientists who are open to other ways of knowing and those who deliberately employ imagination and intuition will be better suited for collaborations with humanities scholars and citizens, ultimately producing creative ways forward that are unlikely to emerge from data trends alone.

Deliberate, intentional engagement of imagination can be an effective way to link intellect with intuition. Training the intellect to honor the unknown, to engage imagination to connect intellectual knowledge with intuition produces different and arguably better outcomes (Cholle 2011). When pursued using participatory processes, the virtue of such outcomes is enhanced as these approaches are also shown to produce more acceptable effective results (Stewart Ibarra et al. 2014; Buchholz et al. 2007).

This paper offers ideas for engaging imagination and intuition towards better solutions for complex problems of science and society including sustainable development. The examples are from the author's explorations of doing so over the course of many years in university curricula, interdisciplinary research, and with professional and community groups focused on sustainability. Emerging from scholarly work in ecological economics, itself a transdisciplinary endeavor, these efforts in education and community planning benefitted from decades of transcending bound-

aries of social and biophysical science, science and policy, and science and humanities. While these examples are limited to the author's experiences, they provide a foundation for others to build on and to investigate further.

2 STEM to STEAM and More

The debate about shifting from STEM—science, technology, engineering and math—to STEAM—adding art to the mix—is a step in the direction of engaging imagination and intuition toward societal and science concerns. Beyond rhetoric, and beyond simply creating programs that include a bit of different coursework, we need to engage differently in the classroom to model embracing uncertainty, and using imagination to link intellect and intuition.

The long-term nature and complexity associated with sustainability planning and decision-making require stepping beyond the traditional limits of trend analysis within science. The ability to accurately predict outcomes is an important focus of much scientific work and it serves as essential input for sustainability efforts. However limiting the planning possibilities to trend lines for existing data does not produce results that adequately account for the emergence of novelty, multiple equilibria, or punctuated equilibrium (periods of rapid evolutionary change). Evolution and complex systems theories suggest limits to predictability from existing data (Faber et al. 1996). This calls for the need to go beyond the data.

What does it mean to go beyond data? It can be as simple as engaging the imagination to bring forward ideas that would otherwise not be suggested based on data alone. This can be challenging for scientists who are trained to stay within the limits of what data allow for prediction.

In a workshop designed to strategize for the long-term future of a large lake watershed, scientists, practitioners and citizens worked together to develop scenarios for the future. Of all participants, scientists had the most difficulty being able to engage imagination to think beyond the trend lines of data with which they were familiar. This difficulty speaks to the effectiveness of science education to teach appropriate use of data but it also identifies a limitation. Appropriate interpretation and extrapolation of data does not preclude the ability to engage imagination and intuition to identify possibilities. Having worked with graduate students who are in the midst of this science education, I have seen that it is possible to transcend this limitation while still fully understanding and applying appropriate use of data. These two approaches are not mutually exclusive.

As complex beings, we humans use many mechanisms to keep ourselves aligned with rules or guidelines that we deem necessary. Setting “bright lines” to indicate boundaries helps some people to stay within those identified bounds. It appears that we may be subconsciously limiting ourselves primarily to the use of the intellect to solve complex science and societal problems when also employing imagination and intuition may be more fruitful. Some writers critical of post-modern science equate going “beyond data” as a slippery slope in which we will no longer adequately

value empirical science (Kuntz 2012). In a world where the value of science is being questioned in political realms this may be understandable—the desire to “bright line” how higher education, and science education in particular, handles other ways of knowing and learning. That said, the outcomes and the clear need to find more effective and efficient ways forward toward sustainability far outweigh the concern.

3 Practical Applications

Training the intellect to embrace uncertainty and to engage imagination to link it with intuition can take many forms. Future scenario development and storytelling are two specific approaches.

3.1 Scenario Development

Scenario development ignites the imagination, an essential component of all creative efforts. This approach has been used in many important sustainability endeavors including the International Panel on Climate Change (IPCC) and the Millennium Ecosystem Assessment (MA). Carter and La Rovere (2001, p. 149) summarize the development and application of scenarios by the IPCC and give this description: “A scenario is a coherent, internally consistent, and plausible description of a possible future state of the world ... each scenario is one alternative image of how the future can unfold.” Carter and La Rovere (2001) include distinctions among projections, forecasts, and scenarios, clarifying the need to go beyond data trends.

The Millennium Ecosystem Assessment (MA) engaged the use of scenarios to assist with the analysis of long-term possible futures for the natural resources of the world (MA 2005). Interestingly, a search of MA documents reveals little acknowledgement of imagination as an integral part of the effort however they clearly embraced other ways of knowing (Reid et al. 2006).

Storytelling and intuitive approaches are considered explicit parts of certain types of future scenario development (van Notten et al. 2003). Below is an example of use of scenarios to assist in professional organizational planning used by the author in 2013:

Dear Colleagues,

In order to plan for the immediate future of our organization, the current Board of Directors will be meeting to use a scenario approach to guide our efforts. To gain a broader perspective on the situation, we invite your input to the process. The form below asks you to focus on the future of our organization with some specific prompts to guide responses. You will note that we ask you to initially consider 30 years into the future. This will be our starting point from which we will look back to plan for the next 5 years.

Scenario planners find that this process works best when the participants draw upon imagination rather than analytical skills. You might use the following process to focus your efforts and to release your imaginative mind.

Sequester yourself in a room away from distractions. Close your eyes and imagine yourself as a Board member 30 years from now. You look at the news headlines – what is happening? What are the issues of the day? You decide to go to your office. How do you get there? What is the focus of your work? Spend 5-10 minutes in this imaginative state then complete this form.

- The focal question: What does our organization look like in 30 years? (Membership; role in society, the academy, practice)

The input from the questionnaire was used to develop a set of scenarios for the future and the discussion was designed to determine the characteristics the organization should have to survive and thrive in any of the future scenarios. These results became a roadmap for how the organization needed to adjust now to be nimble into the future. Discussion with Board members was facilitated to include explicit focus on the technique and the value of imagination and intuition. The result was a greater understanding of the intent and greater willingness on the part of the members to give it a try.

4 Storytelling

Storytelling more generally is another way to catch attention and to stimulate imagination. While this approach has been used by scientists at times (e.g. Hecht 2015), communication of science through storytelling is gaining popularity now as a basis for creating better understanding of science and the value this knowledge can provide for all of humanity (Dahlstrom 2014). TED talks (<https://www.ted.com/>) and similar efforts bring greater popular attention to science and scholarly efforts. Countless online publications, podcasts and blogs add to this effort as well.

Since storytelling is new to many university science curricula, getting started may be challenging. Telling our own stories of science is a way to begin. As an example, here's an excerpt of a talk given by the author at the 2013 national conference of the US Society for Ecological Economics (Luzadis 2013):

Think about a moment when you saw someone change their mind or when they realized that their mind HAD changed. What a powerful thing! As a scientist, I admit that data can change my mind. But when it comes to issues of values, I realized that it is not always data that does it or only data that does it. Upon reflection, I realized that some of the most powerful shifts of mind I have experienced myself or observed in others were stimulated by stories. Personal stories.

We need to tell our own stories and listen to the stories of others. Talk about what you have seen, talk about the changes in yourself. Talk about how you came to be involved in sustainability. Talk about facing the need for systemic change and how the answers seem out of reach sometimes. We need to use the power of narrative in ways that build on the science that we practice and conduct. Harnessing the power of narrative toward sustainable development will help us get there.

Like many scientists, I was relatively new to the idea of narratives – of stories. I came up with all science all the time, so I did what we academics naturally do – I researched storytelling. But I also talked about it with others. The idea of creativity, imagination, and intuition kept coming up – and I thought “all that is okay in fiction, but not in science”. At least we don’t hear about it in science. We all know that science is fact-based – no place for imagination and intuition. But we also know that’s not exactly true. Only we do not usually say it out loud. I experience imagination and intuition not as creative in some childish way – “Oh, it’s only your imagination” – but as an important aspect of my greatest personal AND professional achievements. Imagination and intuition are incredibly important parts of everything we do – in science and otherwise. When we pay attention to them, we can learn to appropriately and usefully interpret them.

Following a conversation or story like this with an exercise for participants to identify and share a relevant story of their own is a good way to begin.

5 Coursework Examples

Providing distinct opportunities for students to express themselves in multiple ways regarding the subject matter of the course is a good way to begin. Explicit articulation of the use of imagination and intuition in scholarly pursuit is essential for a few reasons. First, critical thinking as a foundation of education is rigorous and disciplined. Engaging the use of imagination and intuition in rigorous and disciplined ways helps to support this type of creativity together with the intellect. It may not always be a simultaneous, nor linear, process. However, explicit discussion to clarify the meaning of rigorous and disciplined scholarship will help participants to understand the value of imagination and intuition in relation to engaging with intellect alone. Second, explicit discussion and reflection on these approaches shift it in the minds of participants from being simply an interesting experience to a possible tool for their own use in the future.

The following applications come from experiences in the classroom at both undergraduate and graduate levels.

The following three examples are from a 300-level undergraduate course in environmental attitudes and values taught by the author (typically third-year students enroll):

Course Journal

The goal of the journal is for it to be a substantive source of information summarizing the course material and your learning process. This will end up being your “Cliff Notes” for EST 366. It is not something you could write during the class meetings; rather it is to be a distillation of class notes and synthesis of ideas from discussion and reading. The format of the journal must be a 3-ring binder to allow easy addition of pages. We strongly suggest that you use a small sized binder for ease in carrying outside, 5.5×8.5 is ideal, 3.5×6 is too small for some of the directed activities.

We envision two entry types.

1. Directed reading summaries and activities as assigned

These may include using both left and right brain approaches to summarizing course readings. For instance, you could be asked to sketch or diagram something or possibly to attempt to capture the essence of it in poetry.

2. Reflections on selected essays and nature

You will be asked to read four essays to reflect upon each after spending some time in nature. Based on the ideas of Satish Kumar, being in nature is essential to understanding one's own attitudes, values, and ethics about the natural environment. For these entries, you will be asked to first read an essay that has been influential in environmental science and values, and then to spend at least one and half hours of quiet time in a natural setting. At the end of that time, reflect upon the essay you read earlier. The idea is to let the meditative aspects of quiet time in nature to help you to access new ideas about the world. The quiet time in nature could be walking, cross-country skiing, or ice fishing, but probably not a snowball fight or tobogganing or active engagement with others.

Sketching the final course summary

I ask students to produce a course summary during the last week of the course. Initially, I asked for a written abstract of the course content. Later I offered the opportunity for students to summarize the course content through illustration on a large sheet of paper (11 × 17"). Over several years, the vast majority of students in the course chose the illustration option. The ability to visually communicate course content requires students to engage the material differently. The results were remarkably complete and creative. Comments on course evaluations included expressions of appreciation for this opportunity as well as surprise at fresh insights about the content emerged through the illustration process.

Summarize modules with haiku

Haiku is a 17-syllable Japanese poetic form that captures the essence of its subject. At the end of each subject matter module, I asked students to use haiku to capture the content and value of the material in that module. Students report that this approach provided them with new understanding of the subject matter.

Graduate Course Use of Storytelling

Final Exam - This is a take-home, open book exam.

Part I – Criteria Identification

Identify at least five criteria that you would use to determine if something communicates an “ecological economic” perspective as per the readings and discussion in FOR 770 this semester. Explain each such that it could be used to assess an essay or story that is intended to be paradigm-shifting in an “ecological economic” way. Support your selection of criteria using literature from the course. Other literature is welcome, just not required.

Part II – Vision Essay or Story

Your task for Part II is to write either a story or an essay that describes a desired future from an “ecological economic” perspective (using concepts and ideas from this course). Identify which choice you are making (essay or story) and identify the intended audience including age/grade level. Feel free to illustrate your essay or story...using both sides of the brain for this part is likely to be very helpful, essay or story. (No more than 10 pages typed; illustrations will not be counted as a part of the ten pages.)

Part III – Evaluation and Reflection

Evaluate your story or essay using the criteria you identified in Part I. Identify how your essay or story reflects each. Reflect on how the literature and discussion in class influenced your essay or story, even if they are used as negative examples (in other words, you do not need to agree with what you read in this course).

Performance criteria: 1) how well you construct your arguments; 2) how well you support your arguments; 3) accuracy of your articulation of the concepts; and 4) the extent to which you use material from this course to support your arguments.

Over all the years offered, the option of writing a story was selected by all but one student. They embraced the opportunity to consider this very different way of expressing content, especially in graduate school and with a focus on sustainability. The requirement for them to also develop the criteria and evaluate the effort incorporated analytical aspects into the exam as well.

Graduate research

Engaging in explicit identification of use of imagination and intuition in the scientific process helps to improve creativity among graduate students who are required to conduct original research. Specifically, we discuss where in the process imagination and intuition are appropriate:

- **Research question development**—Often research questions arise intuitively as we observe the world around us. When using positivist approaches to science, review of the literature also stimulates research questions worth pursuing, both rational and intuitive. Grounded theory does the same at a different point in the process.
- **Methods**—Determination of methods to answer research questions also provides opportunity to engage imagination to link intellect and intuition. Once data collection methods are determined, they are followed with great precision to enable replication and to ensure validity and reliability.
- **Data analysis and interpretation**—Typically data analysis follows clear guidelines as related to the questions pursued and methods employed. Interpretation within the bounds of the data is limited by scientific convention however speculation beyond the data is often appropriate in the discussion of the results and certainly in addressing related future research.

These are example of ways to weave imagination, intuition, and science in planned ways. Being prepared to take advantage of unplanned opportunities that may arise in discussions is also helpful, whether in the classroom or in public programs. Being prepared for unplanned occasions also allows for demonstration of how the energy within a group can influence both processes and outcomes.

We all have felt the energy from others influence us. Everyone has experienced the “dark cloud effect”—of sensing and sometimes succumbing—when with someone who is in a bad mood. Or the opposite – the inability to suppress a smile when someone expresses great joy or excitement (“I did it!, I did it!”). We respond energetically and emotionally to inspirational speakers, beauty, mercy, violence, laughter and tears. These emotions and their related energy also influence how we engage with one another. Being prepared to take advantage of a clear example of this in the classroom

is a great way to demonstrate the power of the energetic and emotional context for community and/or classroom problem-solving. This can be done with uplifting or “negative” energy to demonstrate how these conditions impact idea development and/or decision-making. Have a subject matter focus, or several options for this at the beginning of the term for this purpose. Wicked problems—confounding questions or issues are very useful for this demonstration but simple questions that require a group decision can also be used.

6 Conclusions

Sustainable development requires adjustments to physical and behavioral aspects of our current ways of living. Determining the content and methods for collective action can be challenging and rightly should involve all. Explicit engagement of imagination and intuition joined with intellect to address issues of sustainable development is likely to both attract new audiences and produce valuable outcomes. However, this approach may be new to many currently involved in the sustainability debate. University courses, research projects, and community group planning processes are ideal places to introduce and engage these concepts. Using participatory approaches not only provide means to employ imagination and intuition, they also provide the opportunity for those engaged to improve the processes and carry them on into the future.

Experiences of deliberate and explicit use of imagination and intuition to enhance intellectual consideration of sustainability have resulted in a number of lessons learned:

- Opens the sustainability debate to broader audiences
- Outcomes differ and often lead to new insights
- Scientific considerations are enhanced, frequently resulting in better research questions and methods, and
- Explicit articulation of the use of imagination and intuition helps participants to understand them as a tool for future use.

The experiential nature of these lessons suggests the need for more structured analysis going forward. Such investigations can easily be carried out over the course of regular teaching and research, as well as through engagement of citizens in sustainability efforts with proper attention to structure and data collection over time.

Ultimately, broadening the sustainability debate to involve the humanities and all people will lead to better understanding and more effective shifts toward sustainable, equitable societies and healthy ecosystems.

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Rethinking Economics in a Circular Way in the Light of Encyclical “Laudato Si”



Angelo Paletta

Abstract The concept of Anthropocene is now commonly used by scholars to denote a new geological and biophysical era and environmental humanities have rapidly developed in a field of investigation on the new human condition. The study of human preferences, what motivates us as human beings, what influences our actions, the way we can control our actions and the ethics of responsibility, are the main drivers of global change in the twenty-first century. This article is built on the assumption that research on circular economy, in contrast with a linear “take-make-dispose” economic model, can benefit enormously from the study of human motivations and actions that each of us can implement for global change. In particular, the message of humanity contained in Pope Francis’ encyclical *Laudato Si*, helps us to understand the ethical foundations of circular economy: why and how human beings and their social formations, such as enterprises and institutions, not facing imminent dangers, can strongly choose to change direction and to act for the common good.

Keywords Anthropocene · Environmental humanities · Circular economy
Laudato Si · Global change

1 Introduction

The concept of Anthropocene is now commonly used by scholars to denote a new geological and biophysical era (Crutzen and Stoermer 2000). While the original school of thought was led mostly by natural scientists, the evocative power of the concept also represented an enormous opportunity for human and social scientists in confronting questions of meaning, value, responsibility, and finalism at a time of rapid and increasing change (Rose et al. 2012; O’Brien 2012). Anthropocene implies a new human condition based on the awareness that the human species is the main

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driver of global change (Brondizio et al. 2016, Bulfin 2017). The study of human preferences, what motivates us as human beings, what influences our actions, the way we govern ourselves and control our actions, the ethics of responsibility are the main drivers of global change in the twenty-first century (Holm and Brennan 2018). In the academic literature, “Environmental Humanities” rapidly developed in a field of investigation that now involves thousands of researchers over the world from many disciplines, including literature and languages, art, history, philosophy, psychology, pedagogy, and religious studies (Otto and Wohlpert 2009; Sörlin 2012; Philippon 2012; Leal Filho 2015). The Humanities for the Environment represents at an international level the innovative effort to promote dialogue between the academic world and the stakeholders of global change, bridging the gap between the individual disciplines in the pursuit of a problem-oriented approach, the only truly effective way to tackle large environmental challenges (Holm et al. 2015; Little 2017). Based on these assumptions, the last 15 years have been characterized by an increasing number of conferences, position papers, and public policy documents that emphasize the need for interdisciplinary collaboration. In the same spirit, the mandate of the Intergovernmental Panel for Climate Change (IPCC) emphasizes greater integration between the natural sciences, humanities, and social sciences: “... to assess on a comprehensive, objective, open and transparent basis of scientific, technic and socio-economic information on the scientific basis of the risk of human-induced climate change, its potential impacts and options for adaptation and mitigation. IPCC reports should be neutral with respect to policy, although they may need to deal objectively with scientific, technical and socio-economic factors relevant to the application of particular policies” (IPCC 2014).

However, although there have been many calls to interdisciplinarity, there is still a need for integrating the human and social sciences into climate change research (Palsson et al. 2013; Travis and Holm 2017; Holm and Winiwarter 2017).

This article fits into the current debate on “Humanities for the Environmental Initiative” and is built on the assumption that research on circular economy, in contrast with a linear “take-make-dispose” economic model, can benefit enormously from the study of the human motivations and actions that each of us can put into act for global change (Catturi 1990). In particular, the message of humanity contained in Pope Francis’ encyclical “Laudato Si” helps us to understand the value foundations of circular economy: why and how human beings and their social formations, such as enterprises and institutions, not facing imminent dangers, can strongly choose to change direction and to act for the common good. It is not enough what Hans Jonas defined in the 1970s as an ethic of responsibility determined by the “heuristic of fear” (Jonas 1979). Jonas’s essay on moral philosophy was written in the middle of the Cold War, drawing lessons from the risk of a global nuclear holocaust. Andrea Tilche underlines its topicality but at the same time, the different explanatory capacities with respect to climate change: “... Today the challenge is similar—the risk of ecological catastrophes—but the actors are different, because every inhabitant of the planet Earth is at the same time an actor of damage, a victim and a potential solution agent—even if with different roles and responsibilities”. However, the “heuristic of fear” has shown that it does not work in this case. Faced with the enormous scale

of the problem and the risks of losing control of the planetary situation, the reaction of the individual citizen is often oriented toward today's consumption, regardless of tomorrow. We need something else that can mobilize individuals, helping to move away from deeply rooted habits and cultural symbols of the "high-carbon society" (Tilche 2016).

Aumann (1989), Nobel Prize for economics, argued that cooperative gaming theory offers an explanation of how to lower the social discount rate, for instance, how to ensure that agents are not too interested with the present as with the future. According to the theory of cooperative games, the circumstance that the same agents have to maintain long-term repeated relationships forces them to cooperate in avoiding disastrous events such as war. Also, in this case, it is the coercive power, an extrinsic incentive to the agent, and the propelling factor of human behavior. However, in the context of climate change, one of the players at stake is the future generations but they do not have the power to resist or react against our greenhouse gas emissions (Nolt 2011, 67). Some ethics scholars have argued that the future negative effects of climate change (for example, the risk of displacement of 187 million people due to sea level rise) are an unacceptable intergenerational domain (Nicholls et al. 2011) and only a social discount rate equal to or close to zero is "ethically defensible" (Lewandowsky et al. 2017, 157).

The notion of "stewardship" toward future generations is intrinsic to most of the world's religions and has been significantly articulated in the recent encyclical of Papa Francesco (2015). In this paper, we analyze the concept of circular economy (CE), researching its ethical foundations in the encyclical *Laudato Sì*. In fact, the concept of circular economy has been increasingly widespread in academics, industry, political decision-makers, and society (Ghisellini et al. (2016). CE has become a field of multidisciplinary research, especially marked by some disciplines such as chemistry, engineering, agricultural science, and, of course, economics. The field of investigation is characterized by the prevalent promotion of technical solutions ranging from ecodesign to the reuse of goods to extend the life cycle up to innovative solutions for recycling. On the other hand, the ethical foundations of the circular economy continue to be investigated a little.

As recently highlighted by Ronan (2017, 2): "Scholars have conceptualized religion as a system of meaning that can provide answers to central questions about behavior, social order, and human motivation. As pervasive and powerful forces in the lives of the world's people, religions are at least in the theory of the problem of climate change" (Veldman et al. 2012, 258). While recognizing that it is important for a variety of religious perspectives to be considered and included in the research on global change, in this paper, the focus is on the encyclical "*Laudato Sì*". The encyclical contributes to the inclusion of the ethical dimension in the circular economy, providing a very clear message of the need today for a concerted human action to save the planet, which should go together with social justice and the eradication of poverty. It provides a different perspective on the ethics of responsibility, on a different economic model thought not as a reaction to fear but as a consideration of the life of others as the reason of our life. A model in which the economy is an effective tool to take care of oneself, of others, and of the planet through a creative

action is projected in the long run. Indeed, we need a guide capable of proposing policies for the realization of dreams and hopes, even of utopias, not a reaction to fear (Tilche and Nociti 2015).

This paper is structured as follows. After introducing the concept of circular economy, the different interpretative perspectives, and the strategies of circularity, it analyzes the ethical foundations of the circular economy on the basis of the ecological revolution announced by Pope Francis in the encyclical “*Laudato Si*”. The purpose of the encyclical is not to present a technically exhaustive list of possible circular actions. The coherence of the economic development model underlying the circular economy must be sought in its aspiration to realize the founding principles of the encyclical “*Laudato Si*”. The paper provides a contribution in this direction by seeking fundamental consistency over three major aspects: (1) authentically regenerative business models; (2) change of lifestyles and consumption; and (3) realization of the principle of the “universal destination of goods”.

2 The Circular Economy

The concept of circular economy (CE) has become increasingly widespread in academics, industry, political decision-makers, and society but at the same time has increased the degree of ambiguity of the term and its significance with respect to other terms used frequently interchangeably as “sustainable development” and “green economy”. In a recent review of the literature, Kirchherr et al. (2017) have found 114 definitions of the term “Circular Economy” with significant developments in both scientific publications and reports from major consulting companies (Accenture, Deloitte, Ernest & Young, McKinsey & Company), each with its own models, strategies, and application tools.

The main literature reviews try to analyze similarities, differences, and relationships between terms, in an attempt to provide conceptual clarity and favor the use of this new economic paradigm in research and practice (Blomsma and Brennan 2017; Geissdoerfer et al. 2017; Murray et al. 2017; Lieder and Rashid 2016; Ghisellini et al. 2016; Lewandowski 2016; Sauvé et al. 2016).

The CE term is relatively recent. Ghisellini et al. (2016) lead him back to environmental economists Pearce and Turner (1989), to the Industrial Ecology studies (Preston 2012), and to the General Systems Theory (Von Bertalanffy 1950). The industrial system and its environment constitute a unique ecosystem characterized by material flows, energy, and information, in which the biosphere provides resources and services (Erkman 1997).

According to Pearce and Turner (1989), as opposed to the traditional open-ended economic system, the economy is a circular system in which the economic functions of the environment (availability of resources, life support, waste absorption, and emissions) are integrated with productive activities and how they should be “remunerated” according to the utility they create for individuals and society. A mix of interventions that include public regulation, environmental taxes, and voluntary

actions by businesses, and citizens aims to internalize externalities closing the flow of trade between productive systems and the environment (Von Bertalanffy 1950).

The CE allows to operate in the various economic activities (investment, production, and consumption) the mechanisms through which the balance between production systems and the environment is realized. The three main mechanisms of the CE, the so-called 3R: Reduction, reuse, and recycle have received enormous attention by extant literature in contrast with a linear “take-make-dispose” economic model based on the acquisition of large quantities of virgin materials on production systems that require high energy and water consumption and generate constantly high levels of refuses and waste not usable, and consequently the end-of-pipe operations that seek to dispose off or remedy the ex post waste and pollutant production.

Geissdoerfer et al. (2017, 759) claim that the most prominent CE definition has been provided by Ellen MacArthur Foundation (2012, 7) which reads: “[CE] an industrial system that is restorative or regenerative by intention and design. It replaces the ‘end-of-life’ concept with re-storing, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impede reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models.”

This definition makes it clear that the operating model of economic systems must not be confused with a new waste management system (Ellen MacArthur Foundation 2017). The circular approach implies a much more forward-looking business model and economic behavior (investment, production, and consumption), where recycling is only one of the possibilities. We need to rethink the whole life cycle of products and materials, from their design, to technologies and production systems up to distribution, consumption, collection, recycling, and final disposal methods. In these terms, the CE implies an anticipatory approach based on which the generation of refuses and waste is not a problem to be dealt with at the end of the production process or after the product has completed its useful life, but must be kept in mind from the beginning, planning all the possible alternatives to reduce the environmental footprint of the product throughout the life cycle (Braungart and McDonough 2002).

Kirchherr et al. (2017, 223) provide a comprehensive definition of the concept of circular economy as: “an economic system that is based on business models that replace the end-of-life concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumer processes, thus operating at micro level (products, companies, consumers), middle level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim of achieving sustainable development environmental quality, economic prosperity and social equity, to the benefit of current and future generations”.

This definition has the advantage of incorporating different dimensions of analysis: the key principles behind the circular economy, which in this definition are brought back to the 4R framework, or reduce/reuse/recycle/recover; the circular economy as a complex system consisting of subsystems interconnected; the finalization of the circular economy as a function of sustainable development; the existence of certain enabling conditions, including in particular the ability of enterprises to rethink their business model and consumers to rethink lifestyles.

The principles of the CE have become part of the regulations at international level. The most common conceptualization of the “how-to” of CE, the 3R framework is already outlined in the 2008 Circular Economy Promotion Law of the People’s Republic of China (Yi and Liu 2015). In Europe, the Waste Framework Directive (European Commission 2008) introducing “Recover” as the fourth R in the 4R framework. Scholars have proposed R frameworks beyond the 4R framework such as the 6Rs (Sihvonen and Ritola 2015) or even 9Rs (Potting et al. 2017). All varieties of the R framework share a hierarchy as their main feature with the first R (which would be “reduce” in the 4R framework) viewed to be a priority to the second R and so on (Ferri 2017).

The discussion around the circular economy is not only relevant to how it seeks to maintain, protect, and restore the environment toward a low-carbon economy (Blomsma and Brennan 2017). In the CE’s view, the discussion on how circular economy aims to maintain, protect, and transform the economy is also relevant as well as the discussion on how CE seeks to protect, transform the society, human well-being, and jobs (Borrello et al. 2017). In other words, the ambition of the circular economy is that the same economy benefits from environmental protection and that a different model of society, based on sustainable lifestyles, reducing inequalities and greater social protection, represents a condition necessary to pursue environmental quality and long-term economic prosperity (Raworth 2017).

In this perspective, the CE must be integrated into a broader development vision for which the three dimensions—environmental quality, economic prosperity, and social equity—must be systematically represented, because only through their harmonization, it is possible to act without compromising current and future generations (Gladek 2017).

The European Commission estimates that the adoption of circular production models would save the economic system by around 600 billion euros and the creation of around 170,000 jobs in the waste management sector by 2035 (European Commission 2015). According to estimates by the Ellen MacArthur Foundation (2015), the transition from the linear to the circular model could lead to an increase of 11% in the European GDP by 2030 (which is 7% points higher than the growth allowed by the linear model), a 48% reduction in emissions, and an 18% increase in household income. If it has grown steadily over the next 5 years, the circular economy could generate € 450 million in material cost savings, 100,000 new jobs, and prevent 100 million tons of waste from landfilling globally.

However, as these figures are impressive, the most important benefits associated with the CE are not quantifiable; they have an immaterial and transcendental dimension, which implies a reflection on the conditions for a new humanism

- Is it realistic to expect those who are obsessed with maximizing profits will stop thinking about the environmental effects it will leave to next generations?
- Governments are willing to give up a policy focused on immediate electoral results that stop the inclusion of a far-reaching environmental agenda within the public agenda?

- Are we willing to use the same product for a longer period of time, to use a product's services without owning it, to use products already used, to share with others the use of goods and services?

Human beings, as politicians, investors, managers, professionals, and consumers can lose the ability and freedom to overcome the logic of instrumental reason and succumb to an economy without ethics and without social and environmental sense (Coda 2005). The ecological crisis is an appeal to the whole of humanity to a profound conversion of the interior. It is not simply about technological, economic, and institutional innovation but to think about the motivations that come from the care of the world. In fact, it will not be possible to engage in great things only with doctrines, without a mysticism, without any inner motivation that gives the impulse, motivates, encourages, and gives meaning to personal and communal action (Papa Francesco 2015, 193).

In this paper, we want to emphasize the importance of the spiritual dimension as the foundation of sustainable development. In particular, as Pope Francis recalls in the encyclical *Laudato Si*, the great wealth of Christian spirituality, generated by twenty centuries of personal and community experiences, is a great contribution to the effort to renew humanity. The analysis of the principles and values expressed in the encyclical of Pope Francis allow us to have a more consistent look with the social and human implications of the CE.

3 The Encyclical “Laudato Si” and the Paradigm of Integral Ecology

The encyclical “Laudato Si”, promulgated in 2015 by Pope Francis along with the bishops around the world takes its name from the invocation of Saint Francesco, «*Laudato si', mi' Signore*», who in the Canticle of the creatures recalls that the earth, our common home, «is also like a sister, with whom we share the existence, and like a beautiful mother who welcomes us in her arms».

Following the Pope's profound appeal, it has been drawn up the 2030 Agenda for sustainable development by the United Nations, approved by the Heads of State during the September 2015 Summit on Sustainable Development (United Nations, The 2030 Agenda for sustainable development, new strategic framework of the United Nations). At the same year, in December 2015, the COP 21 Paris Agreement, for the first time, brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects.

Pope Francis resumes the thoughts and words of his predecessors and recalls that the care of creation is the commitment of all, believers and non-believers, and denounces the deliberate exploitation of resources, a short-sighted policy that looks at immediate success without long-term prospects 'selfishness of consumer societies that stunt to change their lifestyles. At the center of reflection, there is the unavoidable union of ecological, economic, and social issues, conjugated to the paradigm of

integral ecology, which considers the problems of the planet and of humanity closely related. The Pope affirms a systemic vision in which “everything is connected”, for which nature is not a mere frame of our life, but we are involved on it, so that ecological problems have a human root, requiring “an analysis of the functioning of society, its economy, its behavior, its ways of understanding the reality” (139).

The encyclical “Laudato Si” raises a radical critique to the current model of development based on the technocratic efficient paradigm for its obvious negative impacts on people’s lives and nature. Technical skills, the Pope writes, give *«those who possess knowledge and above all the economic power to exploit its impressive domination over the whole of mankind and the whole world»*. It is the logic of a technocratic domain that leads to the destruction of nature and the exploitation of the weak people and populations. The technocratic paradigm tends to exercise its own dominion over economy and politics, preventing it from recognizing that the market alone does not guarantee full human development and social inclusion.

The denunciation of the efficient paradigm of technocracy refers mainly to the “use and throw” logic that generates the culture of waste. Pope Francis recalls Giovanni Paolo II’s words (1981a) that *«science and technology are a wonderful product of human creativity that is a gift from God»*. But at the same time, he warns that immense technological growth and the advancement of science have not been accompanied by a development of the human being with regard to responsibility, values, and conscience: “He lacks a properly solid ethic, culture and spirituality that really give him a limit and contain within a shiny self-control” (105). Human intervention on nature demonstrates that there is no respect for the natural reality of things; rather than accompanying and assisting the possibilities offered by natural reality, the human being tends to ignore the reality that lies before him. From here it is easy to pass, writes Pope Francis, “to the idea of infinite or unlimited growth” that leads to squeezing the planet to the limit and beyond the limit, on the false assumption that there is an unlimited amount of energy and usable means, that their immediate regeneration is possible, and that the negative effects of nature manipulations can easily be absorbed (106).

At the center of the “ecological conversion” proposed by Pope Francis, there is the redefinition of the very idea of progress, which improves the quality of life of people and communities and leaves the future generations a better environment (194). As the Pope reminds us, it is not “irrationally halting progress and human development”, but instead of “paving the way for different opportunities, which do not imply stopping human creativity and their dream for progress, but over all to channel that energy in a new way”.

Partly, this implies recognizing that the efforts to use sustainable natural resources are not a useless expense but an investment that can offer other medium-term economic benefits. The Pope writes: “If we do not have narrower views, we can find that diversifying a more innovative production with less environmental impact can be very profitable”. But above all, we need to direct intelligence to building fair and sustainable development modes and in this direction “we have to convince us that slowing down a certain rate of production and consumption can result in another way of progress and development” (191). In fact, Pope Francis says, “it’s time to

accept a certain decline in parts of the world, providing resources to grow healthy in other parts”. We know that the behavior of those who consume and destroy more and more is untenable, while others still cannot live in accordance with their human dignity. Therefore, in the face of greedy and irresponsible growth that has been produced for many decades, “one must also think about slowing down a bit, setting some reasonable limits and even going back before it is late”.

4 Rethinking Economics in the Light of Integral Ecology Paradigm

Pope Francis states that for the emergence of new models of progress we need to «change the model of global development», which implies a responsible reflection on «the meaning of the economy and its purpose, to correct its dysfunctions and distortions». There is a point in paragraph 52 in which the Holy Father raises a radical criticism of current investment, production, and consumption patterns, pointing to the disparity in treatment of the financial debt of developing peoples with respect to the ecological debt of the richest countries: “*The land of the poor of the South is rich and unpolluted, but access to property and resources to meet their vital needs is forbidden by a system of commercial relations and structurally perverse property*”.

How should the current global development model be changed to respond to a genuine ecological transformation of humanity? Pope Francis makes a clear distinction between “sustainable development” and “sustainable growth”. According to the Pope, “the talk of sustainable growth often becomes a diversion and a justification tool that embraces the values ...of ecological discourse within the logic of finance and technology, and the social and environmental responsibility of enterprises is mostly reduced to a series of marketing and image actions” (194).

The Italian economist Stefano Zamagni (2015) states that there are three dimensions to analyze the development of a society: the material dimension measured by the GDP, the social-relational dimension measured by the inequality indices, and the spiritual one that looks at how an economy meets the needs of the spiritual spirit. Pope Francis says these three dimensions are intertwined. There can be no GDP growth without the growth of equality between men without the need for their spiritual needs. The obsession of unlimited quantitative growth with all that comes in terms of speculative investments and search for financial income, maximizing profits in the short term, consumerism, is not compatible with the integral development of the human being.

In this framework, it is necessary to ask whether the circular economy can be a model of global development that responds to the principles of the integral ecology laid out in the encyclical “*Laudato Si*”. The purpose of the encyclical is not to present a technically exhaustive list of possible circular actions. Rather, the coherence of the economic development model underlying the circular economy must be sought in its

aspiration to realize the founding principles of the encyclical “*Laudato Si*”. We can distinguish the following fundamental aspects:

- i. economic growth will not clean up the environment;
- ii. authentically regenerative assumptions in business models;
- iii. change of lifestyles and consumption;
- iv. the common destination of goods.

4.1 Economic Growth Will not Clean up the Environment

The regenerative assumptions underpinning the circular economy are the same as those in the encyclical “*Laudato Si*”. According to Pope Francis, it is advisable to avoid a “magical market view”, which tends to think that the problems can be solved only with the growth of the products, of companies, or individuals. In particular, the environment is one of those goods that market mechanisms cannot defend or promote properly.

Raworth (2017) supports the same concept when she says that “economic growth will not clean up the environment”. Starting from the economic contributions to growth (Grossman and Krueger 1995), well-synthesized by the so-called U-overturned curve of Kuznets, it argues that it is not absolutely necessary for nations to suffer the social pain of profound inequality and environmental degradation (the peak area of the curve) if they want to create a richer, more equitable, and more respectful society over the nature.

Empirical research shows that with the growth of gross domestic product the curve may not return to decline. From 1990 to 2007, the ecological imprint of the main industrialized countries grew at the same time as GDP growth: the United States, the United Kingdom, New Zealand, and Australia increased by more than 30%, while in Spain, Portugal, and the Netherlands, the increased pollution was over 50% (Raworth 2017, 219). Between 1980 and 2000, demand for nonrenewable resources such as fossil fuels, metals, and minerals increased by 50%. Over the next 14 years, between 2000 and 2014, demand for nonrenewable resources has increased further by 80%. According to Accenture (Lacy and Rutqvist 2015, 23), this phenomenon is part of a larger growth pathway that from 1960 to 2014 has led to an increase of 450% of the consumption of nonrenewable resources and does not show any stabilization sign in the near future. The Global Footprint Network (2016) has come to the conclusion that the world is already using the equivalent of half a planet’s resources, or we currently use 50% more resources than Earth is able to regenerate each year and which is capable of absorbing pollution. Given the current speed of global growth by 2050, we will need each year the equivalent of the resources of three planets.

In this context, the words of the Pope resound, for which “the rhythm of consumption, waste, and alteration of the environment has exceeded the possibilities of the planet, so that the present lifestyle, being untenable, can only lead to disasters, as it is already happening periodically in different regions” (161).

If the economic development model as we have known so far cannot reconcile growth, eliminate inequalities, and “common home” care can lead to businesses need to rethink their business models deeply to make them consistent with sustainable development.

4.2 *Regenerative Business Models*

Besides the frontage changes and the rhetoric of “sustainable development” in corporate communications, business models respond to the principles of circularity if they become authentically “regenerative”, becoming an expression of a real change of mentality. Some main business models can be distinguished, which also represent an evolution of the way business is made toward the circular economy.

The first is a *reactive business model* for which businesses only modify behaviors when they are forced to change, for example, due to the imposition of environmental taxes, sectoral regulations that impose more tighten pollution limits (quotas), or differentiated tariffs, increasing for consumption rates (e.g., water and energy). The business model continues to focus on the increase in production and sales volumes, and on the supply of nonrenewable resources, with typically end-of-pipe remediation interventions that aim to remedy ex post with abatement technologies pollution levels or the efficient management of landfill disposal. The company moves in the logic of a linear “take-to-work-to-throw” economy, continuing to exert pressure on resources that are not compatible with economic regenerative design. Environmental management for these companies is only a cost of compliance, without any transformation of product strategies, production systems, and organizational models.

Businesses simply respond to an external incentive so much and to the extent that the external financial cost and benefits difference suggest economic convenience. Following an instrumental rationality, a possible evolution of the linear reactive model is in the direction of employing circular strategies at the lowest level (Potting et al. 2017). Businesses “do what they repay” (Raworth 2017, 223), invest in cleaner technologies, implement recovery and recycling strategies, certify products and production sites with green stamps, as this allows them to lower production costs and to earn a green image for customers willing to pay for more environmentally friendly products. In fact, this circular version of the reactive business model is also fully in line with the principle of maximizing profit.

As Pope Francis reminds us (190): “The logic of maximizing profit that tends to isolate itself from any other consideration is a conceptual distortion of the economy: if production increases, it is of little interest to be made at the expense of future resources or the health of the environment; if cutting a forest increases production, no one measures in this calculation the loss that involves desertification of a territory, destroying biodiversity, or increasing pollution. That is to say, companies get products by calculating and paying a fraction of the costs” (195).

A real change of mindset imposes on firms a more decisive evolutionary stage toward an *anticipated business model*. Unlike reactive approaches, companies adopt

a true regenerative design, or pursue the goal of not harming the environment through their activities, pointing to a “zero mission” (Raworth 2017, 224) (zero waste, zero water consumption, zero emissions, etc.). The characterizing aspect of this business model is double: (1) the design of interventions, (2) and their pervasiveness with respect to all the activities that constitute the value chain of the enterprise (supply, production, and distribution).

This approach is precisely identified in the encyclical “Laudato Si”, prefiguring an authentic regenerative economy by project. Illuminating, even for their managerial importance (Mio 2002), are the words of the Holy Father (185): “In any discussion of an entrepreneurial initiative, a series of questions should be asked in order to distinguish whether it will lead to a true integral development: For what purpose? For what reason? Where? When? How? To whom is he directed? What are the risks? At what cost? Who pays the expenses and how will he do it? In this examination there are issues that need to be prioritized. For example, we know that water is a limited and essential resource, and it is also a fundamental right that affects the practice of other human rights. This is unquestionable and goes beyond any environmental impact analysis of a region”.

There is a clear need to include environmental issues and corporate social responsibility already in defining business strategies: “an environmental impact study should not be followed by the elaboration of a productive project or any policy, plan or program ... It must be connected with the analysis of working conditions and the possible effects on people’s physical and mental health, on the local economy and on security” (183). The encyclical also emphasizes the importance of financial economic planning, stressing that “economic results can be more realistically predicted, taking into account the possible scenarios and possibly anticipating the need for greater investment to address undesirable affects that may be corrected” (183).

It is interesting to emphasize the point of view expressed in the encyclical “Laudato Si” also as a new paradigm in business administration and management studies. In one of the most influential academic contributions to corporate social responsibility, Porter and Kramer (2006) state that “The fact is, the prevailing approaches to CSR are so fragmented and so disconnected from business and strategy as to obscure many of the greatest opportunities for companies to benefit society. If, instead, corporations were to analyze their prospects for social responsibility using the same frameworks that guide their core business choices, they would discover that CSR can be much more than a cost, a constraint or a charitable deed—it can be a source of opportunity, innovation, and competitive advantage” (p. 2). On this point converges a very large part of the literature of corporate social responsibility, environment, and management (Carroll 1999; Elving 2013; Lii and Lee 2012; del Mar García-De los Salmones and Perez 2017).

The anticipatory business model is regenerative by design: products and production processes are designed to employ fully renewable, recyclable, or biodegradable inputs (Sauvé et al. 2016; Preston 2012). The enterprise led by “regenerative design” uses nature as a model, unit of measure, and guidance. According to Raworth (2017), if we take nature as a model, we stop asking ourselves what we can extract and we begin to wonder what we can learn from its 3.8 billion years of experimentation.

Organic nutrients such as biochemicals or bioplastics substitute toxic and nonrenewable inputs and, after use, degrade safely in a natural environment (Braungart and McDonough 2002). Synthetic nutrients, such as metals or minerals, can be recycled and reused indefinitely as long as the recovery chain remains functional, and there is no loss of resources along the value chain and the resource is not contaminated (Lacy and Rutqvist 2015, 63). Indeed, the anticipatory business model requires a change of mentality that can be summed up by the approach from “cradle to grave” approach to “cradle to cradle” approach (Braungart and McDonough 2002). This step implies that not only the inputs of production processes need to be renewable and nontoxic but companies must invest in recovery and recycling activities that turn waste into value. The use of new recycling and recycling technologies and bidirectional supply chain management are key to allowing products to move toward customers, and vice versa, according to the so-called reverse logistics (Ellen MacArthur Foundation 2015).

4.3 Change of Lifestyles and Consumption

The anticipating business model is essentially curved on itself and on its own interests. Thanks to the regenerative design, the goal of “zero mission” is pursued by trying to close the circuit between design-supply-production-distribution-recovery and recycling (Yung et al. 2011). However, this is a closed approach, benefiting the company that implements it and the environment but produces limited impacts on the transformation of consumer patterns. A fully circular economic model also implies new ways of consumption and sharing of wealth (Boccia and Sarnacchiaro 2017).

In a degenerative economy, value is created by continuously increasing sales and reducing procurement and production costs. On the other hand, in a regenerative economy instead of being obsessed with the introduction of new products and by moving large volumes of production and sales, we try to get as much value as possible from every ton of consumed resources. This is to look at profitability throughout the product life cycle and not just at the point of sale (Lacy and Rutqvist 2015, 107). The products are designed to have a long life cycle and not to persuade consumers to quickly break out of a still running product; modular design allows you to have components that can be easily dismantled, repaired, regenerated, replaced, and reused; furthermore, to lengthen the life cycle, products are sold together with services that provide the possibility of not replacing the product but to update it with new features and functionality (Blomsma and Brennan 2017; Ghisellini et al. 2016; Kirchherr et al. 2017).

Businesses can do their part to promote regenerative business models also on the consumer side, but the circular economy must necessarily be accompanied by a change in consumer choice and consumer behavior. This point is clearly expressed in the encyclical *Laudato Si*; Pope Francis is very clear in asserting that only by cultivating “solid virtues is possible the donation in an ecological commitment” (209). The recall is on healthy habits that have a direct and important impact on environmental

care and that are part of “generous and dignified creativity”, which shows the best of the human being, how to reduce the consumption of water, differentiate waste, turn off lights, use public transport, or share the same vehicle among many people, and so on. On the other hand, the Pope does not under evaluate the difficulties of this transformation and the educational challenge above all to young people who have grown up in a context of high consumption and well-being that makes it difficult to mature other habits (Otto and Pensini 2017).

4.4 The Common Destination of Goods

Giovanni Paolo II emphasized that the principle of the subordination of private property to the universal destination of goods and, therefore, the universal right to their use is a “golden rule” of social behavior, and the «first principle of all-ethical-social order (Giovanni Paolo II 1981b). The principle in question is widely dealt with in the social doctrine of the Catholic Church in conjunction with the other fundamental principles of justice and solidarity (171). “The goods, though legitimately possessed, always maintain a universal destination (...) The riches realize their service when they are intended to produce benefits for others and society (...) The expansion of wealth, visible in the availability of goods and services, and the moral need for fair distribution of these must stimulate individuals and society as a whole to practice the essential virtue of solidarity”. In the encyclical *Laudato Si*, Pope Francis resumes this principle by emphasizing (93): “Today, believers and nonbelievers agree that land is essentially a common heritage, whose fruits must benefit everyone. ... Consequently, every ecological approach must integrate a social perspective that takes into account the fundamental rights of the most disadvantaged people”.

In accordance with the Church’s Social Doctrine, private property is only a tool for respecting the principle of the universal destination of goods, and thus, ultimately, it is not an end but a means. The right to private property is subordinated to the right of common use, to the need for the goods of creation to be finalized and destined for the development of all humanity. «The person must consider the external things he legitimately possesses not only as his own, but also as common, in the sense that they can be useful also to others». The universal destination of goods entails constraints on their use by legitimate owners. The individual cannot operate regardless of the effects of the use of his resources but must act in such a way as to pursue, in addition to personal and family benefits, the common good (178).

The practical implications of the principle of the universal destination of goods are very important, ranging from the fair distribution of land to the owners’ obligation not to keep the possessed property up to the limitation of intellectual property rights that hamper new technical knowledge and scientific ones to be placed in service of the primary needs of human being (Church’s Social Doctrine, 179). The circular economy model contributes to the principle of the “common destination of goods”, favoring asset sharing and access to services of an asset without the need to be the owners of the good. Sharing economies like sharing platforms, new ways of

accessing underutilized goods, or widening access to goods that would otherwise be inaccessible because of high prices. Circular strategies such as product recovery and reuse by other users allow you to extend the product lifecycle through sharing.

These forms of “common goods” also imply more responsible lifestyles such as taking care of restitution, being transparent in providing information on the state of the products, respecting the conditions of use and security of products, being reliable in payments (Murray et al. 2017; Lewandowski 2016; Heck and Rogers 2014). In fact, sharing involves building trust relationships between businesses and customers and between users, and this allows the system to work by keeping the cost of monitoring and sharing low.

5 Conclusions

The Anthropocene represents an opportunity to confront questions of meaning, value, responsibility, and finalism in a moment of rapid and growing change. Originally, the academic research has focused on natural sciences and technologies and therefore on means rather than on goals, on measurement techniques rather than on the social and cultural norms that primarily guide environmental problems (Lovbrand et al. 2015). Indeed, the scientific understanding of the physical world may not be of much use in understanding human value and motivation. The Humanities for the Environment, providing insight into human action and motivation, argues that the human sciences may contribute to understanding and engaging with global change problems (Holm and Brennan 2018). The encyclical “Laudato Si” is part of the current debate on the role of the human and social sciences with respect to the issues of environmental sustainability. The Pope’s discourse is a profound reflection on the ecological, economic, and social issues conjugated to the paradigm of integral ecology, which considers the problems of the planet and humanity closely related. Following the Pope’s teaching and on the basis of a literature that is increasingly attentive to creating a close interdisciplinary link (Brondizio et al. 2016), this article sought to encourage an integral understanding of new economic models. In particular, we analyzed the pattern of circular economy as a possible way to respond to the principles of integral ecology based on the “Laudato Si”. The lines of action proposed by Pope Francis are clearly associated with the typical circular strategies: Reduction, reuse, and recycle. The paper has provided a contribution in this direction by seeking fundamental consistency over authentically regenerative business models, change of lifestyles, and consumption and realization of the principle of the “universal destination of goods”. At the basis of sustainability, there is an ecological conversion of the human being, individually, and in the communities of the common good. To rethink current production and consumption patterns, develop new business models, and turn waste into high-value-added resources, we need creative business technologies, processes, services, and models that shape the future of the economy and society. However, there can be no real change without an authentic reconciliation as the key to ecological integrity. And here is the great importance of the encyclical

“Laudato Si’”, as it provides the framework for integral and solidarity humanism, capable of living a new social, economic, and political order based on the dignity and freedom of every human person, the only basis on which to build an authentic sustainable development.

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Contemplative Sustainable Futures: The Role of Individual Inner Dimensions and Transformation in Sustainability Research and Education



Christine Wamsler

Abstract Humanity is facing increasingly complex sustainability challenges. It is now clear that they cannot be resolved by new technology, policy or governance approaches alone. They require a broader, cultural shift. Consequently, the role of human beings' "inner dimensions" (e.g., their mindsets, worldviews, beliefs, social values, and motivations) and their potential "inner transformation" (embodied in notions such as mindfulness and compassion) are increasingly attracting attention from practitioners and researchers alike. As a result, in 2015, the "Contemplative Sustainable Futures Program" was set up at the Lund University Centre for Sustainability Studies to explore the role of inner dimensions and transformation for sustainability. It aims to create space and opportunities for learning, networking, and knowledge development on this topic, which entails the creation of closer linkages between sustainability and the humanities (e.g., philosophy, theology, spirituality). The Program consists of different building blocks, including research and teaching activities. This chapter presents the outcomes, as well as the institutional and academic challenges encountered in setting up the Program. The outcomes so far include the establishment of (i) a new Masters-level course on "Sustainability and Inner Transformation", (ii) an Experimental Learning Lab on mindfulness in sustainability science, practice, and teaching, (iii) a professional knowledge database and network, and (iv) different research studies and resultant frameworks for future, more integrated research. Finally, the lessons learned, ongoing gaps, and the future work needed to overcome these gaps are presented.

Keywords Inner transformation · Inner transition · Mindfulness · Compassion Well-being · Contemplation · Contemplative education · Mindful climate action Integral adaptation · Sustainability science

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1 Introduction

I used to think the top environmental problems were biodiversity loss, ecosystem collapse and climate change. I thought with 30 years of good science we could address those problems. But I was wrong. The top environmental problems are selfishness, greed and apathy... And to deal with these we need a spiritual and cultural transformation - and we scientists don't know how to do that.—James Gustave Speth

Humanity is facing increasingly complex sustainability challenges, such as climate change, disasters, and energy, food, land or water conflicts (Kates et al. 2001; Sol and Wals 2015; Wals and Corcoran 2012; WEF 2018). The influence of human activities on their environment and climate system is so profound, and unprecedented, that a new geological epoch—the *Anthropocene*—has been declared (Lewis and Maslin 2015).

Despite the prominence of sustainability as a concept, societies trajectories remain deeply unsustainable (WEF 2018; WWF 2016). While sustainability scholarship has led to substantial analytical advancements over the past two decades, it does not seem to have catalyzed the necessary change (Ives et al. 2018; Wamsler et al. 2017). Now that sustainability science is well-established as a field of scholarship, it is timely to question how it has progressed and where the field needs to go in the future.

A critical review shows that the vast majority of sustainability scholarship has, so far, focused on the external world of ecosystems, wider socioeconomic structures, technology and governance dynamics. At the same time, a critical second dimension of reality has been neglected: the inner dimensions of individuals (Ives et al. 2018; Wamsler et al. 2017).

In order to fill this gap, sustainability also has to be looked at from “the other end”, by investigating how individual inner transformation could impact global sustainability. To this end, at the end of 2015, the Contemplative Sustainable Futures Program was set up at the Lund University Centre for Sustainability Studies (LUCSUS). It aims to critically assess the potential role of inner dimensions and transformation in societies’ transition toward sustainability and create space and opportunities for knowledge development, learning, and networking on this topic, which entails closer linkages between sustainability and the humanities (e.g., philosophy, theology, spirituality). It is based on the assumption that human beings’ inner dimensions (such as mindsets, worldviews, beliefs, social values, emotions, and motivations) lie at the root of sustainability challenges; therefore, they can be important leverage points for change, and are thus fundamental to the solutions to some of the world’s greatest challenges (Meadows 1999; O’Brien 2013). At the same time, they have evaded explicit analysis because they cannot only be understood via traditional scientific approaches and sustainability science terminology (O’Brien and Hochachka 2010; Wamsler et al. 2017).

The Contemplative Sustainable Futures Program consists of different building blocks, including teaching, networking, and research activities. These include: (i) a Masters-level course on “Sustainability and Inner Transformation”, (ii) an Experimental Learning Lab on mindfulness in sustainability science, practice, and teaching,

(iii) a professional knowledge database and network, and (iv) different research studies and resultant frameworks for future integral enquiry. This chapter summarizes the results of the activities that have been put in place¹ and presents a personal account of the challenges in setting up the Program. On this basis, some lessons learned and future prospects are presented.

2 Contemplative Sustainable Futures—Education

You cannot teach the mind until you reach the heart.—Wolpow et al. (2016)

The initial inspiration for establishing the Contemplative Sustainable Futures Program emerged out of teaching sustainability issues (cf. Sect. 4) and led to the development of new educational approaches and activities, which are described in this section. These involved the review and application of contemplative, mindfulness-based approaches in sustainability education, including the establishment of an Experimental Learning Lab and the development of a new Masters-level course.

2.1 *Mindful Teaching and Learning*

While mindfulness is playing an increasing role in pedagogy in general, it has received limited attention in the context of sustainability teaching and learning (Wamsler 2015/2016). Mindfulness is the psychological process of bringing one's attention to the present moment. But it is more than just moment-to-moment awareness. It is a kind, curious, and nonjudgmental awareness that helps us relate to ourselves, others, and our environment with compassion (Kabat-Zinn 1990).

It is only recently that mindfulness-based teaching methods have explicitly been promoted as a new way to address socio-ecological challenges and create a more just, compassionate, reflective, and sustainable society (ACMHE 2016; Gugerli-Dolder and Frischknecht-Tobler 2011; Gugerli-Dolder et al. 2013; Litfin and Abigail 2014; Schoeberlein 2009).

Especially in the context of climate change associated with growing risk and uncertainties, sustainability is increasingly being seen as a learning challenge. It is argued that in addition to appropriate forms of governance, legislation, and regulation, alternative forms of education and learning are needed for people to develop capacities and qualities that allow them to contribute to alternative (climate adapted) behaviors, lifestyles, and systems, both individually and collectively (Doppelt 2016; Sol and Wals 2015).

Consequently, contemplative teaching and learning methods are being explored in sustainability education, and particularly in the context of courses that address climate change issues. Examples are the revision and development of new syllabuses

¹Accordingly, this chapter includes text extracts and summaries from related research studies.

on global environmental politics, sustainability leadership development, and “mindful climate action” (e.g., Barret et al. 2016; Litfin and Abigail 2014).

In addition, the notion of “ecological mindfulness” has been emerging in sustainability teaching (Mueller and Greenwood 2015; Sol and Wals 2015). Underlying this notion is the idea that the proliferation of “adjectival education” (including sustainability education) is inconsistent with the interdisciplinary and hybrid learning needed to foster scientific and cultural understanding and actions, leading to socio-ecological change. Hence, ecological mindfulness suggests that the integration and blending of thought, rather than its disintegration and separation, should be the purpose of sustainability teaching and learning (Mueller and Greenwood 2015). Ecological mindfulness of teachers is said to be crucial in shaping students’ understanding of nature–society relations, and it requires integrating indigenous cultural knowledge and sustainable practices within existing scientific frameworks (Chinn 2015).

An increasing number of pioneering scholars are thus calling for mindfulness-based approaches to improve educational bodies and curricula oriented toward sustainability and well-being. In line with the Contemplative Sustainable Futures Program they argue that in the context of sustainability, teaching and learning require spaces where diverse holistic, and place-responsive perspectives can take root, be nurtured, and flourish into ways of knowing, being, and becoming that serve people, places, and the planet (cf. Greenwood 2013; Gugerli-Dolder and Frischknecht-Tobler 2011; Sameshima and Greenwood 2015). Accordingly, teaching should also become a way to work toward a “learning system”, in which people collectively become more capable of withstanding setbacks and dealing with insecurity, complexity, and risks (Sol and Wals 2015). The Contemplative Sustainable Futures Program was set up to support such a learning system.

2.2 Experimental Learning Lab

The development of the Experimental Learning Lab began in 2015 (cf. Sect. 2). In 2016, it ran for 3 months and included 70 students from two sustainability-focused Masters’ Programs. The aim was to explore mindful approaches in sustainability teaching and learning and assess the potential to make them an integral part of the curriculum.

Contemplative teaching and learning practices were integrated into mandatory course activities (reflecting, listening, debating, working together, etc. [Box 1]). In addition, written assignments on sustainability and mindfulness were offered as graded tasks, and a total of 16 voluntary mindfulness sessions were conducted outside the usual course activities (i.e., lectures, seminars, group work, and field trips). The mindfulness sessions were implemented in coordination with the Students’ Health Centre, and related information was provided in the course schedule, the students’ course portal, and a closed Facebook group. The sessions lasted between 15 and 30 min and included a variety of techniques.

Box 1: Integration of mindfulness-based teaching and learning approaches. Source: Wamsler et al. (2017).

Mindfulness-based approaches in teaching and learning were explicitly integrated in the following ways:

- Moments of silence and reflection were incorporated into course activities to improve self-reflection, self-awareness, social regulation, and empathy (cf. Goleman 2011).
- Mindful interactions during listening, debating, reflecting, and working together were explicitly encouraged in lectures, exercises, and seminars.
- The literature seminar included a written reflection on students' learning in relation to the five key aspects of mindfulness: observing, describing, acting with awareness, nonjudgment, and reactivity (cf. Baer et al. 2006).
- Group assignments required students to establish rules for mindful interaction and learning.
- Written assignments on the topic of sustainability and mindfulness were offered as graded tasks. More specifically, in the context of the overall theme of the assignment (i.e., urban and/or rural sustainability, with a focus on risk reduction and adaptation planning), groups were free to select a specific topic (including gender, livelihoods, food security and farming, municipal governance, climate networks, climate change mitigation, living labs, nature-based solutions, city–citizen cooperation, citizen participation, sectoral mainstreaming, or mindfulness).
- Voluntary mindfulness sessions were offered and conducted outside the usual course activities.

Written and oral course evaluations (response rates: 50/100%), two surveys and a group discussion (response rates: 71/23/29%) were conducted to assess participants' understanding and knowledge of mindfulness and sustainability, and the impacts of their mindfulness practices on learning. The first survey was conducted before the lab was implemented, while the second survey and the group discussion took place afterward. Literal reading and qualitative coding were used to analyze and triangulate the results (cf. Glaser and Strauss 1967; Strauss and Corbin 1998).

The results of the Learning Lab showed that a majority of students were open to including mindfulness in sustainability learning and teaching. Sixty percent of survey participants felt that mindfulness was relevant to sustainability teaching and learning (including issues of climate change adaptation and risk reduction), which increased to 79% after the Lab ended. In addition, those who had participated in the voluntary mindfulness sessions agreed that they had a positive influence on their learning. Overall, around 80% welcomed the integration of mindfulness into the course, and 20% were neutral (based on the pre-Lab survey and the oral evaluation). Around 64% stated that the Lab added extra value to the course in general. Only one

out of 70 students thought that its continuation would not be worthwhile (oral course evaluation).

In addition, the results of the Learning Lab supported the outcomes from the literature review (cf. Sect. 3.1). A total of 83% of participants said that they had not come across the issue of mindfulness in their environmental studies and sustainability science reading, including risk reduction and climate change adaptation literature. Those participants who had come across mindfulness in their reading referred to the practice-related approaches found in green movements. In addition, whilst a total of 79% of respondents felt that mindfulness had an influence on their daily life in terms of sustainable behavior, knowledge of its potential relevance for wider sustainability issues was rare.

2.3 Course on “Sustainability and Inner Transformation”

The successful implementation of the Experimental Learning Lab resulted in the development of a new Masters-level course on “Mindfulness, Compassion, and Sustainability”, later broadened and renamed “Sustainability and Inner Transformation” (cf. Sect. 4). The overall aim of the course is to critically assess the potential role of inner dimensions and transformation for sustainability. The objectives are threefold. First, it allows students to develop a critical understanding of the potential interlinkages between inner transformation and sustainability (theories and practices). Second, inner transformation theories and practices are assessed in relation to a specific sustainability field, such as climate change adaptation or disaster risk reduction. Third, the course allows students to engage and critically reflect on the nature of inner transformation and its salience to sustainability learning. Accordingly, upon the completion of the course, students should be able to:

- Demonstrate the ability to critically investigate the potential role of inner dimensions and transformation in societies’ transition toward sustainability.
- Demonstrate the ability to critically reflect on the notion of inner transition in the context of a specific sustainability field, associated theories, concepts, and practices.
- Discuss in speech and writing the notion of inner transformation in (current) sustainability science and learning.

The drivers and challenges encountered in setting up the new course are described in Sect. 4.

3 Contemplative Sustainable Futures—Research

Change has a considerable psychological impact on the human mind. To the fearful it is threatening because it means that things may get worse. To the hopeful it is encouraging because things may get better. To the confident it is inspiring because the challenge exists to make things better.—King Whitney Jr

The first three research studies, which were conducted under the Contemplative Sustainable Futures Program, focused on mindfulness as a potential aspect of inner transformation toward sustainability (presented in Sects. 3.1, 3.2 and 3.3), followed by broader studies on the influence of inner dimensions on sustainable climate adaptation (Sect. 3.3). Mindfulness is often viewed as a prerequisite to the development of compassion, and is said to involve a fundamental shift in the way we think about, and ultimately act on, local and global economic, social, and ecological crises (Carroll 2016; Ericson et al. 2014; Scharmer 2009/2016). Neuroscientists argue that mindfulness can literally rewire our brains (Goleman and Davidson 2017).

3.1 *Mindfulness in Sustainability Research, Practice, and Teaching*

The first step was to explore whether there are any linkages between mindfulness and sustainability, and how this is reflected in current sustainability research, practice, and teaching. Based on a qualitative literature review that was complemented by the results from the Experimental Learning Lab (cf. Sect. 2.2), the mindfulness–sustainability relationship was investigated (cf. Wamsler et al. 2017).

The results showed that mindfulness has so far been vastly neglected in both sustainability science and teaching. Notably, ideas such as “inside-out sustainability”, “sustainability from within”, “ecological mindfulness”, “organizational mindfulness”, and “contemplative approaches” have received little attention. At the same time, there is a growing body of research that provides scientific support for the positive effects of mindfulness (and the associated cultivation of compassion) on (1) subjective well-being; (2) the activation of (intrinsic/ nonmaterialistic) core values; (3) consumption and environmental behavior; (4) the human–nature connection; (5) equity issues; (6) social activism; and (7) deliberate, flexible, and adaptive responses to sustainability challenges, such as climate change. The results also showed that in contrast to sustainability research and teaching, mindfulness is gaining widespread recognition in practice (e.g., by the United Nations, governmental and nongovernmental organizations). The United Nations office that coordinates global climate action (the United Nations Framework Convention on Climate Change Secretariat) asked the Buddhist leader Thich Nhat Hanh to provide a statement ahead of the Paris Climate Summit in late 2015, for instance.

Based on the identified mindfulness–sustainability linkages, the study concluded that mindfulness can contribute to understanding and facilitating sustainability, not

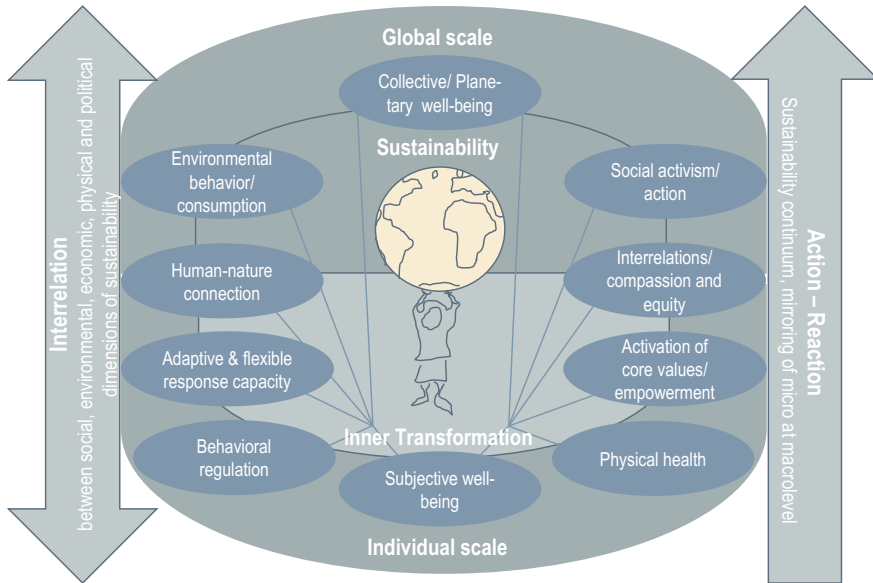


Fig. 1 Framework for contemplative scientific inquiry, practice, and education in sustainability. *Source* Wamsler et al. (2017)

only at the individual level, but at all scales, and should, thus, become a core concept in sustainability science, practice, and teaching. It called for more research that recognizes inner dimensions of sustainability, spirituality, and mindfulness in particular, acknowledging that: (1) the micro and macro are mirrored and interrelated, and (2) nonmaterial causation is part of sustainability. To support related endeavors, it provided the first comprehensive framework for contemplative scientific inquiry, practice, and education in sustainability (Fig. 1). While until now, reductionist research and materialism has been adopted as the intellectual and social model, the study has opened up a new discourse on the role of individual inner dimensions and transformation in sustainability. At the same time, it has provided a springboard for discussions on how we conduct research in sustainability and how we construct knowledge, highlighting the importance of including multiple perspectives and entry points.

3.2 Mindfulness in Climate Adaptation Research

The second study conducted under the Program built upon the first by looking deeper into specific sustainability challenges—i.e., climate change and disasters—and the associated sustainability field of climate adaptation. Based on a literature review, it explored the potential role of mindfulness in adapting to increasing risk and climate change (cf. Wamsler 2018).

The results showed that research on mindfulness in climate adaptation is scarce and fragmented. The few studies that explicitly link mindfulness with climate-related risk reduction mostly assesses the potential of specific mindfulness-related interventions for individual psychological resilience after extreme climate events. These interventions are aimed at different groups, such as victims, aid workers (firefighters, healthcare professionals, and volunteers), and researchers. Broader analyses and foci are missing.

At the same time, new scientific domains are opening up in cognate fields that illuminate the mindfulness–adaptation nexus from certain perspectives. These include studies in the fields of (1) disaster management; (2) individual well-being; (3) organizational management; (4) environmental behavior; (5) social justice; and (6) knowledge production. They demonstrate the positive influence of mindfulness (and the associated cultivation of compassion) for the development of capacities that are crucial in all phases and contexts of climatic events (including pro- and reactive climate adaptation).

The study concluded that mindfulness has the potential to facilitate adaptation at all scales (through cognitive, managerial, structural, ontological, and epistemological change processes) and should, therefore, become a core element in climate and sustainability research. In addition, it sketched the conceptual trajectories of the mindfulness–adaptation nexus and presented a pioneering, comprehensive framework for “mindful climate adaptation” (Box 2).

Box 2: Framework for mindful climate adaptation. Source: Wamsler (2018).

The framework for mindful climate adaptation illustrates the core conceptual trajectories, which imply the critical consideration of mindfulness in supporting:

- **Private adaptation:** for instance, by reducing vulnerability (e.g., psychological and physical well-being, and risk perception), improving post-disaster response, recovery, and growth (e.g., the ability to cope with stressful situations), and increasing motivation and action-taking for reducing risk (e.g., clarification of values, increased empathy and compassion, adaptive capacity, and pro-social and pro-environmental behaviors).
- **Public–private adaptation and governance:** for instance, by improving climate change communication, climate policy support, and new social approaches, norms, and values that challenge the business- and power-as-usual norm. Mindfulness can thus be seen as another pillar in institutional attempts to support transformation, which can complement other angles. Criticism of existing institutions and power relations as drivers of vulnerability and risk thus also need to be extended to include a critique of these institutions as inflexible, unimaginative, and emotionally dead (classically seen as the characteristics of bureaucracy).

- **Adaptation policy integration and mainstreaming:** for instance, by influencing organizational reliability (organizational learning and innovation), nurturing social capital (good leadership and staff support), providing an ethical grounding, and a legitimate basis to negotiate adaptation objectives across cultures and inspire better practices (compassion for others, social activism, equity, and justice).
- **Adaptation science:** for instance, by shaping new research questions, methodologies (deep listening, cross-hybrid learning, nonmaterial causations) and, ultimately, knowledge production. This requires the incorporation of local knowledge, acknowledging and respecting humanity (including citizens, bureaucrats, and even corrupt leaders), possibly leading to dialog and positive change.

3.3 *Mindfulness in Climate Adaptation Practice*

The third study of the Program aimed at filling the gaps identified in the two previous investigations together with their limitations (cf. Wamsler and Brink 2018). As new concepts and approaches have emerged, they require critical construct validation and empirical testing. Accordingly, the third study was designed as an empirical investigation. It was the first empirical exploratory investigation of the potential correlation between individuals' intrinsic mindfulness (as opposed to external mindfulness interventions) and both pro- and reactive climate adaptation. Based on a survey of citizens at risk from severe climate events, it showed that individual mindfulness can be linked to climate adaptation at different scales. In fact, it is consistent with an overarching motivation to take or support climate adaptation actions, especially actions that are "other-focused" (pro-social) or support pro-environmental behavior. Mindfulness may also be consistent with the acknowledgement of climate change and associated risk perception, and it may steer people away from fatalistic attitudes.

This empirical work supported the two previous studies as it indicated that mindfulness might not only influence how we think about the social and environmental crises that affect our world, but might also help us to take the actions needed to build a more sustainable society. The study concluded with a call for more research into the relationship between human beings' inner dimensions and climate adaptation in the wider public domain. Further research is needed to follow up on the identified correlations to depict potential causations. While this study provided important new insights, it was limited in breadth (number of participants, context) and depth (four dimensions/items of mindfulness disposition) (cf. Wamsler and Brink 2018).

Consequently, the fourth and fifth study explored the role of inner dimensions in climate adaptation more broadly (cf. Brink and Wamsler 2018; Wamsler and Raggars 2018). Based on a survey of Swedish citizens at risk from severe climate events,

the fourth study showed that citizens' adaptation is mediated by personal values, worldviews, and place attachment—aspects rarely considered in public adaptation. It highlighted that motivation to adapt goes beyond “rational” (economic) self-interest. In fact, the potential of an adaptation action to contribute to green, thriving surroundings and mitigate global climate change was found to be nearly as (and among female respondents, more) motivating. Women also reported being more motivated to engage in adaptation if this supported other community members at risk. Meanwhile, past adaptation action was not linked to motivation to adapt, and negatively correlated with communitarian and environmental values or worldviews. These results indicated a “mitigation–adaptation dichotomy” in climate awareness, which may lead to ineffective climate responses. On this basis, alternative approaches to supporting increased citizen engagement and more effective, transformative climate action were discussed in the study, ending with a call for more value- and worldview-sensitive public adaptation and risk communication. The fifth study presents related contemplative approaches and design principles (Wamsler and Riggers 2018).

Together, these five studies show that inner transformation and global sustainability are more connected than we think, but we need to know more about the link between them. It is high time to explore the practical impact that contemplative practices for inner transformation, such as mindfulness, can have on sustainability, and how we can tap into this potential to drive global change. Importantly, the role of the humanities and associated methods of enquiry (e.g., the performing arts) have to be further explored in this context.

4 Setting up the Program

We're teaching the wrong things. And you have to be strong enough to say if the culture doesn't work, don't buy it. Create your own.—Albom (1997):35

An important driver for setting up the Program came in 2015, from the Social Science Teaching Academy at Lund University. The Teaching Portfolio I presented to the Academy drew upon mindfulness-based, contemplative perspectives, and provoked many questions about both what and how we teach (Wamsler 2015/2016). However, after two rounds of interviews and scrutinizing, the jury was convinced. Even better, they were supportive of making such perspectives more explicit and prevalent in both teaching and research.

The Contemplative Sustainable Futures Program was set up to provide a platform for such endeavors. Exploring the role of inner dimensions and transformation, embodied in notions such as mindfulness and compassion, in sustainability science and education became my declared aim.

The financing of related activities, which do not fall within traditional funding schemes seemed, however, challenging. Consequently, to generate an initial financing stream and create momentum, I built aspects of inner transformation into ongoing projects. At the same time, I was contacted by a group of five Master's students,

who asked if they could conduct mindfulness sessions in the context of my course in environmental studies and sustainability science. Things thus began to move in both research and education.

The students shared my enthusiasm, and this led to the creation of the “Experimental Learning Lab on Mindfulness in Sustainability Science, Practice and Teaching” (cf. Sect. 2.2), and a joint paper on the issue (cf. Sect. 3.1). The Lab stimulated students’ interest in more dialog and learning around the issue of inner dimensions in sustainability, which motivated me to take the next step: the development of a new course, and the move from temporary activities to a more sustainable integration of the topic into existing academic structures.

While the students were asking for more (cf. Astin 2007), my proposal to develop a new course on “Mindfulness, Compassion, and Sustainability” was, however, also met with skepticism. Some colleagues were opposed to the idea that issues such as mindfulness and spirituality should enter the academic field, and certainly not sustainability science. The separation of church and state seems to have become so deeply embedded that academic institutions have almost completely rejected any mention of aspects that may be interpreted as spiritual, something that has been reported in various cultural contexts (cf. Astin et al. 2006; Burchell et al. 2010; Lee 2012; Goleman and Davidson 2017). Given the existing structures, the course description was reworked into an acceptable format, which explicitly highlights its critical and scientific approach to sustainability and inner transformation. After several rounds of discussions at the faculty level, it was accepted in 2018.

While working with institutional structures proved challenging, the research conducted under the Program quickly spread, and received international recognition and positive feedback throughout, which was unexpected. It helped to establish a professional network of mutual support and engagement, without which it would have been difficult to continue to “walk the path”.

5 Conclusions

The greatest effort is not concerned with results.—Athisa n.d.

Unlike practitioners, scholars have been slow to assess the potential of inner transformation for sustainability. The vast majority of sustainability science and education has focused on the external world of ecosystems, wider socioeconomic structures, technology, and governance dynamics. It has neglected a critical, second aspect of reality: the inner dimensions of individuals.

The Contemplative Sustainable Futures Program was set up to address this gap. It set out to make clear what works and what does not. Some of what is proclaimed about inner transition and transformation pathways (such as mindfulness, meditation, and other contemplative practices) may be wrong. But we might not (yet) know what is true.

We need to shift the conversation and undertake a critical analysis of what the potential benefits of inner transformation *are*—and *are not*. An increasing number of authors seek to show how mindfulness and meditation can change our minds, brain, and body (cf. Goleman and Davidson 2017). But we have to go further, and this also means establishing closer links between sustainability and the humanities (e.g., philosophy, theology, spirituality, the performing arts).

Establishing platforms for related enquiry, teaching and learning that can take the conversation to the next level, and connect current knowledge to changes on a wider scale are needed. How are the micro and macro interrelated or mirrored to support sustainability?

The experience of setting up the Contemplative Sustainable Futures Program shows that bureaucratic, institutional and academic obstacles to establishing such a platform might be overcome by beginning with a spirit of experimentation (here, the Lab) and then continuing, step-by-step, to transform existing structures from within (e.g., new course development), while creating a supportive community (here, through developing scholarship and supporting networks). Faced with resistance, it was good to have the company of supporters such as Professor Davidson, Director of the Healthy Minds Institute. When he said that he wanted to focus his PhD work on meditation, the response of his Harvard professors was blunt: this would be a career-ending move (Goleman and Davidson 2017:6). Such reactions seem typical of the opposition from some authorities, who might respond with knee-jerk negativity toward anything to do with consciousness or spirituality (cf. Sameshima and Greenwood 2015; Goleman and Davidson 2017; Lee 2012).

It is therefore crucial to unite efforts to create spaces where new research approaches and learning can take root, be nurtured and flourish into ways of knowing, being, and becoming that serve people, places and the planet (cf. Sameshima and Greenwood 2015; Powietrzynska et al. 2015; Chinn 2015). As scholars, researchers, and educators, we have a choice of how we position our work with respect to (neoliberal) institutional norms, growing worldwide resistance to these norms, and more integrated approaches—even if it means throwing ourselves into the humility of Not Knowing.

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Sustained by Faith? The Role of Christian Belief and Practice in Living Sustainably



Hannah J. Swithinbank, Richard Gower and Naomi Foxwood

Abstract This chapter examines Christian beliefs and practices that shape and support sustainable ways of living and their role in catalysing social movements on environmental issues. In particular, it examines Christian theology that promotes an attentiveness to sustaining the environment and describes how theological reflection can be used alongside practice within international development to foster grassroots social movements related to sustainable development.

Keywords Christianity · Belief · Advocacy · Development · Social movements

1 Introduction

It is generally understood in humanities and social sciences that belief shapes behaviour. In development studies too, awareness of the importance of belief in driving and sustaining transformation is growing, leading to increased space for faith actors' work within aid and development. However, Christian beliefs are often perceived to be a threat to environmental sustainability, because of the belief that God has given humans permission to rule and use the earth (Genesis 1:28–29). In this chapter, we argue that this is not necessarily the case: there is a strong, positive theological argument for sustainability and strong Christian beliefs and practice that ground sustainable ways of life. The other humanities, and those who learn from them, should not regard belief as something to be overcome in the pursuit of rational,

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utilitarian action, but as something to be engaged within a positive dialogue that encourages sustainability.

The Bible is understood by Christians to be the divinely-inspired text containing the word of God to the world. For many Christians, especially those who identify as evangelical,¹ it is *the* essential text for their lives: they read it daily for ongoing sustenance and turn to it at times of decision-making and crisis for support and guidance. There are many ways of reading, understanding and applying scripture, one of which is to look at the Bible as having an overarching narrative of God's creation of and relationship with the world.² In this story, God is the creator of the universe, and the narrative revolves around God's purposes for creation and humanity's freedom to obey or resist God.³ The vision of 'good life' that the Christian faith casts for its believers is one of creation, humanity and God living together in harmony: a concept encapsulated by the Hebrew word *shalom*. This *shalom* is broken in the fall, but the story the Bible tells is of God reaching out to his creation in order to redeem it and restoring relationships that have been broken: a mission, and *shalom*, fulfilled—although not yet fully realised—through Jesus' death and resurrection.⁴

In this chapter, we will examine the way that the biblical narrative and the practices that are contained within it provide Christians with an ethic of sustainability that is, itself, sustainable. Furthermore, we will suggest that biblical faith also provides several of the key ingredients for counter-cultural movement formation, such that grassroots Christian communities have the potential to catalyse wider social change on environmental issues. We will present evidence of this taking place from Tearfund's experiences of working with the church in Nigeria, Brazil and Southern Africa. This research, into both theology and praxis, has emerged from Tearfund's ongoing work with local churches around the world to pursue environmentally and economically sustainable development and our advocacy in support of a restorative global economy.

¹Bebbington (2003), which identifies a particular regard for the Bible, over the other sources of theological knowledge, and a belief that all essential spiritual truth is to be found in its pages as a key feature of evangelicalism throughout its history. An example of this may be found in the World Evangelical Alliance's Statement of Faith (<http://www.worldidea.org/whoweare/statementoffaith>, accessed 1/03/2018), which leads with an emphasis on scripture.

²Bauckham (2003).

³ibid. 48.

⁴Wright (2006a), USA provides a rich account of this story. A number of theologians have also used the idea of drama to help us understand the key points in the narrative of the Bible, describing it as a story that has six acts. These acts are: (i) God's creation of the world; (ii) the fall, in which relationships between God, humans, and creation are broken; (iii) the story of Israel, including God's covenant promise to Abraham and the establishment of Israel as the people of God, and the promise of the Messiah and the salvation that would be offered by Jesus after the failures of the nation of Israel; (iv) the story of the gospels: the birth, life, death, and resurrection of Jesus that makes salvation possible; (v) the story of the church and its mission to share the good news; and (vi) the new creation: for which we wait in hope and expectation, when we will experience the full redemption and restoration of God's creation and the revelation of his glory. See, for example: Wright, *The Mission of God*, 53–55, 62–66; Wright (1991, 2013), Bartholomew and Goheen (2014) and Vanhoozer (2005).

2 In the Beginning...

In the beginning, God created the heavens and the earth... (Genesis 1:1) The Bible opens with creation in Genesis 1 and runs through to the new creation in Revelation 21, and a concern for God's creation is a theme that recurs throughout the Bible. In Genesis 1 we learn that God made the universe for his pleasure, ensuring that every part of it was good.⁵ After 'creation', the Father, Son and Holy Spirit are all involved in sustaining the world.⁶ God creates in love and power, Jesus holds all things together (Colossians 1.17) and the Spirit fills and inspires (Psalms 139.7–10). The picture the bible presents is one of God lavishing goodness and love on his creation—and of this creation displaying the glory of God: *'The heavens are telling the glory of the God, and the firmament proclaims his handiwork. Day to day pours forth speech, and night to night declares knowledge. There is no speech nor are there words; their voice is not heard; yet their voice goes out through all the earth, and their words to the end of the world.'*⁷

While creation belongs to God, Christianity understands that God has given humanity a part to play in the ongoing nurture and care of creation, in the preservation of *shalom*. Genesis 2:5–7 describes the way God creates humans (*adam*) from the ground (*adamah*). Humans are a part of the creation, as physically dependent upon it for life, and designed to live in mutual harmony and relationship with it. Christianity understands this good relationship between humans and creation, rooted in their shared createdness by God, as an essential part of *shalom*. *Shalom* is often translated as peace, but it holds within it more attributes than peace generally does in common English usage. It incorporates ideas of wholeness, completeness, balance, healing, well-being, tranquillity, prosperity, security and justice, and encompasses both a state of being and a way of living in a relationship with God, self, other people, and creation.⁸ The existence of *shalom* is key to the essential goodness of God's creation.

3 *Shalom*: Broken and Restored

While creation is still understood by Christians to display the glory of God, an essential element of Christianity is the belief that it has not continued in this *good* state but has been broken as the result of sin. The breaking of *shalom* is precipitated by human disobedience⁹ and has a negative effect upon creation. Humans are exiled from the Garden of Eden, the land they live on is cursed because of their disobedience, becoming harder to farm and to live off. (Genesis 3:14–24). In the Old Testament,

⁵ '[It] was good' appears seven times in Genesis 1, the final time as, 'it was very good.'

⁶ Bookless (2008a, b), 23, 63–68.

⁷ Psalm 19. Cf., Psalm 65, 96, 98, 104.27–28, 148, and 150.6.

⁸ Spencer et al. (2009), 115–6.

⁹ Genesis 3:34; Volf (2010).

Isaiah and Hosea both describe the impact of human disobedience on God's creation, in dramatic imagery, and in the New Testament, Paul tells us that creation is 'crying out', waiting for the children of God to be revealed.¹⁰

However, the Christian belief is that God is working to overcome this situation, with Christ's death and resurrection the central act and moment in this work. The prophet Isaiah presents the vision of what this will be and how it will come to pass through the Messiah (Isaiah 11.9–10). This redemption is explicitly linked to the re-establishment of *shalom* (53:5), and to a vision of the future '*New heavens and new earth*,' (65.17), that includes prosperity, justice and security together in a tapestry with ecological fruitfulness and environmental sustainability (Is. 56–66).¹¹

Jesus tells his disciples that he has come to open the way to the father and to bring them peace—*eirene*—the one being a consequence of the other.¹² In Colossians 1 Paul describes the way God reconciles all things to him through Christ's sacrifice: '*For God was pleased to have all his fullness dwell in him, and through him to reconcile to himself all things, whether things on earth or things in heaven, by making peace through his blood, shed on the cross...*' (Colossians 1.19–20). Romans 8:19–21 also connects human salvation and the redemption of creation, with Paul arguing that those who are *in Christ* are called to play a part in the ongoing mission of God to restore and redeem the whole of creation.¹³

There is much debate over what this will look like—whether the new creation will follow in continuity from the present creation, purged and redeemed by the 'Refiner's fire', or whether a wholly new creation will replace the current one (as the picture of destruction seen in 2 Peter 3: 10–13 has sometimes been read).¹⁴ It is our contention that *regardless* of which vision of the new creation is understood to be correct, Christian theology and the Bible present an ethic of sustainability for those who claim the Christian faith. To understand this, we look further at the role God gives humanity within creation.

4 Humanity Within Creation

According to Christianity, humanity is set apart from the rest of creation by their identity as God's image bearers.¹⁵ This 'likeness' marks humans as having intimate and unique relationship with God *and* as God's representative within the time and

¹⁰Isaiah 24:4–6; Hosea 4:1–3; Romans 8:20–25.

¹¹Spencer, White and Vroblecky, *Christianity, Climate Change and Sustainable Living*, 103–108.

¹²John 14:15–31. In Romans 5:1 and Ephesians 2:14–15 Paul also describes cross as the source of peace. *Eirene* is the Greek term most commonly used to translate *shalom* in the Septuagint, and the concepts are largely similar in the Bible.

¹³Wright (2012), 210, 212–23.

¹⁴Discussions of this can be found in Wright, *Surprised by Hope*, especially 101–3, 110–119 and 130–34 and James (2017).

¹⁵Genesis 1:27; Gooder (2017), 10–18.

space of creation: people with a commission. In Genesis 1.28 God blesses humanity and says, ‘*Be fruitful and multiply; fill the earth and subdue it and have dominion over... every living thing,*’ and in Genesis 3 we learn that God created humans to, ‘*Till the earth and to keep it.*’ The meanings of these statements have been interpreted in different ways: the first has sometimes been used by Christians to justify humans using the planet as they choose.

However, the Christian belief is that humans are made in God’s image—an image that is about character, not appearance—provides insight into the way in Christians are called to regard creation. The terms ‘rule’ and ‘dominion’, which are often used in the translation of Genesis 1.28 to describe humanity’s relation to creation, are strong words in our contemporary culture where dominion, in particular, often comes with associations to dictatorship or violence and disassociated from responsibility. But this is not the nature of God as seen in the Bible. Psalm 145 provides a description of the nature of God: wise, powerful, compassionate, providing, protecting, a source of justice. God is creative, generous, and productive, and above all, love. This echoes the picture in Genesis 1–2 of a loving, creative God, ordering creation in a way that is pleasing to him and reveals his goodness. Humanity inherits these characteristics and is commissioned to reveal the nature of God in the world.¹⁶ Jim Wallis has pointed out that the Hebrew words we translate as ‘keep’ and ‘till’ are *abad* (connoting servitude, not management) and *shamar* (for conservancy of life or observance of covenant), leading him to suggest that the phrase should run, ‘*To serve and to preserve*’—a definition of what it means to rule faithfully.¹⁷ This means that in Christianity creation is, to its people, a gift from God that comes with a call to worship and honour God for the gift, and with responsibilities.¹⁸ In the New Testament, this is augmented by the call to become God’s co-workers in the mission of God to restore and redeem all of creation.¹⁹

This, then, is the Christian foundation for an ethic of sustainability: that creation was made, belongs to and is loved by God; that humans were created both in God’s image and of, in and for this creation, to live off it and conserve it in ways that reveal the nature of God; and that living in creation in a way that pursues *shalom* is a part of revealing and fulfilling God’s mission of redemption and restoration of his whole creation through Jesus Christ. This then leads us to the question of *how* Christians are to pursue sustainability.

¹⁶Tearfund, CAFOD, and Theos (2010), 23–26; Paula Gooder, ‘Part of a Flourishing World: The Image of God and God’s Creational Intentions,’ 10–18.

¹⁷Wallis (2008), 116.

¹⁸Bookless, *Planetwise*, 33, citing Luke. 12:48: ‘*To those who much is given, much is required.*’ ...

¹⁹1 Corinthians 3:9; Romans 8:19–22. Wright (2006b), 145–149.

5 Biblical Practices that Enable Sustainability

Humans are not left without guidance in working out how to care for creation: within the Bible, there are a number of practices that provide Christians with principles and guidelines for sustainable living.²⁰ These practices function as rituals and rhythms that make them sustainable within a regular pattern or rule of life and thus have the potential to sustain sustainability itself. The most important practices outlined in the Bible are the rhythms of Sabbath and Jubilee.

First, the Bible tells Christians that certain characteristics are critical to *shalom*: steadfast love (*hesed*), justice (*mišpaṭ* and *tzadekah*) and the power of wisdom for rightly ordering relationships—with all three interconnected. Brueggemann describes wisdom as learning, ‘how to live well, faithfully and responsively in a world governed by the creator God.’²¹ This includes learning how to love each other, as in Jesus’ command to, ‘love one another as I have loved you,’ (John 13:34). This steadfast love is a quality that is linked to *mišpat* (justice coming from right judgement) and *tzadekah* (justice coming from living righteously with others), as it enables both just lifestyles and systems.²² These personal characteristics underpin humans’ ability to sustain the practices that the Bible describes.

The first of these is Sabbath, established in Genesis: ‘By the seventh day God had finished the work he had been doing; so on the seventh day he rested from all his work. Then God blessed the seventh day and made it holy, because on it he rested from all the work of creating that he had done.’²³ After the Exodus, the setting aside of the seventh day became a part of the law: it was established as a practice for the Israelites in the wilderness (they could not collect manna on the seventh day)²⁴ and is the fourth commandment given to Moses by God.²⁵ It was to be a day of rest and worship, the chance for God’s people to remember and give thanks for God’s creation, and sustained a rhythm of work and rest.

Next comes Jubilee, building on the rhythm of Sabbath. The Jewish people, who were commanded to set aside every seventh year as a Sabbath year and the fiftieth year as a year of jubilee. The jubilee laws, as described in Leviticus 25, are essentially concerned with sustaining social relationship, economic security and stability and the well-being of the community that lives in harmony (or *shalom*) with God and creation. Their key principles are as follows:

²⁰As we do this, we need to remember that the political, social and economic conditions in which the jubilee laws were given no longer exist. Christians also believe that because of Christ the way that God and God’s people interact with the world has changed. In reflecting on how jubilee shapes life today, Christians look at the themes and aims of jubilee more than the legal structures designed to enable these to be fulfilled, and think about how to enact them in their own communities.

²¹Brueggemann (2004), 1–12.

²²Tearfund (2015), 25 (https://learn.tearfund.org/~media/files/tilz/research/tearfund_the_restorative_economy.pdf, accessed 1/03/2018).

²³Genesis 2:2–3.

²⁴Exodus 16:5, 23–27.

²⁵Exodus 20:8–11. Cf. Exodus 31:12–18; Exodus 35:1–3.

1. The land of Israel was God's land (Leviticus 25:23) and the Israelites God's tenants. As tenants, they are to care for the owner's land.
2. All people have equality and personal dignity in their shared identity as God's people and as people made in God's image (Genesis 1:27).
3. Life was to be lived within communities; household, clan, tribe and nation. Each household within the nation had access to its own land—and therefore its own resources (Leviticus 25:15) and all community members had responsibilities to each other, for example, in the redemption of relations who had sold themselves into bonded labour.
4. Life has a rhythm of worship, work and rest. While work is good and an essential part of God's mandate for humans in his creation, rest and worship are also essential. Sabbath days and jubilee years provided time for both people and the land they lived on to worship their creator, to rest and to be restored.

The jubilee laws acknowledge that the world is broken and provide instructions for God's people to help them seek *shalom* despite this. As the declaration of jubilee follows the Day of Atonement (Leviticus 25:9–10), obedience to these laws is understood as a worshipful response to the people's restoration to God. In this world, some members of society will succeed and some will fail (for many reasons, both human and environmental), they may be unable to sustain themselves and their families on their land and find themselves separated from both. Jubilee, however, provides a generational restoration, ensuring that inequality doesn't continue to grow, that relationships can be restored between people, and that people can be restored to their land so that they can sustain themselves again. The years of Sabbath and jubilee also provide the land with a time of rest, ensuring that it was not exhausted by overuse and could continue to sustain the Israelites.

The idea of jubilee continues into the New Testament. At the start of Jesus' ministry, he stood up in the Synagogue in Nazareth to read from Isaiah 61, which in turn refers to Leviticus 25 and the jubilee laws.²⁶ In this moment, Jesus announces that his mission was God's mission: the redemption of God's creation and the restoration of its relationship with God. Here Jesus is identifying himself as the Messiah foretold by the prophets and as the fulfilment of jubilee, bringing a renewal that starts with human beings (as first-fruits) but will include, 'all things'—as we have seen in Romans 8.²⁷ But what does this mean in practice for Christians?

In the gospels, Jesus reminds his disciples to, '*love the Lord your God with all your heart and all your soul and with all your strength and with all your mind, and love your neighbour as yourself.*'²⁸ To love other people is not just about verbally sharing the gospel but about caring for their needs and *considering the effects our*

²⁶Luke 4: 16–20.

²⁷Wright, *The Mission of God*, 302.

²⁸Luke 10:27. See also Matthew 19:19; 22:37–40, and Mark 12:28–34. Luke 10:25–37 makes clear that all people are to be considered neighbours by Christians.

*actions have upon them.*²⁹ This includes the way in which our use of the earth's resources affects those whose life also depends on the air, water and soil of planet earth. Here, we see an implicit reference to the concept of shalom and the restoration of harmony in the web of interactions between human beings, God and His creation. The natural consequence of Christians' love of God and restoration to him is that this love is expressed to the rest of God's creation. To care for the natural world is inseparable from the command to love God and our neighbour as ourselves.

6 Biblical Hope as a Sustainer

We have discussed the way that the practices of Sabbath, jubilee, and of loving others as much as ourselves sustain a Christian ethic of sustainable living within God's creation. These practices are inspired by Christian worship of a creator God, and are, in turn, sustained, by the hope of the coming of the Kingdom of God.

In the introduction, we described the way that the Bible can be read with a narrative arc: a story running from creation to new creation. Many Christians understand that they live in the, 'now but not yet': the time between the establishment of the kingdom by Christ in his death and resurrection and its full revelation when Christ returns.³⁰ As Thacker argues, God's revelation has a downwards motion, bringing heaven to earth—something that can be seen in the incarnation as well as the final images of Revelation 21. This expectation of the coming kingdom and the new creation provides an 'ultimate' hope that is grounded in the certainty of belief, rather than optimism, of the full re-establishment of God's *shalom*, and this motivates and sustains continued participation in God's mission (which we have argued includes creation care).³¹

This hope is expressed in *agape* love, an all embracing love for our neighbour, which seeks transformation where it is necessary and a love for God which, 'entails the holy yearning that all in His world should be as He wants it to be.'³² For Walter Brueggemann, this hope is also sustained by an acceptance of the reality of the situation in which humanity and creation find themselves. He argues that those who do this tend to stay in dialogue with God and God's promises, *waiting* for the word from the 'outside' that reminds them of the better future that is promised and enables them to imagine and to work for it.³³ This worldview-shift frees Christians to transform the world in the strength of the Spirit, expressed in our love for and worship of God and in our response to the call to love and care for creation (both animal and mineral).

²⁹Spencer, White and Vrobleky, *Christianity, Climate Change and Sustainable Living*, 75. This echoes the concern of the Old Testament prophets for the poor and their claim that 'right worship' includes the pursuit of justice (see, for example, Isaiah 58:3–6; Amos 5:24).

³⁰Ephesians 1:7–14; 1 John 3:2; Revelation 21. The Wheaton Statement (1983).

³¹Thacker (2017), 205–216, 231–240; Wright, *Surprised by Hope*, 5

³²Williams (1990). See also Williams (1986, 1989), Chester (2006), 121.

³³Brueggemann (2014), 96–97; 103–107; 120. For Brueggemann the role of the Prophet is to help people engage with the difficulties of their reality through lament and to remind them of the hope that is found in God's promises, see also: Brueggemann (2001).

Tearfund's *Restorative Economy* paper argues for the power of a good story that can help people, 'to make sense of where they are, how they got there, where they are trying to get to and how to achieve change [because] Stories define our worldview and have the potential to create our reality as much as they describe it.'³⁴ Humans respond positively to promises of security and community,³⁵ and this is the kind of story that the Bible provides: one in which despite insecurity and brokenness God is moving and offering a certain hope of a better future. These essential stories become especially important during moments of crisis—for good or ill—as they drive behaviour and action.³⁶ This is relevant to sustainability, because as has been discussed the Christian story provides both beliefs and practices to be followed as a part of Christian life and mission—that also encourage sustainable living. Additional contemporary sustainable practices can be added to this, especially as they connect to the beliefs and values of Christian principles.

7 Faith as a Catalyst for Counter-Cultural Movements

Thus far, we have argued that Christianity provides both a theology and a set of practices that allow individuals and society to live in-step with the natural world. However, for most Christians, their current context is a society living profoundly *out-of-step* with creation. In this environment, Christianity offers more than a set of disciplines for a subset of the population: it can also catalyse its adherents to press successfully for wider change in the laws, norms and economics that govern society.

Social change theorists suggest that historically, moments of systemic societal change have often resulted from (or arisen in conjunction with) a shift in society's core values.³⁷ This shift is often bound up with the actions of a social movement for change. Thomas Rochon suggests that movements have a 'uniquely powerful ability... to create controversy about ideas that were once consensus values' in society.³⁸ The Civil Rights movement in the US provides a compelling example. Rochon argues that the 'real work of the movement' was 'the cultural delegitimisation of segregation,'³⁹ based on the value that 'all (wo)men are created equal'. The same is true of the 'votes for women' campaign, which rested on a shift in the societal attitudes towards women, or going further back, the abolition of the slave trade.⁴⁰

³⁴*Restorative Economy*, 6.

³⁵Some thinkers have argued that the formation of ideologies is driven by a human fear of isolation and insecurity, and that they seek to offer an understanding of virtue and partnership with like-minded people that enables success. See for example, Pocock (1972), Žižek (1989).

³⁶*Restorative Economy*, 21ff.

³⁷See *Restorative Economy* Chap. 2. For a more academic discussion, see Snow (2008), 383.

³⁸This is a key tenet in the social constructivist approach to social movement theory. See for example Rochon (2000), xvi.

³⁹Rochon (2000), 58.

⁴⁰*Restorative Economy*, Chap. 2.

The same can be true for environmental sustainability, and we have indeed seen significant change in values in this area over recent decades.⁴¹

In these examples, changes in legal, economic and social systems were precipitated by the actions of a popular movement. These movements pressed for specific changes; but at their heart was a challenge to society's core values regarding the way we see each other and the world around us.⁴² Recent changes in attitudes to race or sexism are a case in point: an existing norm can be '*abruptly abandoned when people who have helped sustain it suddenly discover a common desire for change*,'⁴³ as a result of the 'forerunning' provided by a movement.

How does this relate to Christianity? Sociologist Rodney Stark describes early Christianity as one of the most successful movements on record: an initially obscure, marginal and widely despised religious movement that nonetheless managed to become a dominant force in the Roman Empire.⁴⁴ In recent times, Christians have also been at the forefront of movements for change, from the Civil Rights Struggle to South Africa's anti-apartheid movement, the Jubilee 2000 'drop the debt' campaign and others. Part of the reason for this is that although not unique to Christianity, the Christian faith appears to provide a source for several key ingredients identified as beneficial for counter-cultural movement formation.⁴⁵

The first ingredient relates to the question 'why mobilise?' By definition, social movements must have a reason to challenge the status quo. Classical theories of movement formation posited personal grievance and (economic) deprivation as typical motivations, but these theories are widely viewed as failing to explain a large number of prominent twentieth century movements (including the environmental movement).⁴⁶ The modern social constructivist approach supplements these motivations by resurrecting earlier ideas about the importance of beliefs in social movement formation, and making them central.⁴⁷ In the Blackwell Companion to Social Movements, Snow suggests that '*the importance of a revised sense of what is just and unjust in relation to the development and operation of many significant social movements [is now widely accepted]*.'⁴⁸ To put it simply—a movement's adherents typically disagree with consensus values, particularly as they relate to rights and justice. We can see that this is true of today's environmental movements.⁴⁹

⁴¹Rootes (2008).

⁴²*Restorative Economy*, Chap. 2.

⁴³Kuran (1995), 288.

⁴⁴Stark (1997).

⁴⁵A 'counter-cultural movement' here refers to a movement that is predominantly related to challenging issues related to rights, culture and identity, thus distinguishing it from both movements defending the status quo and revolutionary movements related to class warfare. Counter-cultural and labour movements overlap, but some theorists argue for significant differences between so-called 'new social movements' and labour movements.

⁴⁶van Stekelenburg and Klandermands (2009).

⁴⁷Snow (2008), 381–383.

⁴⁸Snow (2008), 383.

⁴⁹Rootes (2008).

However, desire for change does not a movement make. The ‘resource mobilisation’ theory of social movements emphasises that a movement will only arise where individuals are also able to effectively organise together: planning and investing their resources collectively towards a shared goal. Organisation is crucial for collective action.⁵⁰

Even then, the capacity for organisation may not be enough. Political process theorists add a further key determinant for movement formation. Writers such as Piven and Cloward suggest that individuals must move from ‘apathy to hope, from quiescence to indignation’ before they will participate,⁵¹ and suggest that this occurs when people see a political opportunity for change. McAdam calls this shift towards hope and a belief in the group’s own agency ‘cognitive liberation’, a process that is both connected to but distinct from the emergence of political opportunities.⁵²

Finally, returning to insights brought by the constructivist approach, issues of identify and—in particular—group identity are also key to movement formation. Van Stekelenburg and Klandermans summarise as follows: ‘collective action participation is seen as a way to show who ‘we’ are and what ‘we’ stand for... Group identification seems to be a powerful reason for participating in protest.’⁵³

This very brief tour of social movement theory literature suggests (at least) the following four key ingredients for movement formation:

1. An authoritative source of alternative values regarding who we are and what is just.
2. The ability to organise.
3. Cause for hope and a firm belief in your own agency.
4. Group identity and communities of mutual support.

Each of these is potentially present in grassroots Christian communities, which can become hotbeds of social and environmental activism, as Tearfund’s work around the world demonstrates.

8 Three Case Studies

One aspect of Tearfund’s work on environmental and economic sustainability is the development and support of movements of Christians who are advocating for policy and practice change; demonstrating lifestyle change in their own lives and churches; and making a practical difference in their communities. In the following examples from Nigeria, Brazil and Southern Africa we can see the way that people connect Christian theology, practice and culture to catalyse and sustain change that promotes and increases sustainability.

⁵⁰van Stekelenburg and Klandermans (2009).

⁵¹Piven and Cloward (1977), quoted in van Stekelenburg and Klandermans (2009), 25, 26.

⁵²McAdam (1982); discussed in van Stekelenburg and Klandermans (2009), 40.

⁵³van Stekelenburg and Klandermans (2009), 40.

(1) *Nigeria*

In Plateau State, Nigeria, Tearfund has been working with a group of young people since 2015. Tearfund's vision was to build leadership and capacity amongst Christian young people to tackle environmental and justice issues at community and national level. The young people were recommended by local youth pastors of churches for their leadership qualities and their commitment to their Christian faith. This group, who now call themselves the Jos Green Centre, have been working as a cohesive unit for two years, independently initiating a wide variety of practical and advocacy work. Amongst their activities: research on plastic waste; starting a social enterprise developing fashion products out of waste, hosting a green jobs conference attended by 200 other young people and government policy staff; and awareness raising in multiple schools and colleges. They have collaborated with Tearfund to organise other groups of young people using the same methodology, resulting in the mobilisation of over 250 young people and the establishment of two new cohesive and active groups in Yola and Kaduna states.

(2) *Brazil*

In Brazil, Tearfund supports the work of the Instituto Solidare set up by Igreja Batista Coquerial, particularly the School of Faith and Politics. The School brings together pastors, leaders and active members of evangelical churches to reflect on the social and political ramifications of their faith, and to deliver training on the ways in which they can make an impact. They take 120 students in the north-east of Brazil, balancing the numbers between the inland, rural semi-arid region and the coastal city of Recife. In tracking the 2016 cohort, Instituto Solidare have seen six locally initiated practical projects in their communities led by former students. They have also seen the establishment of four public policy monitoring groups and around 40% of the students engaging directly with advocacy actions. The most high profile of these is the *Clean River, Healthy City* campaign focused on Tejepio river in Recife. This river has been clogged with waste and floods annually, causing great suffering to local poor communities living on its banks. The campaign has brought together churches, community groups, local politicians, schools and the University in Recife, seeing 13,000 local community members signing a petition for local government action, and hundreds attending a campaign march covered by local TV and newspaper. These activities have resulted in numerous meetings with the municipality, taking steady steps towards seeing government, as well as community, action.

(3) *Southern Africa*

In Southern Africa Tearfund has worked closely with the Anglican Communion Environmental Network (informally known as Green Anglicans) to particularly focus on young change makers identified by their churches as active on environmental issues. In April 2016 72 young people from nine countries attended a *Young Green Anglicans Intentional Discipleship Climate Change Conference*, in Lusaka, Zambia, where they received theological input and technical equipping on environmental issues and movement building. Since the gathering they have received ongoing mentoring and

support from Green Anglicans and the Church hierarchy. Research has shown that 36 of 40 respondents have visited other churches to inform others on how to be more eco-friendly, while 28 have organised events for their family, friends and community to participate in being eco-friendly. 32 have also developed action plans which they presented to their Bishop or Priest for official approval. External evaluation of the impact of the 'Lusaka' group concluded: '*Results show that within the Anglican Church in Central and Southern Africa an eco-friendly change is occurring, and it is building momentum. Hence it can indeed be said that an eco-friendly social movement has begun. A major catalyst of the movement is the Young Green Anglicans*'⁵⁴

9 Commonalities

Brazil, Southern Africa and Nigeria present very different contexts, and yet Tearfund has found several commonalities between the work in each. So far, the organisation has conducted interviews and gathered reports from Nigeria and Brazil and will be conducting more in-depth research later in 2018.

(1) *Reflection and discussion of theology and values*

Speaking to theological belief and spiritual values is a key first step in the process of mobilising and sustaining action amongst Christian believers. Work in all three countries began by engaging participants with biblical study and reflection, something that is particularly critical for working with evangelical Christians, who are the core constituency for Tearfund and its partners. The programmes use passages of scripture such as the creation story and Jubilee laws discussed above, which are then discussed in relation to each specific context so that participants develop their own understanding and ownership of the ideas, values and practices that the Bible provides.⁵⁵ For example, one session looks at justice and consumption, examining old testament calls to treat workers fairly, and asking participants to think about how their consumption choices may have an impact on poor workers and on the environment. This kind of study and discussion comes to provide each group with an authoritative source of shared (and cocreated) identity, values and purpose.

This reflection process is powerful in realigning Christian identity, practice and culture with biblical values of care for creation. The Green Anglicans have been particularly intentional about incorporating environmental issues into Anglican practice, thereby embedding it into the core of the experience of being an Anglican in Southern Africa. One interviewee noted that '*People are really embracing an eco-spirituality. It is almost like people are re-embracing their spiritual roots of what it means to be a believer on African soil—I think that the dominion/individualist theology is one of*

⁵⁴Marandu-Kareithi (2017).

⁵⁵In Nigeria, the Jos Green Centre use the *Live Justly: Global Bible Studies* which can be found online at Tearfund Learn (www.tearfund.org/livejustly, accessed 28/02/2018).

*the legacies of colonialism.*⁵⁶ For example, it is now common to have tree planting as part of confirmation and baptism ceremonies, Sunday school materials incorporate care for creation, and fasting for lent now includes a call to a ‘carbon fast’.⁵⁷

(2) *Practical equipping*

Biblical input needs to be followed by technical capacity building on advocacy, justice, politics and environmental issues so that people feel empowered, are able to organise, and are confident to act in a way that makes change sustainable. This capacity building aims to equip participants with the tools to do an accurate assessment of the problem and identify tactics that can tackle the problem—both practically in their own contexts and systemically within politics and society. In Nigeria, this training is given intensively over a few days in the form of a ‘bootcamp’, covering all that is needed to start movement building, from policy cycles to alliance building to communications and framing. Participants in all three programmes are invited to pray, to identify changes they can make in their lifestyles, to lead practical action in their communities, and to call for changes in public policy. A young Nigerian activist, Ulan, has talked of the journey from reflection to action as a very organic one: *‘[it] unleashes the power of immersion into the life of the individual studying it. By this I mean at the end of it, one cannot help but have an immersive relationship with neighbours, community, the environment and the world at large. A relationship that seeks to correct injustice and leads to the flourishing of all.’*⁵⁸

(3) *Developing a hope-filled narrative, building agency*

Reflection and practical equipping need to be accompanied by the creation of a hope-filled narrative. We have already discussed the way that the Bible provides a hopeful narrative: in practice, this involves telling a story of a sustainable future, flourishing communities and nations, alongside a call for Christians to be engaged in building this future. In each of the three countries, the narratives that have been developed paint a picture of hope, not judgement and despair, for example, in Nigeria they talk being part of a generation that tackles old assumptions around the economy and a thriving post-oil economy that grows clean green jobs. All contexts embed these hopes in Christian spiritual hope, talking of, *‘Partnering with God in renewing all things’*, exploring what it means to *‘live life in all its fullness’*, and asking how the church can be a part of this journey. The Recife branch of the School of Faith and Politics is called the ‘Martin Luther King School of Faith and Politics’ as a reminder to all of what it can look like for Christians to engage positively in the public sphere. One participant, Pastor Renilson Fontes, says: *‘I never got involved [in local politics] but after I started attending the School [of Faith and Politics] I heard about the irregularities practiced in some councils. It filled me with a holy*

⁵⁶Marandu-Kareithi (2017).

⁵⁷Examples include: Sunday school material (<http://www.greenanglicans.org/wp-content/uploads/2013/08/CARING-FOR-CREATION-RYAN-THE-RHINO.pdf>, accessed 1/03/2018) and liturgies (<http://www.greenanglicans.org/resources/liturgical/>, accessed 1/03/2018).

⁵⁸Programme participant, feedback via email.

indignation, my blood boiled, I decided to participate in the election of civil society councillors to the Municipal Health Council. I was elected. I act on the council today and I do not let wrong things get past me.'

A hope-filled narrative naturally gives rise to a sense of agency, and each programme made this explicit with a call to action in the form of a holistic response. This tended to happen early in the process, as small actions can help create momentum and small early successes provide motivation. Action provides participants with a sense of agency and of responsibility and the belief that they have a part to play in seeing change happen. For example, in Recife, after studying a module on environmental issues some participants held a workshop in a school on how to develop a school garden and starting work on plans for a community garden. In Nigeria midway through the Live Justly course the participants asked the course leaders to use the money that had been used for refreshments to instead be put aside for practical action.

(4) *Building relationships and redistributing power*

The activities described above all need to be sustained by the development of relationships and the redistribution of power. Individual relationships between Christians engaged in sustainability work, and collective relationships between churches and the communities they are in, are reimagined and deepened within the programmes taking place in Nigeria, Brazil and Southern Africa. Participants in these activities report feeling part of something bigger than themselves and as having mutuality and solidarity with others fighting the same fight. Relationships with peers who are grappling with the same issues are vital to sustaining commitment and energy. In addition, a lack of hierarchy and the feeling that all members of the movement are leaders empowered to make changes, is key to sustaining action.

The sense of empowered community and solidarity goes beyond the initial group of activists, to the communities to which they and their churches belong. A refreshed understanding on the environment leads to a renewed understanding of the place of the Church within that local environment. Christians realise that they are part of something bigger than their immediate congregation and develop a wider sense of community and solidarity. Instituto Solidaire, who run the School of Faith and Politics in Brazil talk of '*decentralising power*' and breaking down the barrier between the people, *doing the project 'to the community' and the community itself.*' They recognise that this work is not a single project led by technical leads, but a sustainable activity led by the community, with the churches acting within and as a part of the community.

10 Conclusions

Christian theology can be a powerful motivator for sustainable living. *In the beginning, God created the heavens and the earth...* (Genesis 1:1). And at the end, God ushers in '*the renewal of all things*' (Matthew 19:28) with heaven and earth fully restored. In the intervening time, Christian theology gives its adherents a role to play

in the maintenance and restoration of the *shalom* relationships that characterised the original creation. It also provides a set of practices, rhythms and disciplines to help Christians work out this role in their daily lives and communities. Furthermore, the Biblical metanarrative provides the ultimate story for Christians, offering sustaining hope that things can be different, and clarifying their role in bringing this about.

One important aspect of Tearfund's work is to facilitate reflection on this story within different communities around the world, seeking local articulations of biblical principles of sustainability that will drive and sustain development practice and daily life. Tearfund's work in Nigeria, Brazil and Southern Africa provide current examples of environmental social movements that began in grassroots Christian communities. With change overflowing from individuals' lifestyles into popular movements, protests and advocacy campaigns, these case studies demonstrate that the way that people connect Christian theology, practice and identity can have a transformational impact on wider environmental practices and attitudes in society. These pilot activities are being followed by similar projects, programmes and campaigns in other countries, connected to each other through a global movement named 'Renew our World'.

Tearfund's experience demonstrates the catalytic role that theological reflection can play when coupled with development practice in grassroots faith communities. When Christian networks offer values and ideas that are rooted in deep belief, alongside a means to effectively organise collective action, social movements can rapidly take off. This is particularly the case where there is a strong sense of both group identity and personal agency. Christian movements, and movement-building activities, can thus play a pivotal role in driving the systemic changes that enable local sustainability practices to thrive.

Our contention is thus that our relationship with the natural world can indeed be '*sustained by faith*'.

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Transformative Education for Sustainability, Health and Wellbeing: A Model of Online Delivery



Hazel Partington, Jean Duckworth and Graeme Tobyn

Abstract This chapter offers an account of the development and early days of delivery of an innovative online master's programme in sustainability, health and wellbeing. In particular, the chapter discusses how e-learning programmes may increase access and through the use of a humanistic, transformative learning approach offer profound learning experiences; while having a lesser environmental impact than traditional attendance courses. The chapter describes the design of the programme to facilitate transformative learning; and incorporates reflections from students on how their learning impacts on their perceptions and understanding of sustainability, health and wellbeing and how they foresee this influencing their future practices.

Keywords Sustainability · Education · e-Learning · Transformative learning Pedagogy

1 Introduction

The model of sustainability education in an online setting presented in this chapter is exemplified by the M.Sc. Sustainability, Health and Wellbeing course delivered by the University of Central Lancashire. At first glance, discussion of a science programme within a publication on sustainability and the humanities may seem counterintuitive. However, if the humanities may be defined as those disciplines which study human culture (Oxford Dictionaries, n.d.) the authors of this chapter suggest that adoption of a humanistic approach to education in the form of Mezirow's

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Transformative Learning (Mezirow 1978, 2000, 2009) may help to address the need for an awareness of culture within widely accepted conceptions of sustainability and sustainable development (Farley and Smith 2013; Mulligan 2018). Furthermore, the authors hope that this chapter may offer a model of online learning that is transferable to other settings and disciplines within both the sciences and the humanities.

In the face of global challenges, educating health and wellbeing professionals about sustainability has never been more important. In 2017, the University of Central Lancashire (UCLan) began delivery of M.Sc. Sustainability, Health and Wellbeing; a master's programme delivered entirely by e-learning, and hence available to students worldwide. The programme is tailored to address the need to confront sustainability issues related to health, wellbeing and healthcare provision. This chapter discusses the place of e-learning and Transformative Learning (TL) (Mezirow 1978, 2000, 2009) in sustainability education; in addition to offering an account of the development and early days of delivering the programme. The chapter closes with reflections from current students on how their learning impacts on their perceptions and understanding of sustainability, health and wellbeing, and how they foresee their studies influencing their future practices and roles in their communities of practice.

2 Background

The Integrated Healthcare and Sustainability team at UCLan have been delivering master's programmes by e-learning to a wide range of professionals across the health and social care spectrum, including Complementary and Alternative Medicine (CAM) and biomedicine for over 10 years. One of the team member's doctoral research had pointed towards the potential of these courses to facilitate TL in an online setting (Partington 2017), thus when the need for a master's level course in sustainability suitable for health practitioners, was identified, and the development of the course began, it was with the intention of carrying forward the lessons learned from previous programmes.

The M.Sc. Sustainability, Health and Wellbeing programme is delivered using a combination of learning units presented on a Blackboard virtual learning environment (VLE) which also hosts asynchronous discussion boards, and synchronous tutorials where students and tutors meet in Adobe Connect Breeze rooms for tutor-facilitated discussion sessions using webcams and microphones. Skype and other social media platforms such as Facebook are used to provide additional support and socialisation opportunities for students. The course is part-time, thus enabling students to continue in their professional capacities. Delivery by e-learning means that students may study from home or in the workplace and fits with the sustainability ethos of the programme.

As an organisation, UCLan has a well-developed Environmental Sustainability Policy which demonstrates the University's commitment to 'implementing environmental sustainability to benefit future generations, the local economy and community' (UCLan 2017a). Outputs from this commitment contribute to UCLan's high placing in the environmental and ethical ranking of the People and Planet University

League (People and Planet 2017), a niche alternative to the standard UK university rankings. Sustainability education may be seen to fall into two broad categories, teaching with an intent to inform the uninformed, and enabling the informed to develop skills in research, critical evaluation, and leadership to help maximise their efforts in the field. In terms of the former, UCLan aims to include a consideration of sustainability in all its practices and delivery of teaching and learning. In terms of the latter category, in the case of the M.Sc. Sustainability, Health and Wellbeing, students on the programme are already committed to the sustainability agenda, and maybe well-informed in their own particular fields. The initial cohort of students although relatively small has encompassed a wide range of experience both in the UK and internationally and includes professionals with work backgrounds within the NHS, private healthcare practice, climate activism, social housing, CAM practice, nursing, midwifery, mental health and community arts projects.

2.1 e-Learning

The advent of e-learning technologies was expected to revolutionise and disrupt Higher Education (HE) (Laurillard 2004) by widening access, encouraging lifelong learning and contributing to the further democratisation of HE by ‘breaking down the elitist walls of the ivory tower’ (Carr-Chellman 2005, p. 1). Yet, whilst e-learning technologies are being utilised to enhance traditionally delivered courses; the full potential of e-learning technology and delivery has still to be realised with a relatively small proportion of HE courses being offered wholly via e-learning.

E-learning courses fit well within the sustainability agenda as they remove the need for students to commute to a university campus, and staff may also choose to work from flexible locations on teaching days, thus reducing carbon footprints. Two key advantages of e-learning for students are accessibility and flexibility (Bischel 2013). Students are enabled to exercise greater autonomy in deciding when and where to study. The main disadvantage of e-learning relates to difficulties in socialisation. Garrison (2011) and Preece (2000) emphasise the importance of socialisation in building learning communities, highlighting that this can be a crucial element in strengthening student retention and in increasing successful outcomes of their studies. Salmon (2003) concurs with the significance of socialisation as an important aspect of becoming an e-learner and points to the requirement for e-tutors to input considerable effort into encouraging learners to connect with each other. E-Tutors hold much more responsibility for social introductions and the development of socialisation between students than those in more traditional learning environments where students can get to know each other and chat outside of lectures (Hootstein 2002; Conrad and Donaldson 2005). However, with the increase in use of social media, once e-tutors have facilitated introductions it seems that e-learning students are now finding it easier to connect and collaborate with each other (Dabbagh and Kitsantas 2011). Of course, it is still possible for students to be successful e-learners without social activity with their peers, as may be seen for example in Massive Open Online Courses (MOOCs),

but successful socialisation does seem to offer a distinct advantage (Anagnostopoulou et al. 2009). A further issue with online learning environments relates to technological difficulties; this can be due to equipment failure, or to students' unfamiliarity with the media. To mitigate against these issues, the M.Sc. teaching team provides an extended induction process wherein students are assigned a series of tasks to introduce them to the various technologies, to facilitate familiarisation with their tutors, and encourage socialisation with their peers.

The development of a sense of community is seen as vital in the success of teaching and learning via e-learning delivery (Garrison 2011). Wenger's (1998) social constructivist perspectives on the furtherance of learning suggest that collaboration and interaction with peers afford learners an opportunity to encounter alternative perspectives and that this, in turn, can promote optimum conditions for deep learning. Groves and O'Donoghue (2009) citing Kolb contend that collaborative models of learning, often found in online programmes, lead to 'reflection, self-evaluation, and the initiation of new learning' (p. 143). This concurs with McKimm et al. (2003) who suggest that in addition to the enhancement of learning, and the provision of course materials, appropriate use of technology may encourage greater autonomy and proactivity in students. However, it is important that the driving force is the suitability of pedagogical design rather than the technology (Downing 2001).

Some commentators have questioned the depth of learning that can be possible via online delivery of teaching and learning. In a phenomenological study of graduate students' experience of a primarily online course, which used a content analysis of students' reflective writings, Boyer et al. (2006) concluded that transformative learning involving changes in students' previously held assumptions, habits or beliefs, was evident in the online course under investigation.

2.2 *Transformative Learning*

The concept of Transformative Learning (TL) was originally proposed by humanist sociologist and educator Mezirow in 1978. Inspired by witnessing the transformative experience of his wife Edee's return to college to complete her undergraduate degree, Mezirow conducted a study of women entering community colleges after a long period away from education (Mezirow 1978, 2000, 2009). Mezirow observed a process of personal development and perspective transformation following the women's engagement in bringing their beliefs, assumptions, and views of their role in society into critical awareness (ibid.). TL is seen as offering an argument against the concept of education as a simple transmission of knowledge from teacher to student, and thus locates the overarching aim of adult education as to facilitate the learner's journey towards autonomy of thinking 'by learning to negotiate his or her own values, meanings, and purpose rather than uncritically acting on those of others' (Mezirow, cited in Taylor 1998, p. 12).

Mezirow's (2009) definition of TL shows an expectation of movement towards personal development and self-improvement:

Transformative learning is defined as the process by which we transform problematic frames of reference (mindsets, habits of mind, meaning perspectives) – sets of assumption and expectation – to make them more inclusive, discriminating, open, reflective and emotionally able to change. Such frames are better because they are more likely to generate beliefs and opinions that will prove more true or justified to guide action. (p. 92)

2.3 Transformative Learning and Sustainability

Several authors have pointed to the benefits of the TL approach in sustainability education (Lang 2004; Sipos et al. 2008; Sterling 2011; Burns 2015). Lang (2004), suggests that TL offers a great potential for encouraging action towards a sustainable future. The course team are in agreement with Lang (2004) that ‘transformation is not just an epistemological process involving a change in worldview and habits of thinking; it is also an ontological process’ by which students may experience a change in their being in the world’ (p. 121). This was backed up by Partington’s (2017) research with graduates from previous online MSc courses at UCLan which showed evidence of an impact on graduates’ identity and professional identity in addition to changes to frames of reference and the acquisition of skills in critical thinking and research (Partington 2017). Changes at the level of identity are proposed as indicative of a deeper level of TL by Illeris (2014a, b, 2015), in the case study conducted by Partington (2017) several participants’ personal and professional sense of themselves had transformed which in turn had impacted on their perspectives of their roles in their communities of practice.

Both Burns (2015) and Sipos et al. (2008) propose the importance of a physical context and activity to sustainability education. Whilst this is appropriate and desirable in an attendance course, in the case of online courses it is not an option to have all students involved in the same physical context. However, by taking a collaborative approach which acknowledges the experience and expertise of the students, the programme team aim to allow students to bring their own sense of place/physical activity with them to the virtual classroom and to share it with their peers. Based on the team’s experience with previous online M.Sc. courses, one of the key tenets of TL, the opportunity for rational discourse (Taylor 1998), is amply facilitated by the diverse backgrounds, cultures, attitudes and opinions of the students.

2.4 Design of Course to Facilitate Transformative Learning (TL)—Features of TL

Vital components in the process of TL are seen as the starting point of the learner’s own experience, critical reflection upon previously unquestioned assumptions, and the opportunity for rational discourse (Grabove 1997; Taylor 1998; Bloom 2015). Mezirow (1978) hypothesises that in many cases, TL may be triggered by the exper-

rience of a 'disorienting dilemma', or by an accumulation of transformations in a person's lower order meaning schemes which culminates in a change to their meaning perspectives or frames of reference. However, the necessity of a disorienting dilemma is less emphasised in later TL literature (Taylor 1998). Comparisons may be drawn with Meyer and Land's (2005) theory of Threshold Concepts particularly in the notions of the disorienting dilemma, or in Meyer and Land's terms encountering 'troublesome knowledge', both of which are seen as instigating critical reflection and ontological shifts (Meyer et al. 2010). A further similarity with Threshold Concept theory is evident in that both theories suggest that development arising from the TL process or from crossing a conceptual threshold is irreversible and non-regressive (Taylor 1998; Meyer et al. 2010), although this is disputed by Illeris (2014a) who suggests the additional possibilities of regressive and restorative transformations.

In practice, most proponents of TL are in agreement that TL cannot be taught (Cranton and Roy 2003; Illeris 2015) but rather that programmes may be designed to provide opportunities for transformation. Illeris (2003, 2015) favours the use of project work and sees education towards the development of competences as conducive to TL. The rapidly changing, globalised, information-rich landscape of the late modern market society demands a different approach to education. The development of competences equips learners not only to solve current problems but also gives them the potential to 'deal with problems that are unknown and unpredictable at the time when the competence in question is acquired' (Illeris 2003, p. 246). It should also be noted that identity is likely to influence the competencies that an individual is drawn to develop, and in turn, the development of a competence will impact on how the learner identifies themselves (Illeris 2014b). In the M.Sc. programme under discussion, the use of critical analysis, rational discourse, introduction to the philosophy of science, and the development of research skills whilst not defined or assessed specifically as competences, is aimed at equipping graduates to work in unpredictable and complex situations and has the potential to impact upon frames of reference. Based on experience with previous courses, the course team sees the value of encouraging students to critically reflect on their own assumptions and biases at an early point in the programme. Hence, in the first module 'Health and Wellbeing', students are asked to interrogate their own assumptions about the constituents of health and wellbeing, and much consideration is given to understanding definitions and theories of health and wellbeing. Mezirow (2000) suggests the questioning of assumptions as one of the key components of TL.

The link between education and personal or social change is not a new one. It might be said that most educational experiences lead to change in one way or another, but not all change is transformative. Key questions to ask here is who decides exactly what qualifies as transformative and how to gauge if a student has indeed been transformed (Newman 2012). As previously discussed, it is widely agreed that TL cannot be taught, but that programmes may be structured so as to allow for opportunities for transformation. The next section of this chapter discusses the underpinning pedagogy of the course.

2.5 *The Course—Underpinning Pedagogy*

The M.Sc. course is designed with a modular framework within which students are able to explore their own areas of interest, for example climate change, sustainability in organisations, the evolution of the sustainability agenda, philosophy, practical applications or inter-professional applications relating to their background or desired career trajectory. Embedded within the philosophical and pedagogical underpinnings of the course it is possible to discern the backgrounds of those who were responsible for its development (Anderson and Dron 2012), who in addition to all being qualified CAM practitioners, have variously held experience and qualifications in philosophy, law, ethics, person-centred counselling, management, and professional conduct. As might be expected in a master's level course the requirement for critical analysis, reflection and evaluation form a strong thread running through all modules, to enable health and wellbeing professionals to inspire and lead in these challenging times:

In the United Kingdom the Sustainable Development Strategy for the Health, Public Health and Social Care System 2014-2020, launched in January 2014, highlights that we need: 'education, training and development to equip leaders and the workforce with the necessary knowledge and skills to function in changing times and climates'. Furthermore, the advice to bodies and agencies responsible for setting standards in training and practice is that they may wish to 'start considering how sustainability is appropriately addressed for different professional groups and included in their curricula'. The development of this course is evidence of a direct response to this advice (UCLan 2017b, p. 4).

To foster the broadening of viewpoints, students are encouraged to engage with perspectives from the wider sustainability, health and social care fields, and to bring these into their written and presentation work.

As shown in the table below, the structure of the course comprises three compulsory modules in year 1: Health and Wellbeing, Introduction to Postgraduate Research, and Principles of Sustainability. These modules encourage students to question the assumptions they hold about sustainability, health and wellbeing in general, and to reflect on their individual experiences in these fields. Additionally, students are introduced to the philosophy of science and begin to develop an understanding of research methods and methodologies. In year 2, students complete a core double module: Connecting Sustainability, Health and Wellbeing along with one further module from the list of options shown in the table below. Year 3 involves completion of an Applied Health Project and a single module from the previous list of options.

The course learning activities, intended learning outcomes, and assessment methods are constructively aligned to give learners opportunities to engage in meaningful activities which are appropriately assessed (Biggs and Tang 2011; Race 2014). A variety of formative and summative assessments are used including individual and group presentations during synchronous tutorials in Adobe Connect Breeze rooms, discussion activities using asynchronous discussion boards, seminar papers, essays of varying lengths, patchwork texts, and the writing of articles for publication. Detailed and constructive feedback is provided in writing and verbally via Skype tutorials at the student's request both during the writing process and after marking.

Year 1	Year 2	Year 3
3 core modules (compulsory)	1 core double module	1 core double module
MY4201 health and wellbeing (20 credits)	MY4000 connecting sustainability, health and wellbeing (40 credits)	PG4115 applied health project
MY4202 principles of sustainability (20 credits)	Plus 1 option single module (20 credits each) Choice from:	Plus 1 option single module with same choices as above for Year 2
NU4025 introduction to postgraduate research (20 credits)	NU4086 Applying Methods in Health Research HP4006 Research, Ethics and Governance PG4114 Healthy and Sustainable Settings: Theory, Policy and Practice MW4036 Organisational Leadership and Management XS4031 International Food law HP4007 Student Initiated Module	

Pedagogical methods such as the use of study buddies and formative group assignments foster a sense of community and collaboration which support the students and mitigate the difficulties of socialisation in online programmes. In terms of the various models for learning in communities, Lave and Wenger's more spontaneous and informal COP model (1999) may be seen as more applicable to the programme under discussion than the Bounded Learning Community of Wilson et al. (2004), where the community structure is imposed by the tutors. Whilst tutors on the programme are keen to encourage a sense of community, they recognise that not all students wish to participate fully. That said, there is generally a strong sense of community on this course. Previous M.Sc. courses run by the team have had a high output of conference presentations and articles published by students that have been developed from their course assignments, and it is envisioned that this will continue with the new course. Hence, there is a sense of tutors and students learning together both for and with their wider communities (Anderson 2004; Holmes and Gardner 2006).

With their backgrounds in healthcare practice, the tutors tend towards a humanistic, collaborative, socio-constructivist pedagogy, holding a respect for learners' previous knowledge and experience, and seeing themselves as collaborators and co-constructors of knowledge rather than experts at the front of the class. Indeed, the writing of this chapter was conceived of as a collaborative project between teaching staff with input from students. The collaborative model is reinforced to an extent by the logistical necessities of e-learning, which are more suited to relatively short online tutorials than longer lecture-based lessons.

In essence, the course team employs a flipped classroom methodology wherein learning materials are provided on the VLE for students to study in advance of the synchronous online session (Tucker 2012). Materials are mainly presented in the form of written study units, which often include links to external websites, articles and video materials. Using elements of Problem Based Learning or problem posing, at the end of each study unit, students are asked to come to the online tutorial ready to

discuss a particular issue, as for example, in the first unit on the Health and Wellbeing module

Think about your own personal beliefs and assumptions about health and wellbeing.

- How do they impact upon the way that you live and work?
- Where have your beliefs come from?
- Are they reliable sources?

Or in the Principles of Sustainability module:

- When and why did the concept of sustainable development come about?
- How have definitions and emphases of sustainability changed over time?

Discussion during online sessions is backed up and extended by use of asynchronous discussion boards, which also provide a way of facilitating peer support activities. Increasingly, the course team is also seeing students' independent use of social media to work collaboratively and to stay connected with each other. All synchronous online sessions are recorded and students are provided with web links to access them. This serves a dual purpose in allowing students who were unable to attend a session to catch up, and is also used as a way of providing assignment guidance and study skills sessions which students can access asynchronously.

In terms of encouraging criticality, the course approach veers more towards critical thinking than critical pedagogy, again this may be in part due to the tutors' history and experience as healthcare practitioners and a philosophy of a person-centred, non-directive approach (Rogers 2002). However, the subject of the sustainability agenda does tie in with a critical pedagogy agenda and it is recognised that students will be in different positions on the 'ladder of sustainability' (Young and Dhanda 2013: 140) when they enter the course, with some already being in leadership or advocacy positions and others who will develop their own praxis over time.

From the outset of the course, students are encouraged to engage in critical reflection and analysis of their own profession and of the landscape in which it is situated. The final section of this chapter presents students' own reflections on their early experiences on this course.

3 Reflections from Students

As part of their learning students are asked to critically reflect upon, challenge and analyse their personal assumptions about health, wellbeing and sustainability.

In doing so, students described how they were beginning to open their minds to alternative ways of developing health and wellbeing (Kate), whilst Emily noted how she had initially focussed on aspects that inhibited wellbeing and how they undermine an individual's ability to own their own health but has, during the course, moved towards the adoption of a more balanced view. Kate described the multifaceted nature of sustainability, health and wellbeing, stating how she feels the group to

be unravelling the layers and that perhaps only in doing this will they be able to understand them, put them back together and build on them to look forward to a sustainable future.

Students appear to be enthusiastic about online learning and the coming together to develop communities of practice as described by Lave and Wenger (1991). They value the breadth of experience within the group noting how they ‘get to interact with peers in quite similar and quite different positions throughout the globe’ (Linda), and ‘there is a great variation in experience and field of expertise in the group, this feels hugely beneficial’ (Kate). Another student states how they ‘forge an effective non-biased cohort of thinkers sharing previous and current practice experience’ (Bryony). She considers that she has been able to build supportive relationships whilst growing in confidence and continuing to challenge independent thought processes.

The pedagogy underpinning the course has always been an important aspect for the tutors, and this is reflected in the student voice. Bryony says that the course ‘allows for discussions to be considered/reconsidered at realistic natural rhythms, and describes how students are ‘more likely to enjoy the experience of continued professional learning with part-time accessible study options to complement their present circumstances’. Students are able to ‘embrace a complementary learning practice study, one that feels more holistic in nature, which allows for a more profound learning experience’. Notwithstanding this, Tony finds it extremely helpful to be able to take a more academic approach to be able to link the underpinning principles of sustainability to his work.

Even at this early stage, Kate feels ‘inspired to live... mindful of her own health and wellbeing’, whilst Emily describes how she feels an increased awareness of the interconnectedness of our wellbeing (i.e. between people, nature and planet). Students report that they are mindful of how they are ‘becoming better equipped to shape their professional futures through evolving perceptions’ and that they are ‘investing in both themselves and to the future of healthcare’ (Bryony). They believe that they will be able to contribute to positive environmental outcomes by eradicating unnecessary planetary stresses and pollutants and that they will be able to bring ‘new frontier thinking’ to their work which, they hope, will ultimately shape policy and process (Bryony & Linda).

In going forward, one student (Kate) described how ‘the course itself is a prototype on how to develop sustainable models; how often otherwise does such a diverse cross-section sit down to discuss such important issues’.

4 Limitations

There are some limitations, namely that the evidence comes from a single, early cohort of students and cannot, therefore, be generalised to a wider student population. However, the authors believe that the study of their course provides a detailed, in-depth examination that allows for the exploration of the complex interrelationship between mode of study, course subject and a distinct group of students.

5 Conclusion

Whilst the course is still in its early stages, it would be premature to claim the provision of Transformative Learning. The evidence so far, suggests that a course delivered via e-learning is sustainable, and the subject of ‘sustainability, health and wellbeing’, corresponds with local, national and global agendas for change. The course brings together individuals from a wide range of backgrounds and encourages them to create a community of practice where they can share their experiences and learn from one another, and in so doing have a significant impact within their own geographical or practice area. The student’s learning experience fits with some of the key features of TL such as the encouragement to question previously held assumptions and provides opportunities for rational discourse, and exposure to new perspectives. The course team agrees with authors who suggest the benefits of a TL approach within sustainability education (e.g.: Lang 2004; Sipos et al. 2008; Sterling 2011; Burns 2015), and are confident that this is eminently possible within an online learning setting. The study reveals something new, that is of value to educators and sustainability advocates. The chapter may, therefore, in outlining the underpinning philosophy, delivery methods and reflections from students on one particular model, be useful to others in this vital, exciting and complex field.

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Sustainably Sourced Seafood: A Criminological Approach to Reduce Demand for Illegal Seafood Supply



Jade Lindley

Abstract The demand for cheap seafood often compromises quality and legality of the source. Yet, consumers may be oblivious to the social, economic, legal and environmental impacts when purchasing cheap, foreign seafood, implicitly supporting illegal fishing operations. From a situational crime prevention perspective, removing opportunity to offend by controlling demand is more effective than via the criminal justice system. This research explores the role enhanced social values towards sustainable choices can play in promoting local and sustainable seafood, supported by consumers' purchasing power. It draws on examples that establish a culture of support for locally sourced seafood, rather than accepting cheaper and potentially inferior and illegally sourced imports. Through that critical analysis, this research discovers by reducing the demand for cheap seafood, the supply of unsustainable and illegally sourced seafood reduces. In turn, this achieves crime prevention and sustainable seafood, supporting humanities at the local to the global level. To ensure the model is globally replicable and simultaneously applied, it further draws on a regulatory pluralism model, driven by the consumer to champion illegal fishing control.

Keywords Illegal fishing · Regulatory pluralism · Community supported fisheries · Situational crime prevention · Sustainable culture

1 Introduction

The World Bank estimates that while the ocean supply of seafood is decreasing, the demand over the next 10-plus years is increasing (World Bank 2013, p. xv). As such, there is wide recognition among governments, academics, and international and non-government organisations that sustainable practices need to be adopted to protect the

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global seafood supply and all of humanity who rely on seafood for protein and in connection with their employment. Consumer purchasing patterns have changed over the past 50 years, whereby the convenience of the one-stop grocery store removes the need to visit specialty stores such as the greengrocer or fishmonger (Aadland 2012, pp. 4 and 71; Friends of the Earth 2005, p. 2). Meanwhile, the grocery store price wars and buying power demand low-cost inventory, including seafood, and that may compromise quality and legality of the source (UK Office of Fair Trading 2006). As such, convenience shopping undermines the pre-existing social values towards local produce common to generations past. The United Kingdom Office of Fair Trading launched an investigation into the effect on speciality stores of super- and hypermarkets and found ‘evidence to suggest that the buyer power of the big supermarkets has increased since 2000, and that the differential between suppliers’ prices to large supermarkets compared with those to wholesalers and buying groups has risen’ (UK Office of Fair Trading 2006, p. 2), indicating that consumers who visit the local speciality store are economically disadvantaged.

Trends show that while many shoppers prefer the grocery store experience rather than a specialist supplier, seafood consumers may be inadvertently misinformed about their purchase or be restricted from competition on species choice (UK Office of Fair Trading 2006). A 2016 Australian Fisheries Research and Development Corporation commissioned survey found that of the 2000 Australian adult participants, 57% purchased seafood from the grocery store, followed by 17% of people purchasing from a seafood market (Intuitive Solutions 2016). This research, coupled with the decline of artisanal specialty stores, indicates a trend towards convenience purchasing (Intuitive Solutions 2016; Aadland 2012). While these research findings are based on multiple locations, it is apparent that a global trend is emerging. It also shows a lack of research linking the consumer and the problem as a potential solution.

Some research suggests that good value for money is a motivator for purchasing seafood (Intuitive Solutions 2016). However, consumers may be oblivious to the social, economic, legal and environmental impacts when purchasing cheap, foreign seafood, implicitly supporting illegal, unregulated and unreported (IUU) fishing operations that undermine sustainable futures. To ensure that consumers are informed when purchasing seafood, greater consumer awareness can support sustainable choices. In turn, greater awareness of the potential for illegally sourced seafood will likely reduce consumers’ demand for cheap seafood. A decreased demand therefore forces illegal fishers out of the market.

From a situational crime prevention perspective, for some crime types, removing opportunity to offend is often more effective than via the criminal justice system. While there is an extensive legal and regulatory model in place at the global, regional and many national levels, limited surveillance and issues, such as corruption at the port and license issuing, allows illegal catch to enter the market (Lindley and Techera 2017). Furthermore, penalties incommensurate with the crimes committed fail to deter illegal fishers. As such, addressing IUU fishing at the point of consumer demand may be a more effective means of control. Situational crime prevention consists of four pillars; however, this research considers only one—reducing anticipated

rewards (Clarke 1997). Reducing the demand among consumers for cheap seafood reduces the need for supply affecting fishers supplying that illegal catch. Awareness is important in minimising the demand for cheap seafood that may be unsustainably sourced affecting all of humanity. This research explores the role local community members, such as chefs and restaurateurs, can play in promoting awareness of local and sustainable seafood, supported by consumers' purchasing power. Tapping into the *foodie culture* particularly common, among Millennials, requires buy-in from celebrated local chefs and restaurants. Trends such as seasonal cooking and local heritage crops are encouraged by celebrity chefs, making buying local fashionable (Barnds and Tan 2017). Further, the Community Sourced Fisheries movement is also gaining support worldwide. These trends encourage consumers to engage in the conversation about local and sustainable seafood. This paper draws on examples that establish a culture of social values that support for locally sourced and sustainable seafood. Globalisation encourages an open market; however, this may be at the cost of local traders. Embracing local seafood is well on trend, and the success and expansion of Community Sourced Fisheries is evidence of this. The New Orleans' seafood scene is well established and home to many celebrated chefs. This combination encourages the local and sustainable seafood demand. Similar trends exist in other locations around the world showing a global interest in supporting local industry and reducing the demand for foreign catch that may be sourced illegally and unsustainably.

Using situational crime prevention to provide a model to understand IUU fishing drivers and methods of control, this research discovers by reducing the demand for cheap seafood, the supply of unsustainable and illegally sourced seafood can reduce. In turn, this achieves crime prevention. Not only is illegally sourced seafood criminal, it often also causes damage to the environment by using banned gear and equipment (Phelps Bondaroff et al. 2015). By reducing the market for illegally sourced seafood removes the financial drivers for organised criminals to engage in IUU fishing. To be successful, this method of control needs to be wide-reaching to have greatest sustainable impact on humanities. The risk if only localised efforts are implemented is that criminals will find another market to sell. To ensure the model is globally replicable, it further draws on a regulatory pluralism model to understand the most appropriate institutional configuration for IUU fishing control. By developing and implementing a replicable model that involves traditional and non-traditional regulators, sustainable fishery control is achievable. Without a clear roadmap, achievable goals are more difficult to reach and replication is a challenge. Further, relying on separate of disconnected approaches is unlikely to be long term and as such there needs to be a model that can draw in the strengths from multiple actors.

2 Global Response to IUU Fishing and Its Impact on Sustainability

Globally, it is well understood that the impact of unsustainable fishing is dire for the future of humanities. As such, the United Nations Food and Agricultural Organization (FAO) International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) defines illegal, unreported and unregulated (IUU) fishing (Food and Agriculture Organization of the United Nations 2001). Paragraph 3.1 defines illegal fishing as offences that contravene domestic and regional fishery management organisation (RFMO) laws (Food and Agriculture Organization of the United Nations 2001). Unreported fishing, according to Paragraph 3.2, extends to ‘non-reporting, misreporting or under-reporting’ failing to report any illegal activity contravening laws and RFMO measures, or other activities not strictly required to be reported, but advisable to report (Food and Agriculture Organization of the United Nations 2001). Paragraph 3.3 notes unregulated fishing involves activities unregulated by States or activities of stateless vessels and non-parties to RFMOs (Food and Agriculture Organization of the United Nations 2001). As such, IUU fishing extends to include mostly illegal fishing activities that violate, or at least disregard international, regional and local fishing laws and regulations for the purpose of facilitating the greatest possible catch. The Food and Agriculture Organization identified IUU fishing as a major issue threatening fishery trade (Food and Agriculture Organization of the United Nations 2016: 62) estimated at ‘more than 15% of the world’s total annual capture fisheries output’ (Food and Agriculture Organization of the United Nations 2016: iii). While the financial loss may cripple some States, there are other impacts of irresponsible fishing practices such as the threat of fish stock depletion. Understanding the cause and effect of IUU fishing, including how it enters the market and consumer awareness, along with effective policing and strengthened laws are all critical elements to sustain commercial fishery enterprises, from artisanal to global, and protect threatened species.

IUU fishing defies sustainable fisheries management and places pressure on fish stock and marine regions. Oftentimes, IUU fishing is coupled with other illegal practices to keep costs down, such as forced and low paid labour, and people trafficking (Techera and Lindley 2016). Illegally sourced seafood enters the market through unconventional and clandestine means—such as transshipment offshore mixing legal and illegal catches or through ports of convenience—and is on-sold to consumers unknowingly (Techera and Lindley 2016). IUU fishing cuts legitimate fishers out of the market making them unable to compete at a comparable low cost. The result of IUU fishing is cheaper seafood, attractive to consumers; however, often they lack the knowledge to make clear and sustainable decisions about what they purchase. The livelihoods of legitimate fishers are also impacted, potentially leading to poverty.

Former United Nations Special Rapporteur Olivier De Schutter used his platform to encourage consumers to make smarter choices about food in line with the agroecology philosophy. This extends to seafood. Agroecology seeks to cost-effectively uncover sustainable solutions to food challenges and works holistically to minimise

negative effects of one specific area of agriculture inadvertently leading to losses in others (DeLonge and Basche 2017). Global impacts have led to a decimation of fish stocks, in some cases the extinction of entire species (Burgess et al. 2013, p. 15943). For example, the 'Green Revolution' led to the overuse of chemical fertilisers to protect and promote the production of major cereals, such as maize, wheat and rice, and soybeans (United Nations General Assembly 2014, p. 5). However, these chemicals also polluted fresh water, the effect of which dissolves oxygen content in the water required to sustain fish stocks (United Nations General Assembly 2014, p. 5). Protecting food security holistically prevents devastating impacts within and beyond state control. Fishing areas beyond state control are particularly of concern as it is where the majority of IUU fishing occurs.

The fundamental nature of the vast high seas is that it remains stateless; however, legal frameworks exist to monitor and control against unfair use of the ocean. Ocean governance is articulated in the United Nations Convention on the Law of the Sea (UNCLOS) which, relevant to IUU fishing, establishes maritime zones, creates general obligations to protect and preserve the marine environment, and introduces concepts such as 'maximum sustainable yield' and 'total allowable catch' in an effort to prevent overfishing (United Nations 1982). UNCLOS gives access to fishing on the high seas, however, 'Freedom in a commons brings ruin to all', therefore, controls must be in place and enforced (United Nations 1982: Art 87(e); Hardin 1968: 1244). As such, UNCLOS requires each littoral State to control activities in its territorial waters (up to 12 nautical miles from land) and exclusive economic zone (EEZ) (between 12 and 200 nautical miles) (United Nations 1982, Arts. 3 and 57). Beyond these areas, no one State has policing authority, in line with the freedom of the high seas doctrine, and therefore regional monitoring has an important role (United Nations 1982, Art. 87). Regional fishery management organisations (RFMOs) govern the regional level. RFMOs may, for example, set catch and fishing limits, adopt technical and conservation measures, and facilitate cooperative and governance arrangements between Member States to enable effective control and management of fisheries within that region (Organisation for Economic Co-operation and Development 2014: para 25). While RFMO measures are often binding on Member States, illegal fishing still occurs. Together with national laws and other bi- and multilateral cooperative agreements, adequate legal frameworks exist to address both species-based and area-based measures; however, fisheries crimes are not chief among them (Lindley and Techera 2017).

Beyond UNCLOS, FAO leads the global plight of IUU fishing through its mandate of eliminating food insecurity. Most specifically, the FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) takes into account principles such as the underlying goal of conservation and sustainable use of living natural resources, the necessity for comprehensive and integrated approaches, the use of phased implementation, as well as principles of transparency, non-discrimination, participation and coordination (FAO 2001). It further encourages flag, coastal, port and market states to adopt national plans of action that implement the IPOA-IUU and to collaborate with RFMOs to prevent,

deter and eliminate IUU fishing (FAO 2001). Beyond its aim of eliminating illegal fishing, the IPOA-IUU does not address fisheries crime in a comprehensive way.

The potential impact of IUU fishing on humanities and species warrants global concern and given the responses to date has not resulted in its elimination, innovative solutions are needed.

3 Situational Crime Prevention Approach to Illegal Fishing

Situational crime prevention is underpinned by the assertion that by increasing the effort and risks, and by reducing rewards and removing excuses, will affect the likelihood of offending behaviour (Cornish and Clarke 1986). While the unreported and the unregulated components of IUU fishing are damaging, it is the illegal component of IUU fishing that can be addressed through a theoretical criminological model. Applying situational crime prevention in the illegal fishing space denotes, by increasing consumer awareness via local chefs leveraging on the *foodie culture* hinged on local and sustainable food, will decrease the demand for cheap, foreign and unsustainable seafood. This concept underpins the current research to explain and promote a suitable vehicle for illegal fishing prevention.

Situational crime prevention asserts that crime is not distributed randomly, but rather concentrates in time and space. As such, certain locations are more crime-prone than others, during specific time periods and therefore, situational and environmental opportunities that give rise to specific opportunities for crime need to be eliminated to prevent crime. Earlier research on illegal fishing underpinned by situational crime prevention techniques captured assumptions about the nature of illegal fishing activity (Petrossian 2015). In analysing illegal fishing, Petrossian (2015) found that ‘a country’s risk of illegal fishing is positively related to the number of commercially significant species found within its territorial waters and its proximity to known ports of convenience’. This highlights the need for research collaboration between criminologists and conservationists to more effectively understand and control the future of sustainable fish stocks. This research builds on that earlier work, applying criminological theory to understand and develop the most appropriate method of illegal fishing control.

Drawing on one of the four pillars of situational crime prevention, ‘reduce demand to reduce reward’, driving down demand for illegally sourced seafood can reduce the reward of illegal fishers engaging in that activity. Illegal fishing is a global problem and no region is immune. However, ‘countries that exercise effective fisheries management and have strong patrol surveillance capacity experience less illegal fishing activity within their territorial waters’ (Petrossian 2015). As such, the response to illegal fishing requires a multipronged approach. While extensive legal frameworks exist to prosecute illegal fishing, jurisdictional complexity prevents coordinated and effective responses and therefore leads to limited prosecutorial success (Lindley and Techera 2017). Instead, approaching illegal fishing control innovatively via alternative methods may be more appropriate. Through the *foodie culture*, it is possible to

achieve target reduction and potentially target removal through consumer demand for local seafood. Assuming correct licencing, catch quota adherence and fishing zones and times are respected, seafood locally sourced (within territorial waters) is more likely to be legal. More specifically, through demand for local seafood, this situational crime prevention approach achieves target removal of demand for foreign and therefore potentially illegal seafood. Increasing non-traditional guardianship to increase effort and risk can be considered through a regulatory pluralism model, engaging a bottom-up consumer-driven approach to reduce the rewards for illegal fishing participation (see the forthcoming sections below).

4 The *Foodie Culture*: The Role of Consumers and Local Chefs

Consumer purchasing power defines the market. Consumers make purchasing choices based on information they have available to them, and therefore informed consumer communication is paramount. There are several methods in which sustainable seafood choices can be communicated with consumers. For example, on-package labelling has high visibility and is among the most researched and discussed methods (Ward and Phillips 2009; Jacquet and Pauly 2007). Globally recognisable, the Marine Stewardship Council (MSC)—which certifies sustainable fish stocks—engages in on-package communication conveying to consumers that the fishery is sustainable. Other methods include consumer guides and informational tools for sustainable seafood consumption, and what to avoid (Roheim 2009). These methods have global consumer reach and while they are impactful, they are also potentially impersonal. Alternatively, informing consumers at the local level may be more relevant to gain the attention of the critical mass are more likely to be successful long term.

The *foodie culture* has a real and significant stronghold, particularly among the Millennial generation. Eating locally sourced food that embraces environmental sustainability is among the ethos of many Millennials (Turow 2015). Research shows that Millennials are interested in eating natural, organic food that is free from pesticides and genetic modification (Pinsker 2015). This ethos aligns well with the desire for sustainable seafood. Furthermore, Millennials are inclined to be environmentally conscious. Compared to others, this generation is environmentally aware and would pay money for sustainable and environmentally friendly options (Nielsen 2015; Laroche et al. 2001). While this relationship is necessary to ensure food security by making decisions and developing strategies to encourage sustainable food choices in the future, seafood stocks are already diminishing and therefore ensuring sustainable strategies such as the elimination of illegally sourced fish entering the market are critical. As such, Millennials have an important role to play in the future of sustainable seafood. The relationship between the foodie culture and Millennials is twofold: first, the desire for high quality and local food promotes an environmen-

tally sustainable outlook. There is also willingness to pay more for food meeting those needs. Second, due to the engagement in social media and technology for communication more broadly among this group, faster and wider communication of sustainable choices is achieved, promoting a following (Toonen and Miller 2017). Social media communications are sent and shared across the globe speedily generating an instant reaction. Social media can thus be instrumental in communicating the potential of illegally sourced seafood as a measure to avoid it.

While Millennials are not the only generation who consume seafood, it is important for future generations that they are environmentally aware. However, to achieve the goal of reducing the number of consumers who purchase illegally sourced seafood unknowingly, there needs to be a commitment among food services dedicated to sourcing sustainable food linking to the environmentally conscious consumer. Community Supported Fisheries (CSF) is a movement progressing towards a sustainable fisheries future by encouraging local engagement between fisheries and consumers. CSF emerged in the US in 2010 and has since been successfully adopted elsewhere around the world since, in various forms (Andreatta et al. 2011). This kind of community engagement emerges in many forms, but is fundamentally underpinned by the local catch to consumer approach. The following few examples highlight awareness-raising efforts underway, but by no means is an exhaustive list.

- In New Orleans, top chefs back the sustainable seafood industry to encourage consumers' preference for purchasing local seafood through community events (Biz New Orleans 2017). Using the power of celebrity within the local community boosts the consumers' purchasing power for clean, fair and legal seafood. 'Chefs argue that foodie-ism ratchets up the pressure to churn out the perfect dish—and infantilizes a profession that they worked hard to master' (Howe 2017).
- Carteret County, North Carolina piloted *Carteret Catch*TM the first CSF, direct marketing arrangement for seafood between fishers and consumers (Andreatta et al. 2011). Through this CSF vehicle, local businesses and fishers link to provide fresh, local seafood. Social media is integral in updating community members about availability of catches for sale from the dock and local restaurants selling a cooked dish of the catch (Toonen and Miller 2017).
- United Kingdom celebrity chef Hugh Fearnley-Whittingstall launched 'Fish Fight' in 2010 a campaign to end the practice of discarding unwanted/unsellable fish in European fisheries. It also encouraged a movement towards more sustainable choices, such as mackerel rather than cod, creating the 'Mac Bap' a mackerel fish burger (Fish Fight 2018). Episodes alerted consumers to unsustainable fishing practices and requested their participation in an online petition to change European Union laws and via social media to request grocery stores introduce higher standards in their seafood buying practices (Fish Fight 2018). It led to an overwhelming response and effected change.

Through these select examples, it shows an increase in effort to raise awareness among the general population of declining stocks and the impact of IUU fishing (Jacquet and Pauly 2007: 8). However, these efforts have not been evaluated to better understand and measure the effectiveness of the awareness-raising campaigns

(Jacquet and Pauly 2007: 10). In order to understand the true impact, evaluations would be needed.

5 Consumer-Driven Regulation

Regulatory pluralism is grounded in the notion that to control effectively, a heterogeneous mix of regulators¹ is more effective than a regulatory monopoly. Grabosky (1995, p. 529) contended, ‘the traditional conception of governmental regulation has become obsolete’. Instead, ‘instruments of public policy appear increasingly to involve a blend of public and private resources’ (Grabosky 1995, p. 529). This concept combines formal and informal approaches relying on actors with either the same or varying motivations (Lindley and Techera 2017; Black 2002; Grabosky 1995). Regulatory collaboration involving pooled resources, and tools and measures to complement rather than compete, is more effective than a single regulator. The application of regulatory pluralism is particularly useful in environments with limited traditional oversight and many and varied legal frameworks, creating layers of complexity, as is the case with illegal fishing. Non-government agencies may perform at lower cost and higher productivity than governments and can be successfully applied in a range of settings (Grabosky 1994, pp. 420 and 422, 1995). A pluralistic regulatory regime in response to illegal fishing can distill the regulatory complexity by harmonising and aligning responses. Regulators working in unison can in this way have greater opportunity to address the issue more holistically on land and at sea.

Regulating in line with a pluralistic model requires innovation. While consistency in motivations and goals, nor cooperative coordination are not critical to its success, it relies on a patchwork of actors. As illegal fishing exists in a complex legal environment, involving both vertical (international, regional and state-level) and horizontal (bi- and multilateral arrangements), rethinking the most appropriate guardians to protect against it is paramount (Lindley and Techera 2017, p. 76). As such, approaching illegal fishing from a bottom-up regulatory perspective may be successful. Through purchasing power, consumers have a role in shaping the market (see Fig. 1).

6 Bottom-up Regulation

Drawing on regulatory pluralism to develop a non-traditional regulatory response to illegal fishing, consideration of the end-user—the consumer—is important. The consumer can potentially have a significant role in controlling the market. The FAO

¹A regulator encompasses state institutions, non-state actors, social and economic forces (e.g. markets, norms, or even language), or physical or virtual technologies. See Parker (2008).

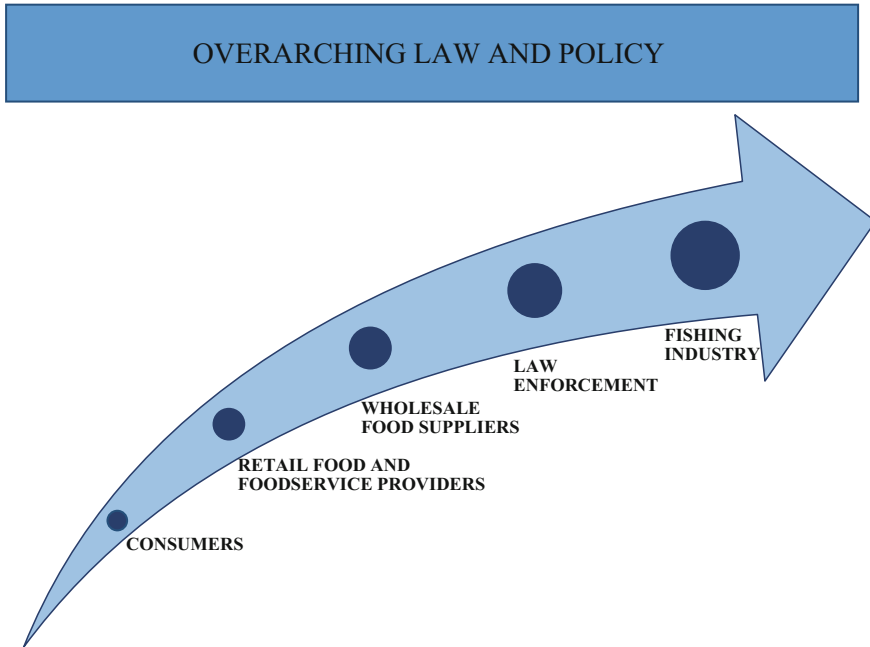


Fig. 1 Bottom-up IUU fishing regulation

estimates almost a 36% increase in demand for seafood by 2030, therefore by targeting consumers as implicit regulators and focusing on their purchasing demand can be a bottom-up regulatory approach, coupled with existing legal and regulatory frameworks (World Bank 2013, p. xv). This measure relies on the assumption that many consumers who embrace the foodie culture will accept a slight premium for local, sustainable food (Frash et al. 2015) and research shows that consumers are increasingly engaging in this behaviour (Engelhardt et al. 2009, p. 1). Consumers are the biggest winners of locally sought, legally fished and sustainable seafood. When the community is empowered to make decisions through purchasing power, policymakers and regulators can respond accordingly. Figure 1 shows the relationship between consumers and fishing, albeit distant, there are measures in which consumers can influence overfishing practices.

In an age when seafood supply from the ocean is decreasing and demand is increasing, World Bank (2013), Fig. 1 shows a bottom-up situational crime prevention approach to illegal fishing to create sustainable seafood supply. Consumers drive the bottom-up approach through purchasing power. Consumers demanding sustainable choices will, in turn, place pressure on those retail providers and their wholesale suppliers. These actions by consumers can inform decision-makers to encourage stronger governance in improving and enforcing laws and policies for fisheries. Greater law enforcement forces the fisheries industry to comply with laws policies, equating to sustainably sourced seafood. Importantly, this model closely links cultivating sus-

tainable seafood and building strength within humanities to direct change through purchasing power. Empowered consumers can prevail over poor governance of the fisheries industry through strength in numbers.

Consumers should be invited to engage in decisions about food security. Consumers may be unaware of the complexities governing and the irregularities surrounding their fish dinner. Purchasing power is an effective way to send a message to industry and government, purporting greater consumer expectations for regulatory control. In its 2016 annual report, the Marine Stewardship Council reported 286 certified fisheries in 36 countries (Marine Stewardship Council 2016). Only 10% of certified fisheries harvest wild-caught fish (Marine Stewardship Council 2016). Given such a small proportion of wild-caught fish are deemed suitable for the MSC certification, more effort needs to be needed to support sustainable fisheries. As such, most ocean fisheries are uncertified and therefore could also be illegal, in part or in whole. These facts reaffirm the need for clear and unfragmented regulatory controls supported and upheld by States that have the political will to preserve the fish stocks through sustainable practices. These controls must apply to fish harvesting, on-selling and delivering the fish to the consumer.

6.1 Displacement of Crime

An effect of crime prevention is crime displacement. Displacement is not seen as inevitable, but rather ‘contingent upon the offender’s judgments about alternative crimes’ (Clarke 1997, p. 28). Crimes may displace in various ways, such as in location or crime type and as such, thoughtful consideration must be given to the potential negative effects of greater control over illegally sourced seafood. This brings squarely into focus the need for illegal fishing to be globally addressed simultaneously to minimise the risk of seafood rejected by one State’s market being sold to another State. Alternatively, research shows many examples of success as a result of the ‘target removal’ element of situational crime prevention, though displacement of the initial crime into crime of greater seriousness is also possible (Clarke 1997, pp. 21–22). In the situation of illegal fishing, research uncovered the close links between organised crime involving human rights abuses and using profits from illegal fishing to spring-board other criminal activity, such as drug trafficking (see for example Lindley and Techera 2017; Techera and Lindley 2016; Environmental Justice Foundation 2016). Certainly, other forms of displacement are possible as a result of illegal fishing prevention and would need to be fully explored at the local, and possibly regional level and measures to minimise those risks adopted.

7 Conclusion

It is clear that illegal fishing is a global issue that requires global solutions. Existing research shows trends towards convenience shopping, leaving the consumer with limited and potentially, unsustainable seafood options for purchase. Building on those conclusions, this research argues that to be effective, a non-traditional regulatory control model driven locally by consumers' purchasing power would be effective. All of humanity would benefit from social values that support sustainable seafood choices. To be effective, it necessitates the establishment of controls that transcend jurisdictions. Drawing on the situational crime prevention model linked to the foodie culture trend, particularly among Millennials, the desire for local and sustainable produce provides a suitable awareness-raising vehicle of the existence of illegal fishing, despite existing international, regional and many national legal frameworks in place.

Illegal fishing is detrimental to humanity from social, economic, legal and environmental perspectives and therefore requires a suitable response. Developing a strategy consistent with a regulatory pluralism paradigm may be suitable to draw strength from various non-traditional regulators, such as consumers and restaurateurs in defeating illegal fishing. Further establishing social values that support sustainable choices, local and celebrated chefs can play a role in advancing the agenda by supporting local and sustainable produce, particularly seafood. This research concluded that this consumer-driven model would encourage a change in the approach and attitude to sustainable fisheries, and place pressure on seafood retailers and restaurants, suppliers, policymakers and the fisheries industry to ensure that seafood is sustainably sourced and illegal fishing is stamped out, which will support humanity long into the future. Future research is needed to build on these ideas at the local and regional level to understand enablers and inhibitors that may exist affecting the progress of the response.

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Sustaining Human Food Sources by Using Abrahamic Religious Guidance as a Framework for Their Sustainable Production and Consumption



Kelly Longfellow

Abstract The scriptures of the major Abrahamic Religions (Christianity, Islam, and Judaism) provide guidance on how to produce food for human health, and how humans are to preserve this shared ecosystem among flora, fauna, and humans for mutual survival. Contemporary societies have embraced technical and biological advancements which have improved the efficiency of production, processing, and marketing of food. However, some new food production processes cause an array of ecological, human health, economic, ethical, and political impacts that have adverse human health impacts, destroy ecosystems, reduce biodiversity, and contribute to the net increases of more than 100,000,000 tons of carbon dioxide being added to the atmosphere per day. These and related changes are leading to climate changes, increasing frequency and severity of storms, and risking human and other species' survival upon our planet. The author of this article included recommended courses of actions that when implemented should help to slow down and to ultimately reverse these unsustainable trends.

Keywords Food chain · Abrahamic religious principles · Christianity
Judaism · Islam · Food waste · Food production · Food consumption · Ecology
and religion · Food and religion · Ecological sustainability · Societal sustainability

The author's research questions are:

Is there useful guidance in Abrahamic texts that can provide a foundation to assist societies to establish an evolving framework of processes to become truly sustainable?

How can societies implement this guidance to counter present and future ecological and human challenges of food scarcity, water pollution/water scarcity, soil erosion, global warming, further losses of species diversity, and unsustainable societal patterns of production, consumption, and of managing human population size so

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all can “live” within the ecosystem limits of this finite planet for now and for future generations?

1 Introduction

The problems this author is seeking to address are caused, according to her hypothesis, because societies, especially in the United States (US), are not building upon the Abrahamic guidance in food production and consumption. Therefore, due to these weaknesses, their daily practices are negatively affecting the global ecosystem’s health, which are resulting in:

1. Rapid increase in soil erosion due to over-tilling and other agronomic practices such as monoculture of genetically modified varieties of crops that are vulnerable to diseases;
2. Increased water scarcity and contamination by pesticides and fertilizers;
3. Increased climate changes due to extensive use of fossil fuels during planting, cultivation, harvest, transportation, processing, consumption, and waste management.

Therefore, this author is convinced that the major reasons we have many of these problems are because our societies do not fulfill their responsibilities according to the guidance provided in Genesis 2:15 “God put Adam and Eve in the Garden of Eden to work it and take care of it.”

During the literature review for this paper, this author discovered articles and books supporting the scientific evidence that our current practices are unsustainable. Additionally, the increasing ecosystem challenges which result in food insecurities can be “solved” or “reduced” if societies would implement practices recommended in the ancient Abrahamic Religious wisdom for producing and managing crops and animals.

2 Research Framework

This author identified some foods referenced in Abrahamic texts related to nutrients, religious ceremonies, ways of harvesting, slaughtering, sharing, storing, and consuming as practiced today in some communities. This author reviewed recent technological advances designed to streamline food production and found that some of these practices are having adverse effects on human health and upon global ecosystems sustainability.

This author highlighted how Abrahamic guidance can and is being used to reduce current and future ecosystem and food insecurities of some individuals and groups in the US and elsewhere.

This author performed an online survey, to obtain insight into individual's daily practices toward purchasing and consuming food and to identify which practice(s) may be helpful in reversing global impacts and to help to ensure ecosystem sustainability and food security. The survey design enabled an assessment of the roles the "Abrahamic" guidance played in the respondent's decision-making and how those decisions can help society to transition to more sustainable practices.

3 Literature Review

In order to set the context of the distributions of religious groups in the US, the author found that according to the Pew Research Center, the percentages of the US population who claim membership in the different religious groups are as follows: Christian 70%, non-Christian 5.9% (Jewish is at 1.9% and Muslim is at 0.9%), other faiths 1.5%, and no religion in particular 15.8%.¹ For the focus of this paper, the author compared responses from followers of the Abrahamic Religions; Christianity, Islam, and Judaism, since these three religions are based upon similar religious frameworks, wisdom, and guidance and are the religions that are most prevalent in the US.

Some of the Abrahamic textual guidelines, i.e., Leviticus Chapter 11, were explicitly written to guide the religious followers with instructions regarding the production and consumption of foods.

In the Koran 2:173, the "Law of Necessity" highlighted "*that necessity makes the forbidden permissible*" when food is limited or scarce. However, the Christian Bible, Romans Chapter 14, states that *all food is good to eat*. It is interesting how different authors of the three religious books interpreted the guidance about which food is healthy to eat.

4 Types of Food Highlighted in Abrahamic Texts

There is a wide variety of human foods listed repeatedly in the Abrahamic guidelines for safe consumption and of those foods that are "unclean" and "clean". There are also guidelines on proper planting, harvesting, and slaughter of animals which were based upon nutrients, health promotion, as well as upon appropriate usage in religious ceremonies and sacrifices. This author focused upon guidance for production and consumption of bread, pork, oil, and wine.

Grains are used globally to produce bread, beer, and pasta. Bread can be made from rye, wheat, oats, barley, spelt, or rice. The Hebrew Bible stated that unleavened bread is made from wheat flour, which was prepared and eaten during the Jewish religious holiday, Passover. In Matthew 26:26–30, Jesus used bread during the Lord's Supper on the eve of His crucifixion to represent His body. Breaking and eating

¹<http://www.pewforum.org/religious-landscape-study/>, viewed on February 6, 2018.

bread in this context provided both physical and spiritual nutrients. Additionally, in the Christian faith, believers recite the Lord's Prayer according to Matthew 6:9–13. This prayer contains the line, “give us this day, our daily bread,” which signifies the understanding of the need of daily consumption of food, but also consumption of all things in moderation in order to conserve for the next day and for next generation.

Consumption of Swine is specifically forbidden in Leviticus 11:7–8, since they do not chew their cud. Swine, like humans, have a single stomach system and both species are able to digest grains easily. Today's scientific research discovered the root cause for the designation of swine as “not clean” was due to the fact that they can be infected with the roundworm, *Trichinella spiralis* (Gramble 2018). If the swine meat is not *properly* and *fully* cooked, the roundworm's eggs may not be killed. Consequently, people are at risk to consume the eggs and may contract the very painful disease of Trichinosis.

Additionally, modern medicine has established a correlation between swine and human anatomy. They are so similar that swine heart valve transplants into humans have been performed for more than 30 years (Pick 2008). Yes, there are both swine and cow transplants, but swine-based tissue is the preferred source for pericardial tissue.² Benefits of using swine tissues in human transplants are based upon the fact that patients are not required to use blood thinners throughout their lives after the transplants (Pick 2008). So, since there are anatomical and physiological similarities between humans and swine, this may be a second reason why God prohibited consumption of swine,

Another reason for this prohibition may be, according to Dr. Peter J. D'Adamo, all four human blood types: O, A, B, and AB should not eat swine due to the lack of enzymes in the human digestive system to properly digest swine flesh.³

Wine was used according to both the Hebrew and Christian Bibles for religious ceremonies. During the Lord's Supper, according to Matthew 26:26–30, *Jesus took the wine from the table, blessed the wine and invited the twelve disciples to drink, for the wine represented His blood for the new covenant with God, which was poured out for many for the forgiveness of their sins.*

In a very different context, the wine was enjoyed with meals and shared with friends, in Genesis 14:18, *Then Melchizedek king of Salem brought out bread and wine. He was priest of God Most High.* In John 2:8–10, he instructed them, “*Now draw some wine out and take it to the master of the banquet.*” *They did so, and the master of the banquet tasted the water that had been turned into wine. He did not realize where it had come from, though the servants who had drawn the water knew. Then he called the bridegroom aside and said, “Everyone brings out the choice wine first and then the cheaper wine after the guest have had too much to drink; but you have saved the best till now.”*

²<https://www.sjm.com/en/patients/heart-valve-disease/treatment-options/heart-valve-replacement?clset=af584191-45c9-4201-8740-5409f4cf8bdd%3ab20716c1-c2a6-4e4c-844b-d0dd6899eb3a>, viewed on March 10, 2018.

³<http://www.dadamo.com>, viewed on February 10, 2018.

5 Abrahamic Guidance on Sharing and Selling Food

According to many scriptures, food was to be shared. For example, sharing of crops was highlighted in Genesis 47:23–15, when Joseph was instructed, *to take the seed, grow it, harvest it, and give 1/5 to the Pharaoh, then 4/5 was to be used by his household*. Sharing of food with neighbors and friends was also highlighted in Revelation 3:20, *Behold, I stand at the door and knock. If anyone hears my voice and opens the door, I will come into him and eat with him, and he with me*. In Matthew 14:13–21, Jesus fed 5000 people with two fishes and five loaves of bread in order to educate the importance of sharing food and the need for nutrients as stated in the Lord’s Prayer. In Deuteronomy 24:19, *when you are harvesting in your field and you overlook a sheaf, do not go back to get it. Leave it for the foreigner, the fatherless, and the widow, so that the Lord your God may bless you in all the work of your hands*.

This paper’s author underscores the current significance of Isaiah 55:2, which stated, *why do you spend money for what is not bread, and your wages for what does not satisfy? Listen carefully to Me, and eat what is good, and delight yourself in abundance*. That wisdom highlights the importance of purchasing foods that will enrich your body and will assist you on your life’s journey in a more healthful manner, instead of buying items that are full of calories, which do not provide nutrients for the body, or soul.

6 Abrahamic Guidance for Proper Slaughter of Animals for Human Consumption

Religious guidance for proper slaughtering techniques of animals for both religious and for normal meal preparation according to Leviticus Chapter 17, which is to allow the blood of the animal to drain so humans do not eat blood, as stated in Leviticus 16:11, *life of the flesh is in the blood; and I have given it to you for making atonement for your lives on the altar*. Also, in Proverbs, 12:10, the author stated: *“The Godly care for their animals, but the wicked are always cruel*. Therefore, eat and enjoy but be humane as you hold livestock and slaughter them.”

The author of the Koran instructed its adherents how to perform humane slaughter according to Islamic Law, Dhabihah of lawful Halal for clean animals, “This method of slaughtering animals consists of using a well-sharpened knife to make a swift, deep incision that cuts the throat (the carotid artery, trachea, and jugular veins) with one swipe. While the head of an animal is aligned with qiblah (facing Mecca) and not decapitated. The animal is not touched or handled until it is dead and the animal is not killed in front of other animals.⁴”

⁴<https://en.wikipedia.org/wiki/Dhabihah>, viewed on March 20, 2018.

7 Abrahamic Foods Being Evaluated in Contemporary Societies

Contemporary Society is defined as, “a setting characterized by technological innovation and increasing human interconnection and globalization. It brings about changes such as increased life expectancy, literacy, and gender equality, and bringing natural equilibrium.”⁵ The US is considered a Contemporary Society. In 2017, the US’s global domestic product (GDP) was 19 trillion US\$, ranking them #1 in the world with China #2 at 11 trillion US\$.

Being a Contemporary Society and among the top in GDP, the average US American Family eats 4.5 times a week outside of the home (Stewart 2016). This is supported by the 2014 Food Waste Reduction Alliance survey which reported that 84.3% of unused food in US restaurants is disposed, 14.3% is recycled or composted, and just 1.4% is donated for use by the poor. It is estimated that 4–10% of food purchased by restaurants and food service operations is discarded before being served to guests (The Real Cost of Food Waste 2017). Since increasing percentages of Americans are eating out, more food at home is rotting and refrigerators and pantries are full of food that will be discarded due to the “expiration date” designated by the US Department of Agriculture. This act not only wastes the tangible food but is also wasting the energy, water, and labor it took to grow, harvest, process, transport, and market the food products. Only 90 American cities offer curbside food waste recycling (Falk 2012) or have a commercial pick-up at the home or office⁶ or drop off compost centers as they do in the author’s hometown.⁷

In relation to GDP, the money spent by US families on food that is wasted is estimated to be \$1500 annually/per family (Stanislaus 2016). The majority of US citizens do not make the connection on how (Doran and Kidwell 2016) their personal, daily actions contribute to the global concerns in food quantity and food quality security for present and for future generations. As presented in Exodus 16:4, *The Lord said to Moses, I will rain down bread from heaven for you. The people are to go out each day and gather enough for that day. In this way I will test them and see whether they will follow my instructions.*

Jesus taught the importance of sharing food in Matthew Chapter 14:13–21, when he blessed five loaves of bread and two fishes to feed 5000 people. In the US, between mid-November and New Year Eve, most celebrate Thanksgiving, Christmas or Chanukah, and New Year’s. For these celebrations, much food is prepared and shared. The solid waste produced during those holidays including food wastes generates about 25% of the annual amount of solid waste (Doran and Kidwell 2016). This increase in solid waste contributes to an increase of 13% in the US greenhouse emissions (Doran and Kidwell 2016).

⁵<https://www.scribd.com/document/224382056/What-Does-Contemporary-Society-Mean>, viewed on February 8, 2018.

⁶<http://cowboycompost.com/index.php/our-services/>, viewed on March 15, 2018.

⁷<http://www.reyclerevolutiondallas.com/compost/>, viewed on February 10, 2018.

The contexts of human food chains are changing due to societal changes such as those related to the Climatological conditions, weakened ecosystems, economic constraints, political circumstances, and evolving technologies.

Corn, soybeans, and wheat were the three leading crops grown in the US in 2016.⁸ Thirty-six percent of the wheat is consumed domestically. Unfortunately, wheat flour processing to make “white bread” requires the bran and wheat germ to be separated from the starch contained in the endosperm. Then, the starch is bleached to make it white. The majority of the nutritional value of wheat is in the bran and wheat germ that is often discarded or fed to livestock. This practice is very unfortunate and is illustrative of many processing steps that reduce the nutritional quality and quantity of the human food supply in order to be more efficient, cost-effective, and affordable. In contrast, when “whole grain bread” is produced, the bran, wheat germ, and endosperm are used. So why produce white bread?

8 Land Cultivation Changes Since WWII

According to Marla Spivak, at TEDGlobal 2013, since WWII, the many farmers in the US switched from using crop rotations of legumes such as clover or alfalfa, with wheat, corn, rye, or barley. Legumes capture nitrogen from the atmosphere and added valuable nitrogenous substances to the soil, which were then used in the subsequent year’s crop. This switch to monoculture made it necessary for the farmers to use synthetic fertilizers instead of the bio-based ones and to the use of herbicides to control the weeds. Many of these weeds are flowering plants which pollinators (i.e., honeybees and butterflies) require for their survival. Researchers have found that pollen and nectar collected by honeybees contained six pesticides. (Goldberg 2016). These pesticides were either 1) carried into the beehives where honey is made for human consumption 2) were pollinated into other plants for animals or humans to consume (Goldberg 2016). Agricultural and horticultural practices based upon the usage of synthetic fertilizers and an array of pesticides are damaging the nutritional quality of many parts of the human food chain as well as resulting in species diversity losses. Since many farmlands have limited or no flora to attract pollinators, humans are artificially pollinating crops. This artificial pollination increases the cost of production and is also altering the ecosystem.

Mainstream grocery stores in the US do not sell “ugly vegetables,” because they are not esthetically pleasing to the customer. Consumers are programed about the preferred shapes, colors, and sizes of food from TV commercials, cartoons (i.e., Bugs Bunny and his orange, cone-shaped carrot, with a long green leaf) or social media. The end result is a majority of the fruits and vegetables grown are rejected then either discarded in the landfill or left to rot on the farmland (Goldberg 2016). Since these farmlands are far from urban population centers, this food is not collected and consumed according to Abrahamic guidance, which 10% of crop is to be left for

⁸<https://www.ers.usda.gov/topics/crops/wheat/>, viewed on March 28, 2018.

the widows and orphans. This waste of “ugly food” not only increases costs to US consumers but also contributes to soil erosion, air, and water pollution. The North Texas Food Bank feeds 190,000 meals per day. If grocery stores would adopt a policy to donate their “ugly vegetables,” more families in North Texas and throughout the US, and consequently worldwide, would receive fresh fruits and vegetables. Such sharing practices were recommended in Genesis 18:6–8.

Fish, and many other aquatic faunae, are consumed globally daily. Fish are either caught in the wild or are produced in aquacultural systems or fish farms. Fishes caught in the wild or in the aquacultural system have found to have traces of heavy metals such as mercury and cadmium, which has led US physicians to warn expectant mothers not to consume any fish during pregnancy. Fish have also been found to contain pesticides from farm runoff and microplastics from solid waste dumping in waterways.

Fish Farms, specifically Salmon, are becoming popular because of the overfishing of the natural aquatic environment. Farm raised fish and wild caught fish each have their “pros and cons” towards sustaining the shared eco-system and the existence of aquatic species. Two main “cons” of farmed fish is 1) they are usually fed processed cut up fish with added nutrients like omega-3a, to fatten up the fish. 2) Although not common in the US, worldwide studies have reported higher levels of PCBs, due to the use of antibiotics and pesticides, which is commonly used to treat fish waste. This in itself is contributing to water pollution. Two “pros” for farmed fisheries: 1) Fish Farms can be established near urban areas in order to decrease transportation cost and be closer to the human population. 2) In Chicago, IL, USA is experimenting with Hydroponics which grows vegetation in the same tank as the fish (Nania 2015).

Grape production, as with all terrestrial plants, is totally dependent upon soil, nutrients, water, and proper temperatures to grow fruit. Historically, France was known globally for their wine and most winemakers across the world still compare themselves to the French winemakers. Currently, winemakers in France and in other parts of the world are noticing the quantity and quality of their wines are being adversely affected due to climate changes (i.e., pH levels in soil, drought, and temperature). Consequently, French grape growers are purchasing land for wine production as far north as Sweden and Greenland to preserve their winemaking heritage for subsequent generations.

Unlike most oils, olive oil is extracted from the fruit not the seed. In 1992, the state of California developed the California Olive Oil Council with the Seal Certification program. This council is responsible for enforcing the standards of growing, cultivating, producing, and marketing the Olive Oil. Prior to the establishment of this state council, manufacturers were adding “fillers” to the olive oil, which did not reflect the nutrients and authentication of the oil. Producing and selling an adulterated product is an example of greed, which is a sin according to Abrahamic guidance. Oil, along with the other foods highlighted in this paper, were used in Abrahamic text in religious ceremonies and of course for food purposes. It is noteworthy, that current society does not usually use these oils in sacred ceremonies.

Swine, cattle, chickens, and turkey are often raised and produced on farms known as “Concentrated Animal Feeding Operations”, or CAFOs. In 1966, one million farms

produced 57 million swine annually. By 2001, these CAFO locations dwindled to 80,000 farms and continued to maintain production output⁹ by intensifying livestock raising in concentrated CAFOs. A major concern of US EPA with CAFOs is the mismanagement of the millions of tons of urine and manure from their livestock. Unfortunately, much of the nutrients from the manure are not properly harvested and redirected to sustain the fertility of the farmland. Rather those animal waste products stay in place and contaminate ground and surface waters. This creates a health risk to humans in the vicinity and downstream from the CAFOs not to mention an imbalance to the ecosystem. Federal and State governments are enacting legislative controls to improve animal welfare and to reduce environmental burdens on water and air quality, and to reduce negative economic impacts, public health impacts, and animal welfare concerns.

Additionally, the poor-quality animal welfare in CAFOs brought this author back to the Abrahamic guidance. The lives of the animals raised in CAFOs are different from animals that are not (i.e., Open pasture farms or in a natural and unprotected environment). Since animals in CAFOs live in confined spaces, large quantities of antibiotics are used to prevent the spread of diseases. Therefore, environmentalists and health professionals continue to scrutinize concerns associated with consumption of CAFO products and by-products containing high levels of antibiotics in meat production, leading to the spreading of antibiotic-resistant microbial strains which may create a health risk to animals and humans alike.

9 Human Population Growth

According to the World Wildlife Fund's (WWF) 2012 publication, humans will need two to four planet Earths in order to accommodate their current lifestyle by 2030. The Living Planet Report stated that humans are using the earth's resources at a rate, which is 50% faster than the earth can replenish them. Mr. Leape, Director General WWF International, stressed that humans need to decrease their "love affair" with fossil fuels and must switch to renewable energy and dramatically reduce their wastage of all resources including food wastage. He stated more than 50% of agricultural produce is wasted before it reaches the fork in the home or in the restaurants.

As of 2017, the human population of the earth was 7.6 billion and the United Nations predicts that the world population may reach 16 billion by 2100 if societies continue on the present trajectory.

Therefore, the following urgent question must be addressed:

How can the biblical guidance wisdom be evaluated and built upon in the context of climate changes and the need to ensure sustainable food supplies for over 7 + billion people? This is a net increase of 85,000,000 to the human population each year, and the 100,000,000-ton per day, net increase in Greenhouse Gases?

⁹https://en.wikipedia.org/wiki/Concentrated_animal_feeding_operation, viewed on February 10, 2018.

To answer these questions, the author believes this paper contributes to the conversations and evaluation of ancient religious wisdom led by, among others: Mary Evelyn Tucker and John A Grim in their Religions of the World and Ecology series; Pope Francis' Encyclical Letter, *Laudato Si, Care for our Common Home*; Rev. Fletcher Harper, Executive Director of Green Faith; and by Rabbi Lawrence Troster's, Green Torah Wisdom.

These Abrahamic Faith Leaders are teaching how this ancient wisdom is relevant today on how all creatures can live in harmony by being dependent and independent on each other for survival as stated in Genesis 2:15. Creation relies on each other; hence the author of this paper believes this is the reason why God instructed Noah to take two of each living creature (flora, fauna, and human) onto the Ark in order to start a new sustainable ecosystem. It takes a community to work together to sustain all life, but it starts at the individual human level to acknowledge that his or her behavior contributes to the health of the shared ecosystem, which is currently experiencing: drought, floods, soil erosion, air pollution, and extinction.

10 Survey-Based Case Study for This Paper

In order to obtain insight from consumers who do and do not implement their Abrahamic faith toward their food purchasing and consumption practices; this author developed an anonymous, survey, delivered via social media: Facebook, Twitter, LinkedIn, and personal e-mails. The survey was opened on Feb. 11, 2018 and closed on Feb. 22, 2018.

There were 97 respondents from the US. Eighty of the responses were used in the analysis since seventeen were not from people of Abrahamic Religions and three were from people outside of the US.

The 38 questions in the survey covered demographic, self-assessment, and purchasing habits. The questions were oriented in reference to US "pop-culture", the foods mentioned in this paper, Abrahamic laws, and consumer's knowledge of eco-impacts. Each food category had a photo of the food or food groups with four checkbox options so the respondent could select all options that applied to them and an option tab for the respondent to provide optional written explanation. The food brands used in the survey were not selected by their specific manufacturing or ethical practices nor based upon specific faith affiliations (Figs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15).

11 Synopsis of Responses to the Survey

The survey results revealed that most consumers were aware that their purchasing habits can affect the global ecosystem but economics and local availability are key factors in their purchasing and consumption decisions.

What is your age group?

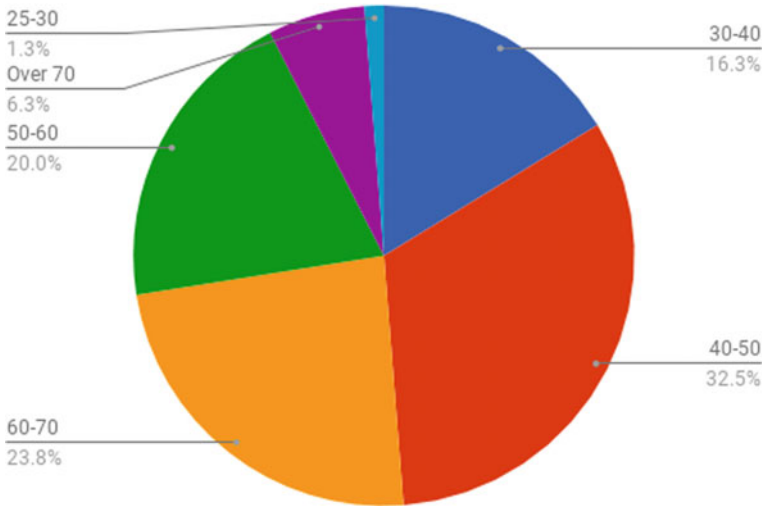


Fig. 1 Age distribution of those surveyed

What is your gender?

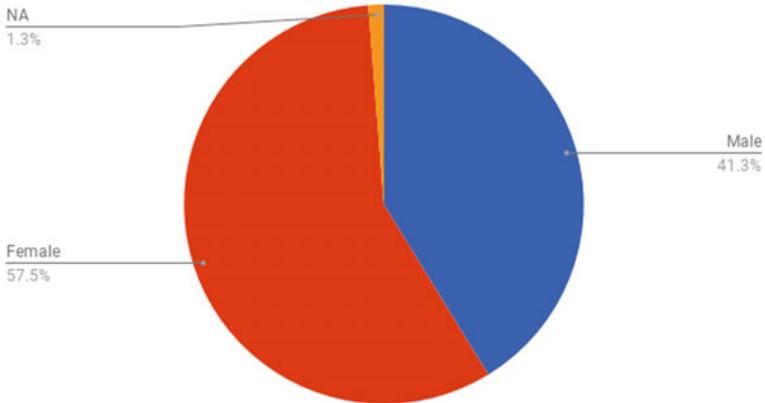


Fig. 2 Gender distribution of those surveyed

Figure 14 shows the response on purchasing Coffee; about 18% purchase the popular “K-cups” or Keurig disposal one-time-use coffee pods. These disposable cups have three components: a plastic container, 2 teaspoons of coffee grinds, and an aluminum seal, which all is going to the landfill. The designer of the K-cup, John Sylvan, regrets developing this because “they are bad for the environment—they are not recyclable” (Wallace 2015).

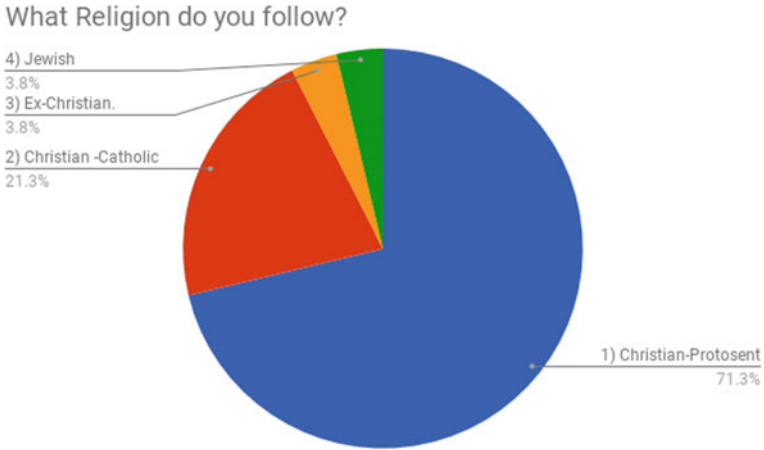


Fig. 3 Declared faith of those surveyed

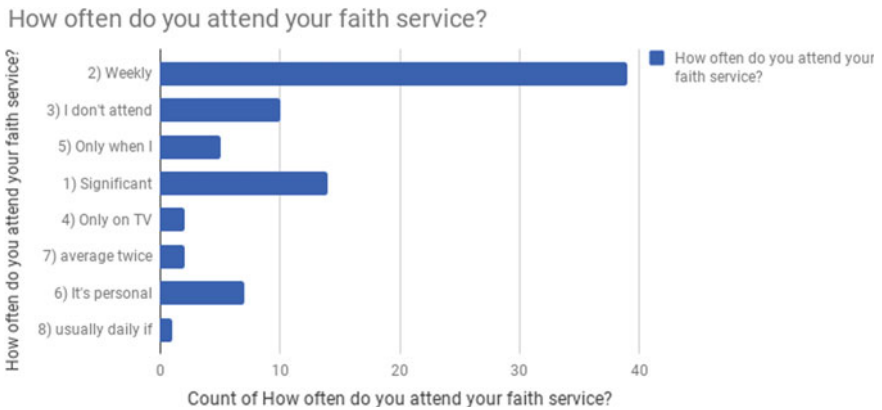


Fig. 4 How often the person surveyed attends a faith service

Figure 12, almost 50% surveyed stated they purchase “baby carrots”, knowing carrots are not naturally grown in this shape. Its cut this shape in production to provide prewashed finger size food in plastic bags for longer shelf life. It is all about convenience not ecological impact.

Figure 7, is the result of asking What Influences Your Purchasing. Each person could select more than one option that best describes themselves. Interesting 18% buy containers based on their reuse ability as well as being aware of animal cruelty, and an eco-friendly food chain production. Those 15% under #12 put price of food items first but are aware of eco-friendly actions in production.

This author is convinced that the consumer does not know how to properly relate eco-friendly actions (i.e., recycle water bottle) when purchasing eggs from caged chickens, pork from CAFOs, nor baby carrots with their faith’s guidelines. Yes,

What influences your purchasing decisions?

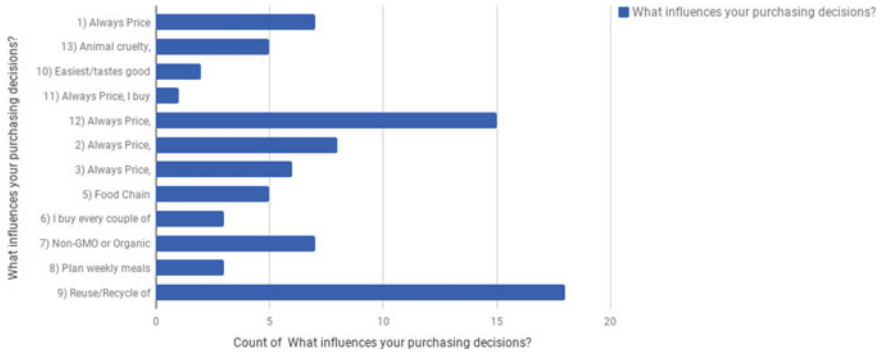
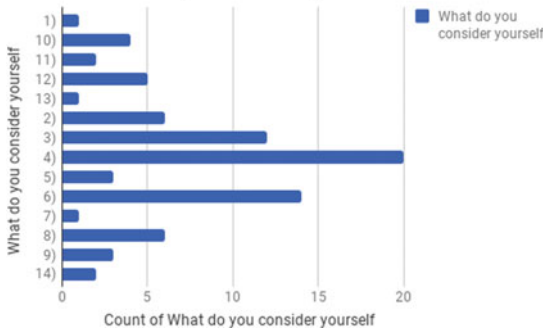


Fig. 5 The influences of purchase decisions of those surveyed

Count of What do you consider yourself



- 1) a person that believes the earth is consumable
- 10) Vegetarian
- 11) blank
- 12) Carnivore
- 13) A person that is conscious of their faith's guidance, even implements in purchasing and daily activity
- 2) Carnivore, I eat anything that tastes good, Always try to "Do the right thing"
- 3) Eco-friendly
- 4) I eat anything that tastes good
- 5) Tastes good, a person God will take care of planet
- 6) Tastes good, Try to "Do the right thing"
- 7) Paleo
- 8) Always try to "Do the right thing"
- 9) Carnivore, I eat anything that tastes good
- 14) Eco-friendly

Fig. 6 Self-assessment of the person being surveyed

92 of those surveyed stated they are of the Christian faith, which can eat anything according to the New Testament, but being good stewards and humane toward all creation are still referenced. Education is needed to link implementing ethics or faith guidelines in the grocery stores, not just "love thy neighbor" when holding the door open into the grocery store.



- 1) Always Price
- 10) Easiest/tastes good
- 11) Always Price, I buy every couple of days; God stated in Exodus "only take manna from heaven for daily use, if you take more, you shall parish"
- 12) Always Price, Reuse/Recycle of container, Less/type of packaging, eco-friendly
- 13) Animal cruelty, Food Chain production (harvest, water used, pesticides, transportation), Less/type of packaging, eco-friendly, Non-GMO or Organic options in order to decrease soil and water contamination
- 2) Always Price, Reuse/Recycle of container, Animal cruelty
- 3) Always Price, Whatever I have a coupon for
- 4) Reuse/Recycle of container, Animal cruelty, Food Chain production (harvest, water used, pesticides, transportation)
- 5) Food Chain production (harvest, water used, pesticides, transportation), I buy every couple of days; God stated in Exodus "only take manna from heaven for daily use, if you take more, you shall parish, Typo "parish"
- 6) I buy every couple of days; God stated in Exodus "only take manna from heaven for daily use, if you take more, you shall parish"
- 7) Non-GMO or Organic options in order to decrease soil and water contamination
- 8) Plan weekly meals and shop once a week

Fig. 7 Actions that influence purchasing decisions

Do you purchase Honey

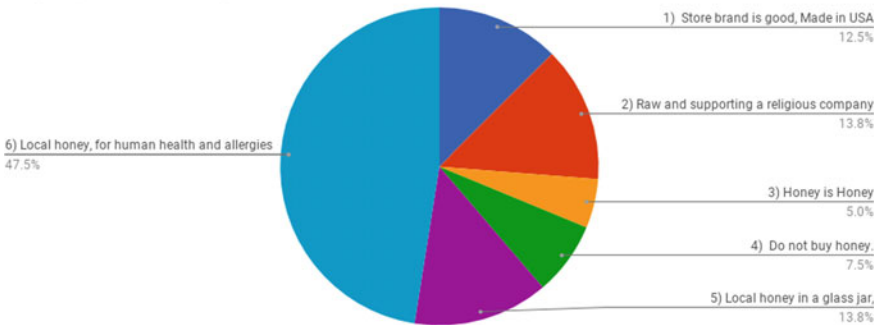


Fig. 8 Response to purchase of honey

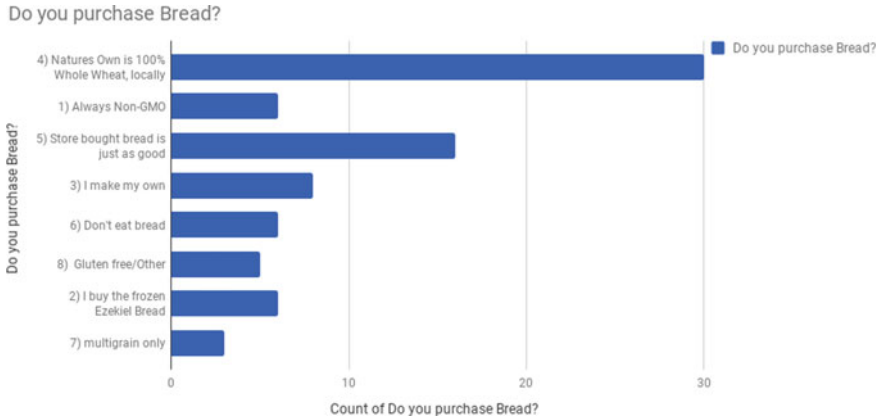


Fig. 9 Type and brand of bread those surveyed purchase

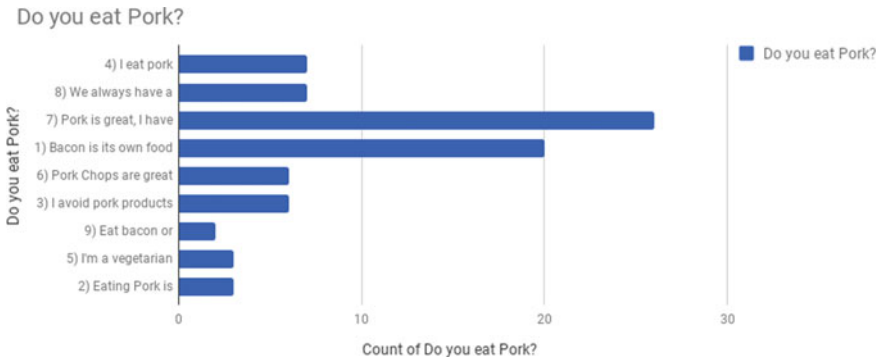


Fig. 10 Those surveyed if they purchase pork

12 Implications of Abrahamic Guidance Toward Food Production by Individuals and Companies

Producers who claim to implement Abrahamic guidance are providing products and services for followers to stay true to their faith’s guidance and to implement ethical practices. There are trends in the US to bring awareness and healthier food options to consumers to decrease their fossil carbon footprint and to be able to purchase and consume based on their faith’s *guidance*.

One such development is the “Non-GMO Project” (<https://www.nongmoproject.org>). This company provides a third-party certification for producers on their Non-GMO products. Since its conception in 2007, this butterfly label is on 43,000 products representing 3000 verified brands and clearing \$19.2 billion in sales.

Do you purchase Nutella?

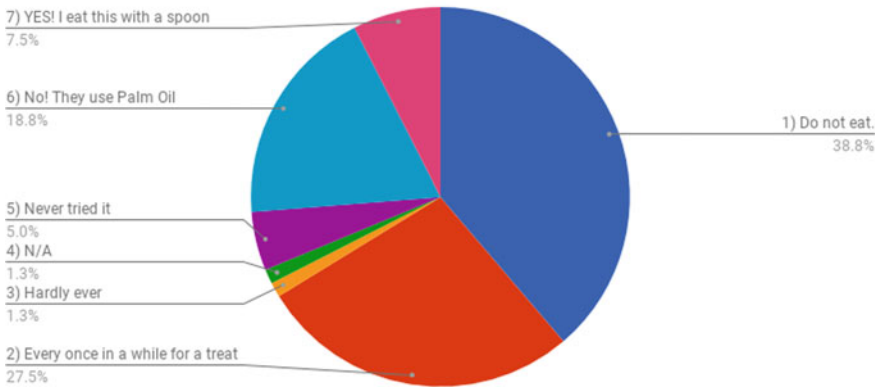


Fig. 11 Those surveyed response to purchasing Nutella

“Certified Humane Logo” provides third-party annual inspections conducted by scientists and veterinarians who verify humane treatment toward animals in farming operations or slaughter facilities (<https://certifiedhumane.org>).

Food for Life, (<http://www.foodforlife.com>) is a California based company implements guidance from two Hebrew Bible texts into their business plan in order to provide Kosher and Sustainable foods: Ezekiel 4:9, “Take also unto thee wheat, and barley, and beans, and lentils and millet, and spelt and put them in one vessel...” and Genesis 1:29, “Then God said, ‘Behold, I have given you every plant yielding seed that is on the surface of all the earth, and every tree which has fruit yielding seed; it shall be food for you.’”

In order to provide local, seasonal, food to the community, urban gardens are being developed in vacant lots in neighborhoods, place of faith worship, schools, and even prisons. Most of these gardens are managed by Master Gardeners provide instruction on how to plan, plant, manage and harvest their garden produce.

Costco Wholesale is establishing several company-wide initiatives including decreasing wasted food, composting efforts, food donation,¹⁰ limiting food packaging, transportation, use of palm oil, Forest Stewardship, and consumer reduction in goods,¹¹ as well as to construct Leadership Energy Environmental Design (LEED) certified buildings.

Even though Kashrut Laboratories (O.K.) was established in 1935 to be the first kosher certifier in the US, O.K. did not become mainstream until 1965 due to the new owner, Rabbi Berel Levy, who started to focus upon providing practical guidance for

¹⁰<https://www.costco.com/sustainability-waste-stream-management.html>, viewed on March 1, 2018.

¹¹<https://www.costco.com/sustainability-environment.htm>, viewed on March 1, 2018.

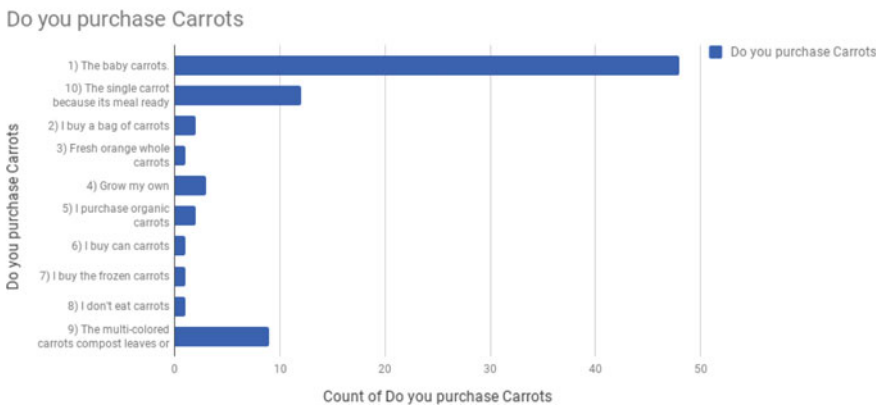


Fig. 12 Those surveyed response to four examples of different carrots

the needs of the observant Jewry. By 1972, all 50 states had Kosher food production laws, which are still in effect today.¹²

Wes Jackson’s Land Institute, <https://landinstitute.org>, is a nonprofit organization in Salina, Kansas, USA, “committed to researching and developing food production methods that sustain the land and soil, (which is) a precious resource in an increasingly precarious state around the globe.” Since 1976, the “focus is to grow food in partnership, with nature by planting perennial grains in mixtures that protect the soil” as well as by stabilizing the local ecosystems since the “current agricultural paradigm takes a short-term/high-yield approach that is dependent on heavy chemical applications and petroleum consumption and leads to soil erosion and degradation.” Mr.

¹²<http://www.ok.org/about/our-ongoing-story/a-timeline-of-kosher/>, viewed on March 15, 2018.



What type of eggs do you purchase?

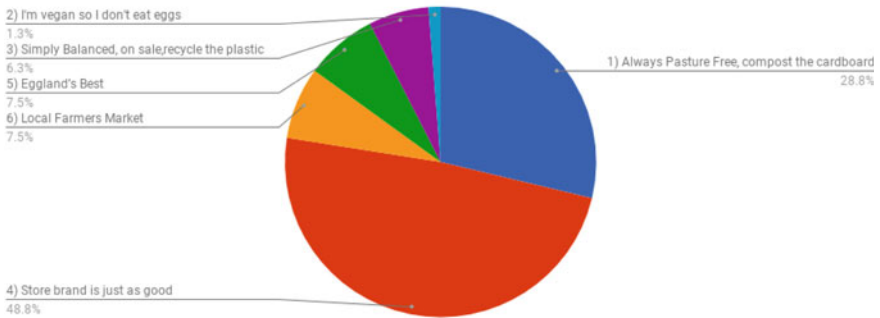


Fig. 13 Type and brand of eggs of those surveyed purchase

Jackson and his institute have been the leading resource in the study and implementation of polycultures and sustaining local ecosystems worldwide.

Paul Hawken, a US American Environmentalist, whose latest book, *Drawdown 2017*, (Hawken 2017) provides “the most compressive plan ever proposed to reverse global warming.” On page 221, Mr. Hawken ranks the Plausible Scenario, in which “Reduce Food Waste” is ranked #3 and eating a “Plant Rich Diet” is #4. The author of this paper applauds the authors of *Drawdown* for confirming the sustainable guidelines in the Abrahamic Religions, especially toward food production and the human food chain, to today’s solutions toward decreasing our fossil carbon footprint.

The US has federal laws and guidelines for food production and food waste reduction/management. U.S. Department of Agriculture (USDA) website has a Climate tab

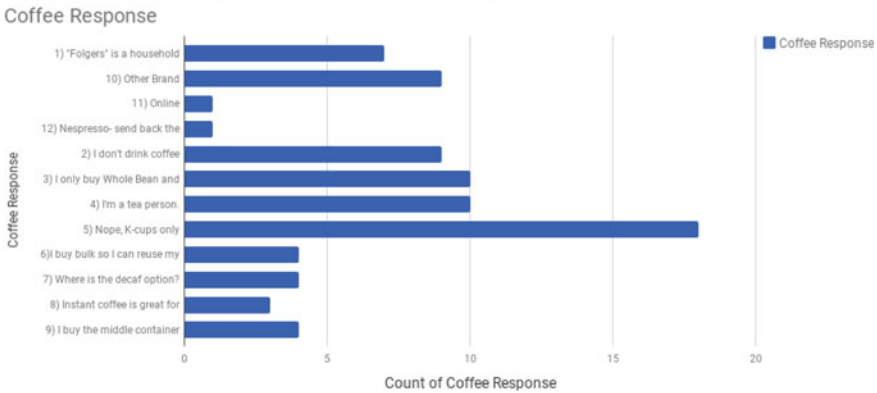


Fig. 14 Those surveyed on purchasing coffee

which has the headline, “Changing Climate is Affecting Agriculture in the U.S.”¹³ This is a step forward in the U.S. government recognizing and setting standards, such as recognizing and labeling food “USDA Organic.”

U.S. Environmental Protection Agency (EPA) started the Food Recovery Program and Challenge,¹⁴ a friendly competition between private and public organizations to pledge to improve their sustainable food management practices.

¹³<https://www.usda.gov/topics/organic>, viewed on March 11, 2018.

¹⁴<https://www.epa.gov/sustainable-management-food/food-recovery-hierarchy>, viewed on March 11, 2018.



Glass, plastic/cardboard, Non-GMO Can, Can

Bulk & reuse container

Do you purchase Olives!

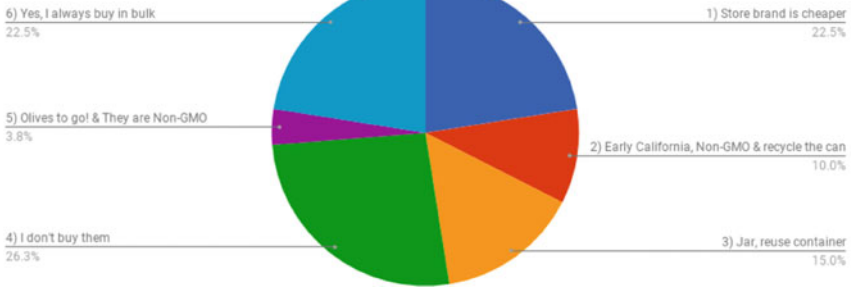


Fig. 15 Those surveyed and their response to purchasing olives

13 Conclusions

In response to the author’s first research question: Is there useful *guidance* in Abrahamic texts that can provide a framework for helping societies to become truly sustainable?

References are made in the Abrahamic Religious guidelines in Leviticus chapter 11 on growing crops and which animals to eat. Even though Jesus declared all food clean in Mark 7:19 and adds it’s not the food a person eats that defines them, its how they love show love towards one another. This author would agree faith followers should also follow, Proverbs, 12:10, “*The Godly care for their animals, but the wicked are always cruel.*” Therefore, eat and enjoy but be humane as you hold livestock and slaughter them.”

This guidance provides a framework for present and future generations to live sustainably, with a special focus upon ensuring sustainable ecosystems within which sustainable food production and consumption can and hopefully will be ensured.

Regarding the second question: How can that guidance be used to help societies counter present and future ecological and human challenges of food scarcity, water pollution/water scarcity, soil erosion, global warming, species diversity losses, and unsustainable societal patterns of production, consumption, and of human population growth on this finite planet?

Because many societies are implementing cheaper and faster food production practices and are not allowing their ecosystems to regenerate naturally, they would benefit from implementation of the Abrahamic instructions of Exodus Chapter 23, highlighting the Sabbath Laws and allowing land to go fallow to have time to regenerate. This practice can help to reverse the exponential changes in soil erosion, water insecurity, species diversity losses, air and water pollution, increasing fossil carbon-based greenhouse gas emissions, and dramatically altered weather patterns in the past 50–150 years.

Leaders such as Wes Jackson and the Land Institute are bridging the gap between “fast and cheap” production and harvest to permaculture, which facilitates flora and fauna to grow interdependently in natural settings. People have disconnected themselves from nature by living in urban settings, which have resulted in false understandings of ecosystems as described in the Abrahamic texts. Wes Jackson and others are helping to demonstrate that there are alternative and eco-friendly ways to help to ensure food quality and food quantity for present and future generations.

In order to sustain life, all creations in this shared ecosystem require appropriate nutrients, water, air, and shelter to survive. The literature review for this paper contributed to the conversation about how ecosystem sustainability is interconnected with sustaining the human food chain. When the food chains needed to sustain human life are damaged and the ecosystems upon which they are totally interdependent are damaged, human survival will become increasingly insecure. This author is convinced that implementation of Abrahamic Religious guidelines could help to reduce the presently evolving destructive trends.

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Systematic Thinking as a Factor in Implementing Sustainable Development



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Abstract In this article, the phenomenon of global thinking is discussed. The main characteristics of logical thinking (substantiality, sequentiality, dichotomy, estimation, etc.) and systematic thinking (the observer's position and restriction of dichotomizing approach, etc.) are described. It is emphasized that the ability to think globally has an evolutionary context, being formed in mankind in general and in each specific person in the course of his or her development. The characteristics of systematic thinking are described as a foreshortening of the conventional forms of Human existence: the individual, the subject of activity, the personality, and the individuality; and also novel, not yet defined, realities of "the Planetary Man" and "the Metagalactic Man" are revealed. It is to be stressed that training to think systematically as a characteristic of the large-scale forms of Human existence is one of the important tasks of education for sustainable development.

Keywords Systematic thinking · Global thinking
Sustainable development · Psychology · Forms of human existence

1 Introduction

The principle of sustainable development says, think globally, act locally. The meaning of this well-known phrase, which has become the motto of ecological education, is that the success of a person's actions depends on the depth and breadth with which they can capture a phenomenon, as well as how precise and focussed their actions can be at the spatio-physical level.

The primary idea is about a person's scale of views and concreteness of actions. The concept of sustainable development is appealing as it involves taking responsibility for behavior concerning nature and reorganizing thinking on a new global level.

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It is well known that education for sustainable development includes holding lectures and informing, as well as providing opportunities for children and adults to join practical activities that promote the development of ecologically friendly behavior. However, the main aim is the formation of qualities that would allow the processes around consciousness to be seen in all of their possible interrelations. As a result, there will be wisdom in decision-making at any level, whether it be local or global. One of such qualities is systematic thinking.

In this article, we will reveal the origins and main characteristics of systematic thinking. Human forms of existence, describing an external and internal scale of a person's relationship to the world, will be discussed. We will try to trace systematic thinking as a feature that appeared at a particular stage of evolutionary development in anthropogenesis. Additionally, we will try to describe the inner characteristics and qualities of the human related to systematic thinking. These ideas can be useful in creating programs designed to educate people about sustainable development.

2 Origins and Main Characteristics of Systematic Thinking

The category of systematic thinking has a lot in common with global thinking, which is understood as the qualitative characteristic of thinking capable of processing a huge volume of information on large-scale problems of the world, the country, or the people (Bezrukova 2000).

It is noted that people who think globally are capable of thinking of the whole planet's needs. They can see a problem entirely, with all its connections, as well as how it contributes to the spiritual, social, and economic development, and self-improvement of the people, the state, and large human communities. This is systematic and holistic thinking, with foresight. Quite often, at the mention of global thinking, the context of noospheric thinking (a cogitative layer of communication and interaction circling the earth) is applied.

The concept of the "noosphere" was presented by the Professor of Mathematics of the University of Sorbonne, E. Lerois, who treated it as the "conceiving" cover formed by human consciousness. Lerois emphasized that he developed this idea with his friend—the prominent geologist, paleontologist–evolutionist, and Catholic philosopher, P. T. De Chardin (Vernadskij 1991).

Lerua and Chardin based their idea on the lectures on geochemistry given in Sorbonne in 1922–23 by the great Russian scientist V. I. Vernadsky. The noosphere (the sphere of the mind) is the sphere of interaction between society and nature in which human activity becomes the defining developmental factor.

Paying closer attention to one of the most important aspects mentioned—the ability to think systematically—this subject has become increasingly demanded in recent decades, both in foreign and Russian scientific literature. However, what is it actually? To fully understand this question, we will start with the logical way of thinking.

In Western culture, logical thinking has historically been given priority; it has the longest history of development. Nonetheless, Aristotle analyzed the main forms of thought (concepts and judgments) as well as methods of cognitive activity.

Logical thinking becomes formally dominating in European science and philosophy from the seventeenth century onward; it is connected with the empirical stage of development of the European natural sciences representing the Galilean–Newtonian model of the world.

Logical thinking is the type of thinking that essentially consists of operating using concepts, judgments, and conclusions according to the laws of logic. It is the thought process wherein a person uses logical concepts and designs, inherent to which are substantiality and judiciousness, and the purpose of which is arriving at a valid conclusion from the available prerequisites.

Logical thinking is expressed in rationality, analytical thinking, and control over mind—that is, with the affirmation of the importance of mental activity. At some level, logical thinking is accompanied by rational thinking and the assumption that the cognitive process dominates while the sensual sphere is secondary.

The essence of analytical thinking is the application of logic in decision-making and analysis of information, based on a person’s ability to split the general whole into its components.

For an analytical task to be solved, the information is first split into separate components that are then comprehensively analyzed; several possible decisions are outlined; strengths and weaknesses of each option are considered; and as a result the most optimal is chosen. It is noteworthy that missing information can be deduced by means of logical conclusions.

Some characteristic features of logical thinking are listed below:

- **Substantiality** (the need for justification, rejection of unfoundedness, and declarativeness).
- **Certainty** (accuracy and unambiguity of thought, as well as lack of confusion in concepts).
- **Sequentiality** (structural communications and relations are presented in time consistently).
- **Dichotomy** (from Greek, meaning “division in two”)—the division of a class into logical subclasses, given that the concept to be divided breaks into two mutually exclusive concepts (day/night, man/woman, etc.).
- **Consistency** (the impossibility of the phenomena having contradictory values; the ban on any contradictions in life and, therefore, in cognition).
- **Estimation** [well/badly, correctly/incorrectly, etc.—an investigation of the laws of noncontradiction as two opposing judgments cannot be true at the same time in the same context, with exclusion of a third judgement (from two contradicting judgments, one is true, another is false, and the third is not given)].
- An opportunity to reveal relationships of **cause and effect** (the cause is always before the effect, preceding it).

- **Priority of mental functions** (the sensual sphere, while the most dynamic, is given a secondary value in the informative process in general as well as in the course of the birth of own thought).
- A distinct **prevalence of analytical procedures** of research in comparison with synthesis methods.

So, using logical thinking, a person tries to receive the maximum quantity of valid and evidence-based conclusions. It is notable that, when perceiving an object, the person takes a certain position and does not change it throughout the whole process.

The purpose of logical thinking is the birth of *own thought*, which is the ability to synthesize information and knowledge and express it externally. Undoubtedly, the high-level ability of creating thought (as a unique unrepeatable event) is not one possessed by many people. People usually recount the thoughts of others.

However, logical thinking has one main restriction: it is not capable of comprehending the life of systems.

The classical large-scale studies of systems belong to the middle of the twentieth century (of course, they were historically preceded by rather deep developments that had arisen in ancient times; the word “system” appeared in Ancient Greece 2000–2500 years ago). Their emergence and development have been connected with a crisis in a person’s various spheres of activity. For example, (in architecture) this interest is related to the beginning of mass post-war construction that tried to satisfy people’s local economic needs in the traditional way, without taking either ecological or social contexts of the system into account (Humans cape 1982; Ittelson et al. 1974; Prohansky et al. 1976).

The result was the construction of aesthetically unattractive areas that were inconvenient for accommodation. Staying in these gave rise to feelings of discomfort, the violation of personal space and privacy, and crowding (stress caused by the presence of a large number of people). At a social level, the consequences have turned out to be the emergence of vandalism, as well as of asocial and criminal behavior.

Even more dramatic is the history of the Pruitt-Igoe district in the USA, near the center of Saint-Louis town in the state of Missouri. In 1954 a complex, consisting of 43 11-storey buildings with 2762 apartments and intended for more than 12 thousand inhabitants, was built here (Ibid.).

This project has won a prize for unique design. The logical arrangement of houses in the area as well as lack of unnecessarily empty areas was especially noted. The area, from the point of view of the authoritative jury, was also aimed at efficiency: the elevator did not stop on every floor, but instead on every third floor, therefore most inhabitants needed to walk 1 or 2 up (or down) to use it.

Besides, Pruitt-Igoe cost about 1 million dollars, and this was quite a low sum when compared to the cost of other projects. The design was considered to be so excellent that the architect even registered the patent in his name.

However, the area soon became criminal. In 1972, after several unsuccessful attempts at renovation, it was demolished. Analysis of this architectural failure revealed that the area did not contain privacy, and inhabitants did not feel that

they could control the space. This is not the only example of large-scale destruction of the urban environment.

As we can see, an urban environmental system can cease to exist if people and their needs are not incorporated into it.

In ecology, attention to systematic processes has been justified by the large number of unsuccessful attempts to solve problems resulting from people's impact on the environment by the usual means. A set of examples can be found that illustrates how the rash actions of people, misunderstanding how ecological systems work, lead to catastrophic consequences. One of the most striking cases is that of the sparrow war in China (1958–1959), which represents the most remarkable episode from the series of mishaps that resulted from the Great Leap Forward.

The idea of exterminating the “four pests”—rats, mosquitoes, flies, and sparrows—was presented by the Deputy Minister of Education. On March 4, 1958, the campaign for destruction of sparrows began in China. Statistical data records say that in 3 days, 900 thousand birds were killed in Beijing and Shanghai, and by the first 10 days of November of the same year, 1.96 billion sparrows had been exterminated in the whole of China.

A year after the campaign, the harvest did indeed improve, but at the same time the number of caterpillars and locusts increased. Further harvests sharply decreased, a famine befell the country, and as a result of this more than 10 million people died. At the beginning of the twenty-first century, a mass campaign for the protection of sparrows began in China. Purchase and delivery of sparrows to China from abroad became the result of the campaign of destruction.

As we see from this example, a crude cause-and-effect viewpoint, combined with an inability and unwillingness to see processes in their interrelation, has led to a global disaster. The high price for understanding the need to change the approach to perceiving systematic processes has been paid with human lives.

In medicine, there has been an increased interest in homeopathy, since the beginning of the nineteenth century. In homeopathy, the person is considered as a system, and the processes happening in them as whole and indivisible, concluding that it is necessary to treat the person (as a system) but not the disease (as a subsystem malfunction).

In the exact sciences—physics, chemistry, and mathematics—systems begin to be studied in detail. This development is connected, primarily, with the works of L. von Bertalanfi, M. Mesarovich, A. N. Kolmogorov, etc. (Mesarovich et al. 1973, etc.). In the 1950–70s, a number of new approaches to constructing a general theory of systems were offered by scientists belonging to areas of science such as philosophy, biology, and technical sciences.

It is obvious that everything a person interacts with (such as their family, political, economical, and social systems) is a system. Systems possess the characteristics of openness, nonlinearity, instability, multidimensionality, and diversity, and do not follow the laws of formal logic. At present, there is a rather large amount of literature devoted to the matter (Booth Sweeney and Meadows 1995; O'Connor and McDermott 1997, etc.).

At the forefront, there is an understanding that *the researcher is a subject capable of exerting impact on the studied object*. The observations carried out in various fields of knowledge—such as in quantum physics (for example, Young’s interference experiment, the thought experiment of Schrödinger’s cat), in pedagogy (for example, R. Rosenthal’s effect), and in psychology—have revealed that the result of research directly depends on the identity of the experimenter, who exerts a direct impact on the results, introducing into them a subjective view: the object researched changes under the influence of the subject (Rosenthal and Jacobson 1992; Bandler and Grinder 1975, etc.).

The consequence of this perspective is the recognition of the importance of, and a more attentive attitude toward, the category of the “*perception position*.” This term is rather well developed in Neuro-Linguistic Programming (NLP) as a consequence of the situation described above, and is understood as the position from which a person perceives any phenomenon of surrounding reality (an object, a situation, human relations, etc.).

Whether or not the person realizes, the result of observation will depend on the chosen perception position. It is obvious that to achieve the most objective picture the angle of inspection needs to be changed (as in the known parable about an elephant: to know an elephant as an object in all its completeness, it was necessary to synthesize all the views of the people perceiving it from all directions).

Aside from work on one’s own position of perception, *the researcher considers an object to be an independent system* that is a part of other systems and is included in interrelations with subordinate and higher systems. This indicates the need to highlight systems and subsystems, and delineates the judgment of an object of research to be a perspective of their interaction.¹

Realizing this, the researcher, from the perspective of systematic thinking, begins to study the object of interest from different angles, bringing closer and removing from them systems depending on their relevance (this is visually very well reflected by an animation under the name “the best animated model of the Universe,” available on the Internet—<http://htwins.net>).

Similarly, *the researcher considers any object from the angle of necessary components of the system, such as elements, hierarchy, borders, feedback, etc.* So, any system consists of elements that are in constant movement; some are steadier, while others appear, disappear, and are transformed as time passes.

The borders of a system separate the structure and elements of the system as they interact with each other from the external environment as well as from other systems. Feedback is defined as the processes responsible for receiving, interpreting, and transferring information, energy, and substances within the system, and also between the system and the external environment.

¹For example, a person is a part of large systems such as family, society, state, educational, economic, political, and religious systems in which they are included to some level. However, in their corporeal and inner world, there is a set of subsystems, such as blood, lymphatic, or any other system. All these systems are not linearly connected and exert impact on each other in varying degrees.

Thus, systematic thinking represents the process of obtaining knowledge about an object on the basis of the researcher's judgment of the meaning of their own position concerning the study of systematic processes. Also included is the identification and synthesis of information about higher, subordinate, and equal systems; distinctions of elements of a system, their essence, and the understanding of connections between them; and finally their communication with other systems.

The result of systematic thinking is the study of an object in all the varied elements of its system, and communications between these elements and the environment, for the purpose of identifying the meaning of the interesting phenomenon.

Some characteristic features of systematic thinking are identified below:

- ***Recognition of the fact that the result of research always depends on the observer's position.*** As discussed above, the person practising systematic thinking learns to judge their own position as the subject of research, and to synthesize various opinions on an object for the purpose of receiving the most whole and objective view.
- ***Consideration of an object of research from a systematic perspective.*** The ability to see phenomena and processes in a multilevelled and multivaried way.
- ***An understanding of the limits of a dichotomizing approach, and a recognition of the phenomena's simultaneous existence as having contradictory value.*** The researcher recognizes contradictions as a natural part of the existence of any system and is determined to synthesize contradictions—that is, to include them in the system's integrity. Therefore, the dialectic law of unity and conflict of opposites is of particular importance here.
- ***Recognition of the value of each element of the system,*** even in the case of a certain element falling out of the field of the researcher's understanding and being comprehended as “bad,” superfluous, problematic, or unnecessary. The task in this case is to find the purpose of the given element and its place in the system.
- ***Assessment concerning the research object;*** recognition of the fact that any value is a result of the observer's position and an expression of their characteristic subjective guidelines.
- ***Recognition of the equal contribution of sensory and rational knowledge.*** In logical thinking, a person operates using concepts, judgments, and conclusions. A secondary function is given to that which is not logical, rational, and evidential, and which does not correspond to laws of logic. The role of sensory perception in systematic thinking is acknowledged; impulses that come from sensory organs make an essential contribution to the knowledge process.
- ***The priority value is given to synthesis*** as the connection of various elements of an object to a whole (a system).
- ***Recognition that it is not always possible to establish cause-and-effect relationships.*** The desire to construct linear connections, very characteristic of logical thinking, can bring the researcher into a deadlock. As the discussion is about a system, many events take place at the same time. They accumulate, interact, and create conditions for the emergence of one phenomenon or another. The cause

and effect can be divided into time and space. In the natural sciences, there is a term used to designate the property of some chaotic systems. It has the name “the Butterfly Effect” and describes how an insignificant influence on the system can have large and unpredictable consequences somewhere in a different place and at a different time.

As we can see, systematic thinking is a rather difficult type of thinking, not only owing to the need to capture the maximum quantity of elements of a system, but also to the abilities to look at it from different angles. It demands competence in a large number of areas, development of a nonjudgmental position (which is difficult for many), openness and objectiveness, and a readiness to see processes that are not superficial or obvious. Mobility, flexibility, spontaneity, openness to the new, readiness for the unknown, and the ability to think unconventionally are also necessary for this approach.

The value of systematic thinking is that it overcomes the characteristics of logical thinking, not by contradicting them but by including them as a part of itself. Undoubtedly, it is a process in which there is logic, but it goes from a formal to a multidimensional level, promoting a whole global view of a system and of the processes happening in it.

So, if the purpose of formal logical thinking is the birth of own thought, then the purpose of systematic thinking is the identification of synthesis of communications and the attempt to answer the question of why communications and elements of a system are built as they are, but not differently—that is, identification of their meaning.

Once again, we wish to emphasize a particularly important idea. In systematic thinking, there is a shift in focus from *the research object* (*what* is in the zone of interest?) to the *subject* (*who* conducts the research?). The results depend on what characteristics the subject directly possesses. The person applying systematic thinking needs development not only in the special professional qualities necessary for scrutiny of a certain phenomenon but first of all for the scrutiny of universal phenomena.

It is worth of notice that the ability to think systematically has an evolutionary context, being formed in mankind in general as well as in each specific person during the course of their development.

3 Forms of Human Existence

Forms of Human existence are described below, based on the best traditions of Russian psychology and psychological anthropology (Ananjev 1960; Leontjev 1983; Rubinstein 2012; Smolova 2017; Slobodchikov and Isaev 1995). We wish to point out that these categories could be rather confusing due to the translation and would therefore like to ask the reader to pay more attention to their content rather than to their names.

The Human as the Individual describes the person's biological and corporal nature. To develop properties of this form means to manage the body, its age and gender, and individual and typical features.

The Human as the *Subject of activity* is the individual endowed with the qualities of activity, independence, and ability to carry out specifically human forms of activity, first of all, of a subjective and practical nature.

The Human as the Personality is the subject, freely, independently, and responsibly defined, who develops their position in the social community and the corresponding culture. Inclusion of the person in social communications and relationships is reflected by such concepts as social status, communicative abilities, leadership, moral properties, responsibility, etc.

The Human as the Individuality is the person capable of creating their own view that is different from that of society, introducing new concepts to the social system, and thereby enriching it. Distinctive qualities are creativity, freedom, outlook, and individual lifestyle. The level set by this form of life is undoubtedly very high, but not necessarily final.

The form of life of *the Planetary Man* is the individual capable of going beyond the private and local systems of any sort (the city, the country, or the nation), and seeing themselves as part of a planetary system. The qualities characterizing this form of life are the formation of one's own picture of the world, global thinking, and awareness of a personal mission.

When we think of people endowed with such qualities, we usually imagine decision-makers whose actions influence the life of the whole planet, guiding people's fate, and the course of history in various spheres. The reality, however, is that all people influence the life of the planet with their thoughts, actions, and decisions. It is obvious that to solve many political, religious, ecological, social, and economic crises (amongst others), it is necessary to find a more large-scale view than personal interests, which are the needs of "my own" society, of "my" nation, or of "my" country. A reference point for this can be an awareness of and connection to the needs of the planet, expressed in the Planetary Man.

Undoubtedly, the level described by the form of life of the Planetary Man is very high in the hierarchy of forms of life. However, it is not final. On April 12, 1961, an epoch-making event happened: humans' flight to space. The era of space exploration has begun, and with it rapidly progressing, the life of people and mankind has started to change. From the second half of the twentieth century, fields specializing in space activity (space medicine, psychology, biology, geology, etc.) have appeared in the sciences. Such terms such as "space technologies," "space power," and "military space armed forces" have gradually begun to enter the lexicon of ordinary people. Increasing we speak not only of professional astronauts but also of the approach of an era of space tourism.

However, aside from the inspiring development of technology, space travel was extremely important from the point of view of physics. The meaning of this, the global implications of which are far from always understood, is that the human has changed their area of existence and left their habitual ecosystem—the Earth—for another system, higher for them: space.

From the point of view of synergetic theory, while the system is isolated, its action on other systems is limited. When interaction begins, it always happens by the exchange of substance, information, and energy. Planet Earth has joined a new system of a higher hierarchical order, in which other laws of development work. This means that humans have started to develop under the laws of another, more all-encompassing, space system.

In the Encyclopedic dictionary, the Metagalaxy (a term suggested by the American astronomer Harlow Shapley) is understood as the part of the Universe available to modern astronomical methods of research (Bolshoj... 2000). Therefore, from our point of view, it is possible to speak about *the Metagalactic Man* as the newly formed form of Human existence different from Planetary and all levels known previously. Of course, it is difficult to speak about what characteristics this type of person will possess.

At first, this idea can seem too courageous. However, we will recall that human nature usually follows the principle: I know only what I see; and if I do not see something, most likely, it does not exist. Here, we can recall “the Kaluga dreamer,” K. E. Tsiolkovsky (as he was named for his strange and eccentric ideas), whose strange ideas aroused the mistrust of many contemporaries and who often was not perceived seriously; yet, today his works are the cornerstone of practical actions which resulted in the human’s emergence into space.

So, each of the described phenomena can be called a “*form of Human existence*” in which we understand the opportunities formed in the course of evolution at various cultural and historical stages of development, available first to mankind in general (as at least one person has experienced achieving them), and second potentially to each specific person (who, under favorable conditions, can realize these stages).

From the point of view of evolutionary development, the human is a synthesis of forms of existence in their own individual hierarchical expression. The concepts of the described forms of Human existence developed in anthropogenesis. A human potentially possesses all of them; however, some become leading. Each form of Human existence has a characteristic external expression in a given environment as well as the ability to develop and manage it. At the internal level, there is the existence of certain psychological qualities and properties, purposes, values, and meanings.

It is possible to assume that in a person with each leading form, there is the ability on some level to think systematically. We must bear in mind, however, that systematic thinking as discussed above requires the ability to capture large-scale external systems, which is always connected with the development of internal qualities such as freedom, the ability to see one’s own mission, to synthesize a personal philosophy, and to create a picture of the world.

For this reason, it is possible to assume that *systematic thinking really appears with the birth of such forms of Human existence as the Planetary Man, as a necessity of judgment of processes in their wholeness and indivisibility, as well as of decision-making on a global scale.*

4 Conclusions

Sustainable development is a harmonious development and a balanced interaction of the biosphere with mankind. It is apparent, however, that such a development is directly connected with the ability of a person to see beyond stereotypes of logical thinking, on a higher hierarchical level—the level of systematic thinking.

In the present article, we reviewed the evolutionary context of its development. Systematic thinking is born as a stage of humanity's evolutionary development, as well as that of the individual. Its emergence is connected with the need for judgment of global processes happening on the planet, including political, social, ecological, economic, migratory, religious, and scientific processes, among others.

Without belittling at all the value of a person's local actions as a citizen for the benefit of the state, it is necessary to nurture more large-scale forms of life in them, to create a whole view of events and phenomena of the surrounding world.

We suggest that one of the most important problems of education toward sustainable development is the formation of systematic thinking characteristic of the Planetary Man and of the qualities inherent to this form, as well as of the further arising form of Human existence—the Metagalactic Man.

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Taking Sustainability to Heart—Towards Engaging with Sustainability Issues Through Heart-Centred Thinking



Louise Livingstone

Abstract There is still much to be done to motivate people to actively engage in issues related to sustainability (ICCiP). While it may seem obvious that thinking about the world in a different way creates the possibility of arriving at new awareness, this paper suggests that such a seemingly ordinary observation shines the light directly on a major obstacle to engagement with sustainability. More broadly, this paper demonstrates the importance of the humanities in helping to understand how human beings make meaning in the world (Kripal 2014) linking directly to issues of sustainability in terms of how people connect with each other and the world at large. Taking an imaginal approach, and honouring a metaphorical mode of investigation (Voss 2009), this paper positions the heart as an organ of perception able to comfortably move between different ways of engaging with the world. Using the metaphor of epistemological duality with reference to cultural history (McGilchrist 2009; Bound Alberti 2010) as a guide, this paper moves to explore two important ideas; first how a taken-for-granted, epistemological approach towards the world (McGilchrist 2009) could be creating barriers to engage effectively with sustainability, and second, how the separation of body from mind, and heart from brain, when taken as a metaphor, could further guide this understanding. This paper moves towards the suggestion that when re-considered as an organ of perception (Corbin 1971; Hillman 2007), the heart has a key role to play in guiding people towards different ways of understanding, and subsequently engaging with sustainability.

Keywords Epistemology · Metaphor · Heart · Spirituality · Holistic science

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1 Introduction

Sustainability is a complex concept with often multiple and conflicting meanings (Giovannoni and Fabietti 2014; Weber 2013, p. 11). Growing concerns for environmental and climate change, coupled with issues of increasing tension brought about by social inequality, have served to bring sustainable development under the spotlight in recent years (Giovannoni and Fabietti 2014, p. 21). While there seems to be general agreement across society with regards to the importance of sustainable development, its nature and meaning have been rarely discussed explicitly, leading to different discourses treating the issue of sustainability through different ways (Giovannoni and Fabietti 2014, p. 22). Certainly, the limitations of this approach have been highlighted in recent years and are beginning to be addressed by academics and other cross-country initiatives to engage with the difficulties arising from the 'separation between social, environmental and financial concerns, as well as from an individualistic approach to sustainability' (Giovannoni and Fabietti 2014, p. 22). The message now arising within sustainability circles does appear to highlight the need for an integrated approach at all levels, comprising social, environmental and financial aspects (Giovannoni and Fabietti 2014, p. 22), and an understanding that 'any foreseeable sustainable state will be the result of interactions between organisations, individuals, societies and states' (Gray 2010, p. 57, quoted in Giovannoni and Fabietti 2014, p. 22).

Certainly the matter of integrating disparate discourses, businesses and societal enterprises with regards to sustainability is an important observation, as issues relating to sustainability connect all beings on the planet. In academia strong links are currently being forged between sustainability and the humanities, which extend well beyond the social sciences, however the Sustainability and Climate Change Management Research and Transfer Centre based in Hamburg has recently stated that debate on the contribution of the humanities to better understand sustainable development 'is not as intensive as it should be', resulting in 'interesting opportunities...being missed' and a 'holistic discussion...not fully taking place' (FTZ-NK 2017). This observation led to a symposium in Canterbury, UK, in November 2017, exploring sustainability and the humanities through linking social values, theology and spirituality. A major theme arising from discussion was the role of the individual in sustainability, an observation recently made by the International Climate Change Information Programme (ICCiP) which stated there is still a great deal to be done to motivate people to engage in 'global efforts to address the challenges posed by climate change' (ICCiP 2017). From a wider perspective, it could be suggested that there is a fundamental link between the apparent lack of conversation across different discourses and areas of business/society, and the seeming lack of public engagement in sustainability issues; and it is towards such a connection that this paper moves, aiming to reveal what could be seen as a major obstacle to conversation and engagement with sustainability, which is grounded within contemporary society's epistemological stance towards the world.

Indeed, religious studies Prof. Jeffrey Kripal has identified the fundamental importance of the humanities in helping to bring a more expansive vision to the way that human beings know their place in the world, moving beyond empirical and historical data to consider human perception and experience (Kripal 2014); leading to questions concerning how human beings connect with each other and the world at large. In these terms, the author has been reflecting on Kripal's ideas with reference to a research project that takes an imaginal approach to engaging with conflict situations—exploring limitations of empirical, mind-based approaches and studying ways of knowing that are made possible through the heart as an organ of perception.¹ This project is finding that the heart is, in contemporary society, a deeply misunderstood and desperately undervalued phenomenon, which, through an imaginal lens could be seen to offer invaluable guidance and support with many of life's challenges—not just in conflict situations, but in all issues which affect human beings in society, including sustainability. From an empirical perspective, where the heart is seen to be merely a pump, this research does have clear limitations; however, this paper is intended to open up creative conversation about the nature of perception itself, and in that regard cannot be approached through such a rigid, literal lens, for the quality of what this paper is attempting to discuss will be lost completely.

Moving tentatively into such a creative space, by considering the heart as an organ of perception, (Corbin 1971; Hillman 2007) this investigation will bring the imagination to bear (Voss 2009, p. 4)—taking a metaphorical approach through many apparently unrelated areas in what could be said is the nature of sustainability itself. From here, it is possible to creatively explore sustainability issues in the future. Drawing upon cultural history, neuroscience, holistic science, depth psychology and Sufi mysticism, the author will uncover an epistemological approach towards the world which appears to have split the individual, and the individual's view of reality, into two distinct parts—left hemisphere/right hemisphere, head/heart, person/world; favouring one particular approach to making sense of, and engaging with, life. Considering the implications of such a split, this paper reflects upon neuroscientist and English literature specialist Iain McGilchrist's grand metaphor of epistemological duality (McGilchrist 2009). He suggests that in our current intellectual milieu, we value the mind over the body,² the head over heart and the person over world, and that this could be creating barriers for people to engage with sustainability in a manner

¹In this paper, the meaning of imagination is drawn from religious philosopher Henry Corbin (1903–1978), who states that the imagination is the meeting place of literal and spiritual realities. For Corbin, the imagination is an organ of perception that produces sense perceptible images which embody qualities of a universal, shared realm of consciousness (Corbin 1971). This view is different to modern understanding of the imagination (or the 'imaginary') as unreal, or something outside the framework of being and existing.

²Ideas of the body have been changing dramatically for hundreds of years; from the Enlightenment notion of the body being something to command and discipline (Hancock et al. 2000, p. 2) as primarily the domain of biology (Hancock et al. 2000, p. 1), to in recent years, becoming a 'problem for linguistic, cultural and social analysis' (Hancock et al. 2000, p. 2). While there is clearly overlap with such movements in thinking in this work, it is beyond the scope of this paper to directly address the intellectual roots of these issues which are wide and diverse. However, the author does acknowledge the influence of such changing ideas about the body, particularly with reference to

which would sufficiently enable and support future planetary flourishing. This paper considers how the separation between left hemisphere/right hemisphere, head/heart and person/world, when taken as a metaphor, could further guide this understanding, and open up creative conversations within and around sustainability issues. Finally, this paper moves towards the suggestion that when considered as an organ of perception, the heart has a key role to play in moving people towards different ways of approaching and engaging with sustainability into the future.

2 Opening to the Imagination

...the thought of the heart is the thought of images...the heart is the seat of the imagination... imagination is the authentic voice of the heart, so that if we speak from the heart we must speak imaginatively (Hillman 2007, p. 4).

In the above quote, archetypal psychologist James Hillman (1926–2011) is referring to religious philosopher Henry Corbin's (1903–1978) understanding of the imagination as developed through his extensive study of the Sufi mystics. Corbin's theory of knowledge honours the meeting place of literal and spiritual realities, which are interpreted through the creative imagination, and as an 'organ of perception' (Cheetham 2012, p. 17; Corbin 1997, p. 221), the imagination engenders 'a kind of knowledge which arises from the confluence of inner recognition with 'external' reality' (Voss 2009, pp. 1–2). Moved to reclaim the imagination as being 'at the very heart of human life' (Cheetham 2012, p. 3), Corbin is one of a number of scholars who have considered the imagination as being fundamental in moving the individual towards a deeper, fuller understanding of the world. For example, reacting to the rigid empiricism of the Scientific Enlightenment, poet and scientist J. W. Goethe (1749–1832) used his imagination to develop a 'deep, intuitive and holistic relationship with the phenomena of his study [of plants], requiring a fundamental shift of attention within everyday experience' (Livingstone 2016, p. 7). Similarly, philosopher Martin Buber (1878–1965) and depth psychologist Carl Jung (1875–1961) both espoused the importance of the imagination in helping to deepen one's experience of the world beyond narrow, literal interpretations. More recently, in his work on left–right brain hemisphere lateralisation (2009), McGilchrist has pointed to the faculty of the imagination as crucial in linking the two hemispheres of the brain, enabling the fullness of the human experience to manifest:

It is the faculty of the imagination...which comes into being between the two hemispheres, which enables us to take things back from the world of the left hemisphere and make them live again in the right. It is in this way...that things are made truly new once again (2009, p. 199)

Holding on to the imagination's capacity to move an individual beyond literal interpretations through the language of metaphor and symbolic image (Voss 2009),

critiques of Cartesian dualism and subsequent feminist discourses relating to reconstructions in being and knowing (Jaggard and Bordo 1992).

it is towards McGilchrist's metaphor of dual ways of knowing that this paper now turns, in order to creatively investigate why people within contemporary society might not be engaging fully in sustainability issues.

3 The Divided Brain—Left Hemisphere/ Right Hemisphere

In 2009, McGilchrist published a book entitled *The Master and His Emissary—The Divided Brain and the Making of the Western World* (2009). In a thought-provoking cultural analysis of left–right brain hemisphere lateralisation, McGilchrist traces the history of the Western brain from ancient Greece to the present day, arguing that in modern times the 'left hemisphere has become so far dominant that we are in danger of forgetting everything that makes us human' (2009, p. back cover). Based on a vast body of experimental research, McGilchrist argues that the left and right hemispheres of the brain have differing insights, values and priorities, each with a distinct 'take' on the world (2009, p. 10; Rowson and McGilchrist 2013, p. 12). While both hemispheres have been proven to be involved in everything that human beings do, and have considerable ability to perform any task, the striking difference is the fact that each hemisphere conducts these tasks in very different ways (2009, pp. 10 and 93). The left hemisphere's thinking is decontextualised and tends towards logic, dealing efficiently with abstraction and categorisation, while the right hemisphere deals preferentially with 'actually existing things, as they are encountered in the real world' (2009, p. 50)—concerned with context and the relation between phenomena. Highlighting the relationship between these two different modes of human experience when characterised as brain hemisphere functions, McGilchrist suggests that 'many of the disputes about the nature of the human world can be illuminated by an understanding that there are two fundamentally different 'versions' delivered to us by the two hemispheres' (2009, p. 5). In a report produced by the RSA Social Brain Centre, McGilchrist states that:

[A]t the core of our thinking about ourselves, the world and our relationship with it, there are two incompatible but necessary views that we need to try to combine. And things go badly wrong when we do not (2013, p. 12)

Certainly, since the time of the scientific revolution, the West has come to overly value a detached, reductionist and analytical approach towards knowledge production. This means that anything that cannot be measured or observed—inner states of mind, certain subjective experiences, intuition, the depth of meaning of symbols and metaphor—is reduced down to narrow, materialist understanding.³ As a result of this

³McGilchrist points to practical examples of a left hemisphere version of the world as demonstrated in the most recent financial crash (2007–2008), where financial institutions disregarded and overrode their 'wise intuitions', and 'petty legislation' which 'saps morale' within all industry sectors (Rowson and McGilchrist 2013, p. 9). Most alarmingly of all, McGilchrist points to the growing inability of children to sustain attention, empathise, communicate well or read the human face: 'Because each of these faculties—the ability to read faces, to sustain attention and to empathise—as

approach to life, ‘everything we encounter becomes one thing or another; different things *distinguished* from one another, with each thing *outside* the other, and all things *separate* from one another’ (Livingstone 2016, p. 2, referencing Bortoft 2010, p. 13, my italics). Indeed, this modern approach is being increasingly recognised as foundational in the creation of many contemporary problems stemming from an escalating divorce from nature (Bortoft 2010; McGilchrist 2009). This observation is particularly interesting in the light of McGilchrist’s thesis, which suggests that the left hemisphere’s perspective, and ‘way of being’, is so strong that it seems to shape culture in such a way that culture responds to it as the dominant one (Rowson and McGilchrist 2013, p. 8)

Seeing this idea of epistemological duality (and the dominance of the left hemisphere) as a striking metaphor for the creation of the growing challenges and difficulties which contemporary society faces on all levels of scale, McGilchrist suggests that the inner structure of our intellect reflects the structure of our universe, going on to say that ‘our brains not only dictate the shape of the experience we have of the world, but are likely themselves to reflect, in their structure and functioning, the nature of the universe in which they have come about’ (2009, p. 460). In other words, the issues of social, environmental, and economic instability, which themselves have initiated conversations regarding sustainability, are embedded within global humanity’s experience of the world.

4 The Divided Body—Head/ Heart

Interestingly, while McGilchrist focuses specifically on the imbalance between left and right brain hemispheres, cultural historian Fay Bound Alberti observes an imbalance occurring between the brain and the heart. Tracing the changing relationship of the heart and brain from the seventeenth to the nineteenth century, Bound Alberti shows how a cardio-centric worldview was gradually overtaken by a cranio-centric worldview (2010, p. 7) at the level of medical theory, under the ‘influence of processes that we might broadly associate with modernity’ (2010, p. 7).⁴ Appearing to coincide with the movement in thinking from the scientific revolution onwards, Bound Alberti suggests that the heart gradually became subservient to the brain particularly within the medical sciences (2010, p. 15), where theory shifted the ‘heart of feeling’ towards the ‘brain of feeling’ (2010, p. 7); a move which rapidly gained ‘common sense status’ in the West, and, according to Bound Alberti, could be perceived to represent ‘the triumph of reason over passion, of mind over matter, of masculine over feminine’ (2010, p. 15). Possessing a strong resonance with McGilchrist’s ideas concerning the

well as being essential to the human world, is particularly reliant on the right hemisphere of the brain. So their relative demise is precisely what you would expect if my hypothesis is correct’ (Rowson and McGilchrist 2013, p. 10).

⁴Bound Alberti traces the movement of medical theory, ‘away from the heart of feeling and towards the brain of feeling’ (2010, pp. 7–8).

growing dominance of the left hemisphere, particularly since the Enlightenment,⁵ Bound Alberti, through an analysis of the relationship between the head and heart over the past several hundred years, suggests that it is easy to see how the idea of the brain has come to dominate rational discourse due to the ‘habitual identification, in the West, of Cartesian theory as a way of understanding the relationship between the mind and the body (the mind being superior, rational, male, and logical; the body as inferior, unregulated, irrational, female, and illogical)’ (2010, p. 155).

While Bound Alberti observes that in modern scientific discourse the brain is now conceived to be the site of rationality and logic and the place from which emotions arise (with the heart considered simply a pump), in day-to-day culture, the heart remains a symbol of the emotions (2010); revealing a clear disconnection between the heart of science and the heart of culture (Bound Alberti 2010, p. 3).⁶ However, for McGilchrist, the left hemisphere of the brain is tied to linear logic and rational analysis, whereas the right hemisphere of the brain is connected to the imagination, intuition and making sense of direct, embodied experience of the world. While at first glance, it could be pointed out that McGilchrist and Bound Alberti are speaking about completely different ideas (which indeed they are from a left hemisphere, literal sense of understanding), from a wider, imaginative, right hemisphere perspective, it is interesting to observe the *quality of sentiment* that each of these scholars are pointing towards. What is specifically meant here is that there appears to be an imbalance between brain hemispheres/parts of the body, which represent particular qualities of human experience. In both McGilchrist and Bound Alberti’s ideas, the ‘subservient part’ appears to represent the deep emotions, feelings and intuition. Expressed in different languages, both these scholars, in their particular ways, are pointing towards a compelling line of philosophical enquiry which this paper is attempting to explore.

5 Divided World—Person/Planet

In the conclusion of his thesis, McGilchrist imagines how the world of the left hemisphere might manifest. Indeed, McGilchrist suggests that a left hemisphere approach would create a world where the impersonal would replace the personal, where mate-

⁵Even though the Romantic movement (towards the end of the eighteenth century) endeavoured to counteract the rigid empiricism of the Scientific Enlightenment particularly through art, prose, poetry and Goethe’s approach to science, the intellectual movements of the nineteenth century brought with them the philosophy of materialism (McGilchrist 2009, p. 382; Tarnas 2000, pp. 356–366), embracing ‘literalism’ and developing a deep mistrust of the ‘imagination’ (McGilchrist 2009, p. 382). According to cultural historian Richard Tarnas, despite the fact that the Romantics drew attention to the idea that the scientific mind was, at its roots, symbolic, it chose to see these symbols as ‘valid’ (2000, pp. 368–369); externalising them and subsequently defining them as objective, concrete, literal, as ‘fact’.

⁶The heart of science is generally considered the common sense heart, however, the heart of culture remains a strong symbol of emotion for people in the modern West (Bound Alberti 2010).

rial things would be prized at the expense of the living, where social cohesion and the context in which each person belonged would be neglected, ‘perhaps actively disrupted, as both inconvenient and incomprehensible to the left hemisphere acting on its own’ (2009, p. 431), and where exploitation rather than co-operation would be ‘the default relationship between human individuals, and between humanity and the rest of the world’ (2009, p. 431). Certainly McGilchrist paints a bleak, yet sadly recognisable picture of the world as it stands in 2018. Moving on to consider the reality of the destruction of the natural world and erosion of established cultures, McGilchrist puts forward a compelling case for the consequences of the left hemisphere’s actions (2009, p. 434), which seeks to manipulate and control. With the left hemisphere perceived to be in a position of dominance over the right hemisphere, it might not be too great a leap to see how individuals could find themselves disconnected from perceiving and understanding their interconnectedness with the natural world.

Adopting a similar sentiment to McGilchrist, marine biologist and philosopher Andreas Weber suggests that modern culture has an ‘obsolete, mono-cultural worldview [that] is literally preventing us from understanding the deeper causes of our multiple crises’ (2013, p. 8). Arguing that one of the biggest obstacles with regards to engaging effectively with sustainability issues is that ‘science, society and politics have for the last 200 years lost their interest in understanding actual, lived and felt human existence’ (2013, p. 11), Weber’s viewpoint is strikingly similar, albeit in different language, to McGilchrist’s observation that the left hemisphere has effectively narrowed down the idea of those things which help us to directly experience the world—i.e. the body, spirituality and art, subsequently ‘discounting or dismantling what it does not understand and cannot use’ (2009, p. 445). McGilchrist’s thesis concludes with a call for humanity to recognise its reliance on left hemisphere approaches towards the world, and begin to find ways of reintegrating the capabilities of the right hemisphere; learning to fully understand what it means to be directly connected to the world (2009, pp. 438–445). Crucially, what McGilchrist is pointing towards is the idea that the human experience cannot be comprehended from the viewpoint of the left hemisphere alone, requiring the co-operation of both hemispheres:

[T]he right hemisphere starts the process of bringing the world into being....because it is more in touch with reality....Whatever the left hemisphere may add – and it adds enormously much – it needs to return what it sees to the world that is grounded by the right hemisphere (2009, p. 195)

It could be suggested at this point that many people within contemporary society might not yet understand what such an integrated experience of the world might be like or feel like; because current epistemology does not make space (in terms of epistemological validity) to make sense of the world in such a different way. However, there are a growing number of scholars who are endeavouring to move towards this new space of thinking across many disparate discourses from religious studies to holistic science.⁷ Specifically, Kripal calls for a broader perspective of both/and

⁷Holistic science focuses on the study of complex systems, holding that any system is more than merely the sum of its individual part; focussing on observation of phenomena within the ecosystem

thinking in which the full spectrum of the human experience can be examined in a new way (2014, p. 392). He defines this as a move into what he calls the ‘third classroom’ (2007, pp. 22–24). Similarly, Weber envisions a different scientific paradigm which he terms ‘Enlivenment’ (2013, p. 7); i.e. a way to ‘move beyond our modern metaphysics of ‘dead matter’ and acknowledge the deeply creative, poetic and expressive processes embodied in all living organisms’ (2013, p. 7). Inspired by neurobiologist Francisco Varela (1946–2001), Weber reconsiders the idea of life and aliveness as fundamental categories of thought, moving beyond the dead categorisation of the left hemisphere towards a sense of the living world. Weber’s position could be seen as bringing together, in McGilchrist’s language, the imaginative capabilities of the right hemisphere with the logical, analytical processing capabilities of the left; or in Bound Alberti’s language, bringing the qualities of the heart of culture together with the brain. This has implications for contemporary politics and public policy frameworks, as Weber suggests that this worldview actually defines how sustainability practices can be crafted and implemented. By this, he means that by changing the story about the world, and our place in it, we shape the world into being (2013). Indeed, it could be suggested that *true sustainability can only be reached through the full integration of each of the parts*; a view which is captured in McGilchrist’s observation of the value of both hemispheres working in reciprocity (see above), and his further observation that:

The kind of attention we pay actually alters the world: we are, literally, partners in creation. This means we have a grave *responsibility*, a word that captures the reciprocal nature of the dialogue we have with whatever it is that exists apart from ourselves’ (2009, p. 5, italics in original)

At this point, it could be suggested that what Bound Alberti, Kripal, McGilchrist and Weber are all pointing towards is a different way of looking at, thinking about, and speaking about their *experience of the world*. While the points each of these scholars make may be *specifically* different at the level of individual discourses (a left hemisphere view), they all appear to be responding and reacting to a *particular* experience of the world which points towards a desire to explore the obvious limitations of an approach that is increasingly being seen as unbalanced and unequal across many areas, including the environment. From a right hemisphere perspective, the movement these scholars are making could be seen as a strong metaphor from which to consider how phenomena, that have been gradually epistemologically separated over the course of the past several hundred centuries, might be brought back into balance; perhaps encapsulating the very nature of sustainability itself.

as part of reciprocal, participatory relationships, of which the observer is also a part. This is in contrast to the reductionist approach, which reduces an idea or system to its component parts; suggesting that an understanding of the parts explains the whole. In this approach, the observer’s presence is generally removed from analysis.

6 Reviewing the Terrain

While the language that the scholars referred to above use to express these experiences differs, the underlying movement of metaphorical thinking towards engaging fully with sustainability remains the same—i.e. different approaches moving towards a desire to interact with the phenomenon of sustainability, however, it is manifested.⁸ Returning to McGilchrist, it is interesting to note that he suggests that ‘Metaphoric thinking is fundamental to our understanding of the world, because it is the *only* way in which understanding can reach outside the system of signs to life itself. It is what links language to life’ (2009, p. 115, italics in original). Language can, therefore, be considered as a tool which helps us to articulate our experience of life. An intermediary, ‘like money’ (McGilchrist 2009, p. 115), language ‘begins in the world of experience and returns to the world of experience’ (McGilchrist 2009, p. 115), often through metaphor. To use a metaphor, states McGilchrist, is to use language as though it is the ‘money of thought’ (McGilchrist 2009, p. 115), making sense of experience through metaphor which bridges a gap that does not exist at the level of experience (2009, p. 116).

In this statement, it is possible to conceive of *both* the left and right hemispheres as making sense of experience. It is the right hemisphere, suggests McGilchrist, that is able to pay attention to what exists apart from ourselves, to the ‘Other’ (2009, p. 93), whereas the left hemisphere ‘pays attention to the virtual world it has created...ultimately disconnected from the Other, making it powerful, but ultimately only able to operate on, and to know, itself’ (2009, p. 93). As the right hemisphere has the ability to deal with multiple layers of meaning and subsequently understand the deeper suggestions of metaphor and symbol, McGilchrist puts forward a persuasive theory, suggesting that contemporary society’s narrow, materialist worldview, and the resulting subject/object split, reduces the capacity to make sense of often non-material experiences thus rendering them hidden from day-to-day consciousness.⁹ It is this very problem of epistemological duality that could be making it difficult for people within contemporary culture to fully relate to both each other and the world at large (McGilchrist 2009). However, by becoming aware of this issue, and by loosening a grip on literal conceptions of reality through the use of metaphoric thinking, it might be possible to move beyond current epistemological limitations towards the creative possibilities that such a freeing of epistemological bindings can facilitate.

⁸This could be seen as a movement towards Kripal’s ‘third classroom’; i.e. taking responsibility for one’s own direct experience of the world and the language that this creates, never assuming this is truth for another, but understanding that there is always an underlying quality that links these ideas.

⁹In this paper consciousness is defined as a state of awareness (i.e. one’s own existence, sensations, thoughts). This paper does not explore the scientific question of the origin of mind which followed on from the theory of evolution, or, more specifically, the origin of consciousness in evolution.

7 Taking Sustainability to Heart

This paper has promoted the use of the imagination as a way to rise above the rigid dualities often present within traditional thinking which, the author suggests, has implications for how future strategies are formed to engage more creatively with sustainability. Moving forward to consider Corbin (1971) and Hillman's (2007) suggestion that the organ of the imagination is the heart, this paper concludes by considering how the heart might have a key role to play in guiding people towards different ways of understanding, and subsequently engaging with sustainability. Indeed, in Corbin and Hillman's interpretation, the heart is 'the seat of the imagination', and the imagination is subsequently 'an organ of perception' able to mediate between different realms of human experience. It can, therefore, be suggested that the heart, when considered metaphorically, has the potential to hold differing modes of awareness—offering a way to consider an expanded view of relationships with each other and the world itself. Indeed, in contemporary parlance, the heart is still acknowledged as a metaphor for emotional life, and a symbol of love, compassion, warmth and wisdom (Bound Alberti 2010; Hoystad 2007), able to comfortably hold opposites (Vaughan-Lee 1996). Certainly, in the Sufi tradition (and within Arabic culture generally), the heart is not only a metaphor, but an objective organ for sensing, intuition and cognition (Hoystad 2007, p. 79). It could, therefore, be suggested that the heart is a place which appears able to perform the movement that McGilchrist calls for in his thesis; holding different modes of knowing together and moving between them. Perhaps it is the heart itself to which Buber, Goethe and Jung were alluding in their work, and which can be found guiding Bound Alberti, Weber, and Kripal's work?

8 Conclusion

As highlighted at the beginning of this paper, sustainability is a complex concept, (Giovannoni and Fabietti 2014; Weber 2013, p. 11), linking environmental, social and financial issues. The main aim of this paper was to show the importance of the humanities in engaging with issues of sustainability, particularly from the viewpoint of highlighting how a largely empirical, mind-based approach to the world could be setting up barriers to engagement with sustainability—moving towards the consideration of the heart as a place from which to think about our actions in the world. Indeed, as a metaphor and a symbol it could be suggested that the heart's seemingly inherent capacity to hold differing ideas comfortably, and the heart's strong resonance with love, compassion, empathy and interconnection, makes it an important place of knowing from which to consider any kind of authentic engagement with sustainability.

What are the limitations of such an approach? While there are a growing number of organisations across the globe focussing on the importance of love and engaging

the qualities of the heart in sustainability issues, including the Schumacher College in Devon, UK,¹⁰ the Heart Follower family in Norway,¹¹ and a European organisation called Love Made Visible who provide links to hundreds of individuals, groups and companies using the wisdom of the heart to guide their own sustainable engagement in the world,¹² there is still very little evidence for how such an imaginal, heart-centred way of approaching the world might be practically applied, and what the implications of such an approach in the longer term might be. Certainly, the author is under no illusion that much of what has been discussed is contrary to most contemporary thinking with regards to engaging with modern challenges in general, and sustainability in particular, however, it is hoped that this paper has helped to raise questions concerning traditionally accepted ways of perceiving the world, and has shown the possibilities of the imagination in action through the heart—helping to open up dialogue to creatively explore ways to transcend the literality that pervades contemporary culture, and in so doing, move towards finding different ways for the planet to flourish and for all beings to live in harmony.

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¹⁰See <https://www.schumachercollege.org.uk/about> (accessed 18/12/2017). The college emphasises the importance of combining ‘head, hand and heart’.

¹¹See <http://hjertefolgerne.no/> (accessed 18/12/2017)—inside a glass dome, in the inhospitable Arctic climate, a family have trusted their heart guidance and developed a uniquely successful way of life—growing their own food year round, protected from the weather and living in harmony with nature.

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The Evolution of Societal Values: A Historical Perspective of the Role of Sustainability in the Practice of Economics



Madhavi Venkatesan

Abstract The history of economic thought embodies the evolving, dynamic, and varied cultural influences on economic systems both at a point in time and over time. It provides a context from which one can understand the theories that have simultaneously influenced, and have been influenced by observed cultural norms of behavior. It is more than an accounting of past economic theories; it is a resource that enables an understanding of the role and responsibility of social values in observed economic outcomes. This chapter provides an overview of the evolution of economic thought from its normative qualitative foundation to the positive quantitative attribution observable in present practice, and details specific religious and moral sentiments that have influenced social norms.

Keywords Sustainability · History of economic thought · Normative · Economics

1 Timeline of Economic Thought

Economics was not considered a separate discipline until the nineteenth century. The discipline emerged from political economy through a foundational period as moral philosophy. Fundamentally, a behavioral science throughout its iterations, economics is a framework for explaining observable behavior. As a result, a nuanced understanding of the theories economic philosophers developed requires knowledge of the circumstances and issues contemporary to the particular period.

Aristotle's works on politics and ethics analyzed the different motivations of market participants as well as assessed the concept of private property, specifically promoting discourse on whether property is best left in private, or public, hands. During the Middle Ages, Saint Thomas Aquinas advocated the idea that establishing a "fair" or just price was a moral obligation of business. François Quesnay founded an economic school of thought known as Physiocracy that saw no substantive value

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associated with the production of manufactured goods, and instead argued that only the agricultural produce tied to a man's labor had value. As European society experienced previously unimaginable advances in technological knowledge, global exploration, and material opulence, merchants, and individuals sympathetic to business interests, known as mercantilist, developed theories that emphasized the importance of international trade, and became active participants in the creation of what has been defined as the *nation-state*.

Adam Smith and other classical economists such as David Ricardo, Jeremy Bentham, John Stuart Mill, and Karl Marx developed systematic explanations of the relationships between trade, individual incentives and public welfare, and the distribution of wealth. As the capitalist system matured, mainstream economic thought began to utilize abstract mathematical representations of economic behavior with the intent of establishing economic theory on a scientific footing. This resulted in a seemingly value-free or *positive* and scientifically grounded methodology that distanced itself from moral philosophy and the relationship between values and economic outcomes; the *normative* foundations of the discipline.

In the early twentieth century, the potential fragility of capitalism culminated in the Great Depression. In response to this seemingly intractable economic crisis, John Maynard Keynes published a text popularly referred to as the *General Theory*. Keynes' ideas garnered widespread acceptance within the economics profession. It represented a significant departure from the accepted *laissez faire* or a noninterventionist approach, which had garnered support with the rise of mercantilism.

Keynes and his followers argued that government intervention in the forms of fiscal and monetary policies were necessary to stimulate economy-wide demand to promote economic growth and stabilize capitalist economies. Keynes' theories were radically different from the neoclassical framework, and as a result, it divided economics into two branches; microeconomics, which incorporated many of the tools and ideas of the neoclassical economics; and macroeconomics, with ideas and concepts inspired by John Maynard Keynes. Interestingly, though Keynes' ideas garnered widespread recognition, the policies he advocated were not universally accepted. The schism in macroeconomic thought came to a crossroads during the 1970s, when the American economy experienced high rates of inflation and unemployment simultaneously, an outcome predicted by economists skeptical of the Keynesian framework. As a result, the Keynesian consensus fell apart, and macroeconomic thought splintered into a myriad of theoretical perspectives, each arguably tied to a different perception of cultural norms. The quantification of the discipline served to distance practitioners from the values embedded in the theoretical frameworks. The disconnect remains to this day, and challenges the validity of these economic models in an increasingly culturally heterogeneous global and domestic economy.

In acknowledgment of the siloed approach that economics has had since the classical period, as well as the dynamic and interconnected elements that foster cultural norms, contemporary economic thought has emerged as an interdisciplinary area of study. Economists such as Amartya Sen and Joseph Stiglitz have emphasized the responsibility of economic policy to promote social and environmentally optimal outcomes, rather than focus on the myopic, financial quantification of optimality.

2 Early Economic Thought

Discussions of economics were included in philosophical and spiritual writings of many cultures. Depending on whether slavery or social stratification was prevalent or if accumulation or social equity was the valued cultural norm, economic thought tended to promote specific views that were meant to benefit some or all of a society's members.

The earliest known discussions of economics date back to ancient times. In what is now India, Kautilya or Chanakya (350–283 B.C.E) is credited with writing the *Arthashastra*, the earliest known treatise on economic principles and guidelines. In Greece, Xenophon's (430–353 B.C.E.) *Oeconomicus*, from which the discipline takes its name, provided an economic perspective on household management. Other economic rooted discussions are evident in religious and moral works across countries and religious philosophies, and are found in Jewish, Christian, and Islamic discourses.

In early times, and until the industrial revolution, economics was not a separate discipline but part of philosophy. Both morality and ethics were significant drivers of the theories espoused and the concept of societal optimality. As a result, early economic thought generally took into account the welfare of the common man, the worker, rather than seeking ways to benefit a few elite individuals.

2.1 *Plato and Aristotle*

The cultural designation of *value* is a significant and arguably primary differentiator with respect to the differences in the perspective between societies of the quality of life for both human and nonhuman elements. Examples of surviving written works that provide insight with respect to the value of different economic activities include Plato's *Republic* and Aristotle's *Politics*. The economic circumstances as described by the authors are consistent with the phenomena observable today. The evaluation of human behavior as it is applied to the accumulation of wealth, class stratification of society, and the role and impact of gratification were framed within an evaluation and discussion of moral philosophy and ethics, positioning Western economic thought up to the eighteenth century within the discipline of moral philosophy and politics. The evolution of the discipline continued within this framework until the discipline formerly separated from moral and political philosophy, first through iteration as political economy to its present stand-alone context as economics. Of interest to present students of economics should be that the observable mechanics of economic systems were evaluated and discussed in conjunction with the human values, whether assumed as innate or culturally inspired. A connection between the qualitative and quantitative aspects of economic outcomes was articulated and addressed as an evolving and dynamic process. From this perspective, economics discussions offered both a *normative* and a *positive* perspective, where the former provided opin-

ions and values related to optimization and the latter described observable activity. At the present time, the teaching of economics and to a large extent, the academics of economics has shed the normative element of the discipline opting for a positive attribution as a means to enhance its standing as a science. Perhaps, the modification of the defining of the boundaries of present economic thought may in part provide an explanation for the imbalance in sustainable outcomes observable today yet credited as being attributable to economic optimization.

2.2 *The Role of Biblical Verse*

The Bible also addresses aspects of economic equity and activity; these include restrictions on the use of labor, treatment of the poor, and limitations on property transfer. However, the most significant influence of the Bible may be attributable to the translation and understanding of man's standing within the global environment as having sanctioned dominion, not stewardship, along with a mandate to multiply. From the King James Version of the Bible, Genesis, Chap. 1, Verse 28 (2004):

And God blessed them, and God said unto them, be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.

Given the significance of Christianity in the colonization of invaded lands, as well as with respect to its transmission over cultures, the perception of dominion and propagation may be viewed, and has been credited by some scholars, as significant in defining the economic systems and cultural justification for anthropocentrism apparent in the present period.

3 Middle Ages

The Middle Ages (500–1500 CE) promoted both the development of the economic framework as well as discourse on the fairness of accumulation and price. In *Summa Economics*, Saint Thomas Aquinas (1225–1274) provided a perspective on private property rights, price, and the role of government in ensuring fairness.

Discussions during the period centered on the morality of commerce and the role of society with respect to the poor. The issues of focus were not far removed from those apparent in contemporary society; of significance, however, was the role of religious influence in determining the appropriateness of activities and responsibilities. Aquinas argued that a just price should be equitable to the costs of production. In his view, the just price would include the living wage of the producer for himself and his family where the living wage resulted in a maintenance wage rather than an accumulation fostering income. Aquinas, as well as some of his contemporaries, viewed charging prices above the just price as immoral.

4 Protestant Reformation

In the early sixteenth century, modification in widespread religious views allowed and promoted the rise of *mercantilism*, a period defined by increasing the wealth of the state through trade. Early mercantilist thought emphasized protectionism via tariffs and trade restrictions. The views stated by the moral philosophers of the time were positioned in religious and political discourses, which included the subject of *usury*, defined as charging interest on loaned money. The importance of purchasing power gained greater attention, as accumulation, social hierarchy, and the role of emulation of the “haves” garnered increasing interest.

4.1 *Martin Luther (1483–1546)*

Martin Luther was a leading agent in the Protestant Reformation; he was born in an agrarian village in Germany and became a priest and professor of theology. His views on the economy of his time were largely shaped by his religious convictions, and to a large extent were molded by both his faith and his cultural circumstances.

From his perspective, land and agricultural production had the greatest value. The concept of profiting at the expense of a neighbor by charging the highest price possible rather than the cost of producing a good, which included the labor wage to the producer, was immoral. Additionally and following from the same perspective, he viewed usury to be in opposition to Biblical doctrine. Luther did not support the payment of interest and argued that a loan should be offered without the expectation of repayment. He viewed government as having a role in protecting the population from unjust pricing.

4.2 *John Calvin (1509–1564)*

John Calvin, like Luther, was also a Reformationist but his views on usury and trade differed from Luther and were influential in the development of Puritan practices that would eventually become the foundation for the American colonies. Calvin was from Geneva, Switzerland, and lived at a time when the city had adopted a sympathetic view of interest. Geneva had also embraced commerce in lieu of an agrarian lifestyle. His views on interest were not as strict as the interpretations of Luther and others who limited their perspectives to Biblical verse, instead, Calvin considered interest to be a fair return for the loss of ability to use of funds or even as compensation for the potential risk of return. Additionally, he believed wealth was a material blessing from God that could then be shared; to this end, government was obligated to ensure that social welfare was evenly provided for between the rich and poor. Calvin also believed that commercial trade could produce greater social

benefit than an agrarian lifestyle; however, he was wary of the potential for prices to be immoral, as self-interest, he concluded, could promote the desire for financial return over neighborliness. For this same reason, he believed that property rights were superior to common rights in the promotion of social welfare, because, in the case of common rights, some individuals would take advantage through overuse, leading all to bear the cost.

5 Mercantilism

Mercantilist philosophy developed as the organization of European economies transitioned from feudalism to capitalism. This transition took place from the sixteenth through the later half of the eighteenth century. During this time, the decentralized feudal system was replaced by the business-oriented, politically centralized, and nation-state. As the focus of power within European society shifted, merchants and European monarchies projected their power across the known world with military power and the accumulation of wealth through the appropriation of resources, trade, and finance.

Mercantilism was promoted through the resource constraints of the old world and the recognition of the resource abundance in a populated but culturally divergent “new” world. The emerging capitalist system promoted a political and economic ideology that emphasized the sanctity of private property rights as well as the freedom to buy and sell. This new ideology was spread to the new world through military power and trade. The goal of mercantilism was to establish and maximize the wealth and power of the newly formed nation-state. In early phases of mercantilism, this was accomplished by promoting policies that limited a nation’s imports while simultaneously maximizing its exports. By the end of the mercantilist period, this view on international trade becomes more nuanced, and turned to an emphasis on establishing a favorable balance of trade.

The European accumulation of wealth was achieved in part by claiming new lands that would eventually serve as bases for foreign trading monopolies. During this time of European expansion, wealth was defined by the quantity of precious metals, and the accumulation of precious metals, which was the focal point of European monarchies and merchants, was promoted through tariffs and protectionist policies. From this perspective, the “discovery” or “invasion” of the Americas was significant due to the documented evidence of the geographies’ marketable resources.

The rise of mercantilism established a strong regulatory government. However, the role of government and protectionism gave rise to competing theories related to income mobility, wealth creation, and economic development. Mercantilism was not just an economic theory but also a political movement that relied on military power to establish and protect local markets and supply sources.

6 Physiocrats

Contrary to the mercantilists, the Physiocrats believed that the source of the wealth of a nation was determined by the size of its net product, which was produced in the agricultural sector, not in its accumulation of gold and silver specie. However, Physiocrats did believe that circulation (or trade), while not the source of a nation's wealth, was important to the healthy functioning of the economy. This is most readily seen in their strong advocacy of *laissez faire* or a free market system of trade.

Physiocracy, defined as a government of nature, is a school of economic philosophy established by eighteenth-century French economist Francois Quesnay (1694–1774), who wrote in his *Tableau Economique* (1759), that trade and industry were not the sources of wealth, arguing instead that agricultural surplus was the true basis of wealth accumulation. Quesnay's view was that regulation impeded income mobility and economic development. Additionally, he supported reduced taxation of productive classes in favor of higher taxation of unproductive classes, labeling farmers as productive and landowners as unproductive. Overall, Physiocrats viewed only agrarian-based wealth to be of consequence, questioning the artificiality and trajectory of urban life. Their belief that the foundation of value was based in agrarian production remained a strong sentiment among many classical economists as well, and to a large extent created a paradox of value referenced by Adam Smith.

7 Classical Economics

The foundation for current economic thought can be found in the writings of Adam Smith, Jeremy Bentham, David Ricardo, and Karl Marx along with many others. However, though all of these authors provided insights related to the human behavioral attribution of economics contemporary to their time, the context of their writings has often been neglected in lieu of an adoption of an absolute meaning of their opinions. In essence, the commentaries of these authors have been given the position of universal truth independent of time or observable change in society.

7.1 Adam Smith (1723–1790)

Adam Smith was a Scottish philosopher, who is most famous in economics for his text *An Inquiry into the Nature and Causes of the Wealth of Nations* (1791). Smith argued that an economy would be made better off with less regulation. His perspective was diametrically opposed to the highly regulated economy envisioned by the mercantilists. While Smith did not disagree with the mercantilist belief that the accumulation of gold and silver was the means to ensure a nation's wealth, Smith and his contemporaries, viewed tariffs and barriers to trade as limiting the potential

of society. Smith believed that the natural inclinations of individuals to promote their own self-interest, served the greater good through the miracle of the “invisible hand”. By allowing individuals to make decisions in their own best interest, the society would realize levels of economic growth, productive efficiency, and social welfare that could not be achieved through the sheer force of planning.

Smith made many contributions to economic thought and addressed the topics and issue prevailing in his time, many of which remain relevant in the present day. In the *Wealth of Nations*, he defined many conundrums, such as social perception of value or the paradox of value, which he viewed as being attributable to one of two characteristics, use and scarcity:

The word value, it is to be observed, has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods that the possession of that object conveys. The one may be called “value in use”; the other, “value in exchange.” The things that have the greatest value in use have frequently little or no value in exchange; and, on the contrary, those that have the greatest value in exchange have frequently little or no value in use. Nothing is more useful than water: but it will purchase scarce anything; scarce anything can be had in exchange for it. A diamond, on the contrary, has scarce any value in use; but a very great quantity of other goods may frequently be had in exchange for it.

Although often referenced for *laissez faire* policy, Adam Smith did address the concept of “fairness” as a value that should be embedded in the wage to labor. He noted, “A man must always live by his work, and his wages must at least be sufficient to maintain him. They must even upon most occasions be somewhat more; otherwise it would be impossible for him to bring up a family, and the race of such workmen could not last beyond the first generation.” However, he refrained from quantifying the concept of a rightful wage, “in order to bring up a family, the labour of the husband and wife together must, even in the lowest species of common labour, be able to earn something more than what is precisely necessary for their own maintenance; but in what proportion, whether in that above mentioned, or in any other, I shall not take upon me to determine.”

7.2 *Jeremy Bentham (1748–1832)*

Jeremy Bentham was an English social reformer. He is well known for his contribution of utilitarianism in the framework of economic thought. Bentham believed that rational decision-making resulted in optimizing pleasure over pain to promote *utility*. Bentham defined utility from the perspective of an individual but believed that the application of utility had economy-wide ramifications. In his *Principles of Morals and Legislation* (1879), he provided several defining elements of utility and attempted to delineate the parameters of pleasure and pain:

By the principle of utility is meant that principle which approves or disapproves of every action whatsoever. According to the tendency it appears to have to augment or diminish the happiness of the party whose interest is in question: or, what is the same thing in other words

to promote or to oppose that happiness. I say of every action whatsoever, and therefore not only of every action of a private individual, but of every measure of government (p.14).

Bentham espoused a more liberal view with respect to the basis for decision-making. He was an abolitionist, believed in gender equality, and promoted animal rights. Specific to economic incentives, his perspective greatly influenced the thoughts of other economic philosophers of the time including John Mill and later Mill's son, John Stuart Mill.

7.3 Thomas Malthus (1766–1834)

The Reverend Thomas Robert Malthus, an English cleric and scholar was a self-professed disciple of Adam Smith. Malthus is most widely known in economics for his text, *An Essay on the Principle of Population* (1967) in which he argued that population growth could be maintained within resource constraints by either: *positive* checks, which raise the death rate; or *preventive* ones, which lower the birth rate. The positive checks include hunger, disease, and war while the preventive checks consisted of abortion, birth control, prostitution, postponement of marriage, and celibacy. In later editions of his essay, Malthus reasoned that positive checks were potentially debilitating for society while preventative checks were potentially stabilizing. Fundamentally, he did not believe that agricultural output could keep pace with population growth and believed that if the labor classes did not exercise moral restraint as it related to their propagation, population growth in their class stratification would result in the burden of financial misery, as the price of food increased faster relative to the wage of labor. In discussing the role of industrialization, he viewed the benefit of return to the lower classes as a result of industrialization to be limited. From his perspective, manufacturing growth would result from the movement of labor from agriculture to industry. This, in turn, would reduce the amount of agricultural production and potentially increase the price of food relative to manufacturing wages, in net resulting in a lower living standard for the lower classes. An articulation of his view can be found in *An Essay on the Principle of Population* specific to his discussion of China:

An immense capital could not be employed in China in preparing manufactures for foreign trade without taking off so many labourers from agriculture as to alter this state of things, and in some degree to diminish the produce of the country. The demand for manufacturing labourers would naturally raise the price of labour, but as the quantity of subsistence would not be increased, the price of provisions would keep pace with it, or even more than keep pace with it if the quantity of provisions were really decreasing. The country would be evidently advancing in wealth, the exchangeable value of the annual produce of its land and labour would be annually augmented, yet the real funds for the maintenance of labour would be stationary, or even declining, and, consequently, the increasing wealth of the nation would rather tend to depress than to raise the condition of the poor. With regard to the command over the necessaries and comforts of life, they would be in the same or rather worse state than before; and a great part of them would have exchanged the healthy labours of agriculture for the unhealthy occupations of manufacturing industry.

7.4 *David Ricardo (1772–1823)*

David Ricardo was an English political economist, who is most widely known for his trade theory of comparative advantage. The view of trade expressed by Ricardo supported the notion that specialization in the production of some goods could foster significant economic advantage for a nation. Like Smith, Ricardo was not a protectionist and believed that free trade would ultimately yield higher return. He used mathematics as a foundation of his theories and brought many new parameters into the discipline of economics, including the concept of rent, theory of wages and profits, and the labor theory of value. Specific to value Ricardo wrote in his *On the Principles of Political Economy and Taxation* (1911):

Utility then is not the measure of exchangeable value, although it is absolutely essential to it. If a commodity were in no way useful, - in other words, if it could in no way contribute to our gratification, - It would be destitute of exchangeable value, however scarce it might be, or whatever quantity of labour might be necessary to procure it.

Possessing utility, commodities derive their exchangeable value from two sources: from scarcity, and from the quantity of labour required to obtain them.

From his perspective, Ricardo viewed labor as the essential determinant of the value of a commodity, and he delineated the value of labor based on skill as well as in combination with capital. Ricardo's ideas, though influential to the present period, have been quite controversial. The primary issue has been specific to trade and relates to the observable and exploitive element of trade, inclusive of environmental and social justice parameters. Ricardo did not assume trade based on exploitation but rather trade as facilitating both country-specific and global optimization. The application of comparative advantage where trading partners have unequal power and both regulatory and economic differences is arguably not consistent with the theory Ricardo forwarded.

7.5 *Karl Marx (1818–1883)*

Karl Marx was a German philosopher who influenced economic thought through his writing and explanations of the nature of class struggle associated with various economic systems. Similar to other influential economic thinkers of his time, Marx was cognizant of the differences in the quality of life between the rich and the poor, but departed from contemporaries with his belief that persistent social inequities would eventually give rise to revolution. Marx's analysis of capitalism emphasized the alienation of labor from the product they produced, he also asserted that the source of profits was, in reality, the under compensation of labor for the value of the output they produced. Therefore, he viewed labor as a class of humanity within the capitalist system that was disenfranchised by private property, which, in turn, allowed the means of production (capital) to be controlled by a small minority, the capitalist. Furthermore, capitalists found themselves in a societal arrangement characterized by

fierce competition that forced them to maximize their profits in an effort to endlessly accumulate capital in order to survive.

From *Das Kapital* (1871):

The economic structure of capitalist society has grown out of the economic structure of feudal society. The dissolution of the latter set free the elements of the former. The immediate producer, the labourer, could only dispose of his own person after he had ceased to be attached to the soil and ceased to be the slave, serf, or bondsman of another. To become a free seller of labour power, who carries his commodity wherever he finds a market, he must further have escaped from the regime of the guilds, their rules for apprentices and journeymen, and the impediments of their labour regulations. Hence, the historical movement, which changes the producers into wageworkers, appears, on the one hand, as their emancipation from serfdom and from the fetters of the guilds, and this side alone exists for our bourgeois historians. But, on the other hand, these new freedmen became sellers of themselves only after they had been robbed of all their own means of production, and of all the guarantees of existence afforded by the old feudal arrangements. And the history of this, their expropriation, is written in the annals of mankind in letters of blood and fire.

From Marx's perspective, competition resulted in the tendency of capitalists to develop new and more efficient methods of production by replacing labor with capital. Marx believed that within a capitalist society, the ranks of the unemployed would grow in number, and be pressured by the desperation in their meager circumstances to reduce consumption. The actions, in turn, would create surpluses of commodities that cause economic contractions that result in the worsening of the plight of the working class. The economy would eventually recover but with increased polarization between socioeconomic classes. His observational commentary concluded that only a social revolution, inspired by the misery of the working class, would be able to free them from the exploitive predilections of capitalism.

8 Principles of Economics

The classical period of economics has become the foundation of the study of the discipline of economics. To a large extent, the curriculum of introductory economics has maintained the theories espoused by the writers and contributors to economic thought contemporary to the period. John Stuart Mill's *Principles of Political Economy* provided a summary of the contributions to economic thought by Adam Smith, David Ricardo, and other significant economic thinkers of the nineteenth century, and became a standard text used in the study of economics into the early twentieth century. However, of note is that the authors including Mill were relaying behaviors perceived in a society contemporary to their life and questioning aspects of the observed progress of the time including poverty, the role of money, and the potential impact of population growth. Their thoughts were debated discussions and their frameworks were not adopted as immutable facts. Additionally, the issues discussed were similar to those of predecessor Western societies, as evidenced in the moral philosophical discourses of Plato and Aristotle, nearly two millennia earlier. The

evaluation of the human condition within a given social and economic framework provides the challenge to economists to be both *positive* evaluators from the perspective that positive signifies reporting on observable and factual phenomenon and *normative* participants, where normative requires an expression of value judgment.

Present teaching models of economics have virtually eliminated the normative aspects of assessment, reducing economics to the mathematical relationships that are addressed in absolute terms rather than in alignment with cultural attributions coincident with their development. This in large part is attributable to the work of Alfred Marshall (1920). Alfred Marshall (1842–1924) was one of the most influential economists of his time. He applied mathematical principles to economic issues, with the result that economics became established as a scientific discipline. The promotion of the market model and the inherent efficiency of supply and demand are credited to him. He promoted the perspective that the intersection of both supply and demand produces an equilibrium of price and quantity in a competitive market. Therefore, over the long run, the costs of production and the price of goods and services tend towards the lowest point consistent with continued production.

Over time economics has become an increasingly quantified discipline. Arguably, the corresponding lack of attention to values and behavior incorporated within economic assessment has distanced the tangibility of economics to sustainability. This attribution has limited the understanding of the explanatory potential of economics and the application of economics as both a cause and a remedy of unsustainable practices.

Glossary

Anthropocentric: The belief that human beings are the central or most significant species on the planet (in the sense that they are considered to have a moral status or value higher than that of all other organisms)

Anthropomorphic: Anthropomorphic refers to the projection of human characteristics on nonhuman entities

Behavioral science: Behavioral science is the systematic analysis and investigation of behavior through controlled and natural observation, and disciplined scientific experimentation. It attempts to accomplish legitimate, objective conclusions through rigorous formulations and observation

Capital: Wealth in the form of money or other assets (equipment) available for investing in production (starting a company) of goods or services

Comparative advantage: The ability of an individual or group to carry out a particular economic activity (such as making a specific product) more efficiently than another activity

Economics: Economics is a behavioral science that studies the relationship between human needs, wants, and the finite resources available for the satisfaction of them

Economic activity: The production, distribution, and consumption of commodities

Economic agents: An individual, business, or similar entity that interacts within the economic framework and is therefore engaged in buying, selling, and producing activities related to goods and services

Free market: An economic system where prices are determined by supply and demand factors, without government intervention

Interest: Money paid regularly at a particular rate for the use of money lent, or for delaying the repayment of a debt

Laissez faire: The abstention of governments' interference in the market mechanism

Market efficiency: Based on the theory of market efficiency, when supply and demand are able to exercise their own self-interest without regulatory intervention, the price and quantity generated at equilibrium will represent an optimal outcome

Macroeconomics: Macroeconomics (from the Greek prefix makro- meaning "large" and economics) is a branch of economics dealing with the performance, structure, behavior, and decision-making of an economy as a whole, rather than individual markets. This includes national, regional, and global economies

Mercantilism: The economic theory that trade generates wealth and is stimulated by the accumulation of profitable balances; historically consistent with protectionism

Microeconomics: Microeconomics (from Greek prefix mikro- meaning "small") is a branch of economics that studies the behavior of individuals and firms in making decisions regarding the allocation of limited resources. Typically, it applies to markets where goods or services are bought and sold

Nation state: A sovereign or independent entity where the population exhibits commonality (homogeneity) in language, religion, lineage, and similar factors

Normative economics: Normative economics (as opposed to positive economics) expresses value or normative judgments about economic fairness or what the outcome of the economy or goals of public policy ought to be

Oikonomos: Ancient Greek for house manager

Physiocrats: A member of an eighteenth-century group of French economists who believed that agriculture was the source of all wealth and that agricultural products should be highly priced

Positive economics: Positive economics (as opposed to normative economics) provides description and explanation of economic phenomena. It focuses on facts and cause-and-effect behavioral relationships and includes the development and testing of economics theories

Rational economic agent: A rational economic agent can be anything that makes decisions, typically a person, firm, machine, or software. Rational economic agents are also studied in the fields of cognitive science, ethics, and philosophy, including the philosophy of practical reason

Sustainable: Able to be maintained at a certain rate or level

Utility: The satisfaction associated with consuming a good or service

Usury: The action or practice of lending money at unreasonably high rates of interest

Value: In market terms, value represents the financial attribution to a good or service. In philosophical terms, value represents the perception of significance of a good, service, event, resource, etc.

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Religion and the Environment: An Exploration of the Connections Among the Hindu and Christian Community in the Republic of Mauritius



Vencatesen Ponin

Abstract A growing chorus of voices has suggested that the world's religions may, individually and collectively, become critical actors as environmental problems intensify and the climate crisis unfolds. Religions affect societies at every level and they are key factors to take into account in designing environmental and climate change policies and communication strategies. However, empirical research on the issue remains divided and inconclusive. Findings offer few conclusive or consistent signs on whether religion is good, bad, or otherwise inconsequential with respect to how people express their environmentalism through their religious beliefs and attitudes. Wide heterogeneity in perspectives can also be observed both within religious groupings as well as across religious groupings. Understanding this heterogeneity might unveil crucial information about a community's perception of environmental risk and locus of control and can be extremely helpful in planning sensitization campaigns to promote pro-ecological behavior. The research study which forms the basis of this chapter attempted to explore how this diversity of eco-theological linkages operates in the Republic of Mauritius by investigating the way and extent to which the religious beliefs and values of the two main faith groups in Mauritius (the Hindus and Christians, respectively) shape adherents' perspectives on issues of climate and other environmental changes. It specifically analyzes whether there is any significant relationship between levels of religiosity and environmental concern, as well as qualitatively examining how participants make sense of and respond to environmental and climate change risks in light of their respective faith. The research was undertaken using a mixed methods approach that employed a combination of self-completion questionnaires and in-depth interviews. Quantitative data were analyzed by means of the SPSS statistical software while qualitative data were assessed by means of descriptive and thematic interpretations. The results indicate that, overall, the way that participants' perspectives on ecological and climate change issues relate to their religious beliefs and values is much more nuanced and varied than a linear conceptual framework would otherwise suggest. Depending on the particular environmental

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variable measured, the religious beliefs tended to be sometimes of a stewardship and type at other times espoused the character of mastery over nature, both within and across the two faith communities studied. Importantly, participants do not seem to explicitly relate their ecological behaviors to their religious beliefs and do not act in a way that is congruous with their values in general. This study makes a refreshing contribution to our understanding of the religion-environment nexus in Mauritius and constitutes an important basis for further studies seeking to understand how to optimize and improve the overall effectiveness of public engagement campaigns.

Keywords Religion · Faith · Culture · Environmental attitudes · Climate change

1 Introduction

Our worldviews profoundly influence our perceptions of and actions towards the natural world. The conditions of the physical life support systems which include biotic, ecologic, and abiotic components are directly dependent on the meanings and values we human ascribe to them as expressed through our behavior and its impacts. Research examining the different types of environmental attitudes has associated values with different concerns. For instance, cultural theory holds that individual differences exist in the perception of environmental risks based on four different myths of nature: nature benign, nature ephemeral, nature perverse/tolerant, and nature capricious (Steg and Sievers 2000).

Religion, as a dimension of human life, is one of the most important sources of our worldviews, values, and attitudes toward nature and other humans (Sponsel 2007). Due to its nature and function, it pervades and embraces almost all areas of life and has been called “the most powerful source of ethical guidance for our civilization” (Gore 1993). Every major religion to one degree or another prescribes principles for the human relationship with a Supreme Power, other humans, the Earth’s creatures and the Earth itself. Through a mix of parables, exhortations, commandments, and traditional practices, the nature and importance of these relationships are reinforced in various ways in each of the world’s sacred traditions (Posas 2007). It is seen as able to provide powerful, personal and social, metaphorical and practical resources for environmental engagement (Watling 2009). It stresses the order of nature, providing holistic awareness of the web of life, embedding humanity in a wider world of meaning and responsibility. Empirical research by social scientists about the relationship between religious affiliation/belief and environmental worldviews has confirmed substantive effects of religious affiliation on climate change beliefs, even after controlling for a range of confounding factors (Morrison et al. 2015).

The Bible, which is the Book of Christianity, has powerful ecological teachings that support an ecological worldview while opposing a utilitarian worldview which tend to encourage overconsumption, continuous exploitability of resources, expendibility, and unlimited human population. According to DeWitt (1995), four

fundamental ecological principles can be readily discerned within the Christian Bible. These include an Earth Keeping principle, a Sabbath principle, a fruitfulness principle, and a fulfillment and limits principle. The Earth Keeping principle holds that just as the Creator keeps and sustains humanity, so humanity must keep and sustain the Creator's creation. Indeed, as affirmed in Psalm 24:1, "The Earth is the Lord's and the fullness thereof". Creation is proclaimed as God's handiwork and thus it deserves to be treated with respect, care, and concern. The created world is viewed as having been entrusted to humanity, which is to act therefore as its steward, and not its exploiter. The Sabbath principle, for its part, affirms that the creation must be allowed to recover from the human use of its resources. Humans have the responsibility to make sustainable use of the Planet Earth and let it flourish. According to the Bible, humans have three-dimensional ethical accountabilities—First to God, then to their neighbors, and finally to the entities in nature. These responsibilities are interconnected to each other. Thus, God regards the human attitude to his/her neighbors as the attitudes toward himself.

Hinduism, the largest religion in India, believes in the all-encompassing sovereignty of the divine. It sees the divine as manifested in all forces, objects, and processes. The great forces of nature—the earth, the sky, the air, the water and fire—as well as the various orders of life including plants and trees, forests and animals, are seen as all bound to each other within the great rhythms of nature. The Divine reality is seen to be present as "shakti" (energy) in every electron, particle, atom, cell and all manifestations of matter (hinduwisdom.info). Being parts of the Divine, all living things are therefore considered sacred and thus deserve to be treated with respect and compassion. Only God is assumed to have absolute sovereignty over all creatures, and thus no damage may be inflicted on other species without appropriate justification. Additionally, Hindus believe firmly in the concept of reincarnation, which refers to the countless cycles of births and deaths a human being goes through the cosmic journey and it warns us against treating lower forms of life with cruelty as life tends to progress into higher forms or regresses into lower forms based upon our good or bad karma (righteousness in this life) (Palmer and Finlay 2003, pp. 95–96). Harold Coward, in his essay "The Implications of Karma Theory" (1998), asserted that "there is a clear and unambiguous environmental ethic within Indian thought" that can be derived from the pan-Indian theory of karma. In Coward's view, karma theory rejects any radical dualism between humans and other forms of life, promoting instead a continuity between all beings that is conducive to a responsible ecological ethic based on interdependence and moral responsibility for one's actions (Van Horn 2006, p. 9).

However, in spite of its potential in effectively fostering more ecologically appreciative worldviews and environmental ethics, the role of religion has been increasingly found to be complex and rather ambivalent, with progressive and regressive tendencies operating at the same time within as well as between religious groups. Findings offer few conclusive signs on whether religion is effectively good, bad, or otherwise inconsequential with respect to how people express their environmentalism through their beliefs and attitudes.

In 1967, Lynn White, a historian of medieval history, has singled out Christianity as “the most anthropocentric religion the world has ever seen”, and held that the biblical injunction in Genesis 1:28 “Be fruitful and multiply, and fill the earth and subdue it; and rule over the fish of the sea and over the birds of the sky and over everything that moves on the earth” sanction a destructive dominance of the planet and established the dualism of man and nature (White 1967). Similar claims have been made by social scientists based on studies conducted in the 1970s and 1980s that church affiliation and/or biblical beliefs indeed correlated with low levels of environmental concern and behavior of a sort consistent with White’s historical claims (Hand and Van Liere 1984; Eckberg and Blocker 1989; Truelove and Joireman 2009).

Hand and Van Liere (1984) found in a Washington State Survey that Judeo-Christians were less likely to be concerned about environmental issues than were non-Judeo-Christians and were more likely to believe that humanity should dominate nature. Similarly, Douglas Lee Eckberg and T. Jean Blocker found that non-Judeo-Christians have more environmental concerns than Judeo-Christians. The authors stressed that “belief in the Bible, and only belief in the Bible predicted scores on all four indexes of environmental concern and did so in the direction expected by White’s thesis” (Eckberg and Blocker 1989).

On the other hand, researchers such as Hayes and Marangudakis (2001), in their study on environmental attitudes in Britain, reported no difference in dominion over nature attitudes for followers of Abrahamic religions (Jews, Christians and Muslims) as opposed to their category of non-Abrahamic which included Buddhists, Hindus, Sikhs, and other faiths with a stated belief in a higher power. In a similar vein, Kanagy and Nelson (1995) challenged the dominant view that those in Judeo-Christian traditions—particularly religiously conservative individuals in these traditions—are less concerned about environmental issues than are other individuals. He argued that Christians are found to be less environmentally supportive in some instances, but effects diminish with the addition of controls. When cultural, social, and demographic influences were taken into account, significant relationships between Christian perspective and dominion over nature were no longer apparent.

Barker and Bearce (2012) demonstrated that believers of Christian end-times theology in America are less likely to support policies designed to curb global warming than are other Americans. End-times believers hold that Jesus will one day return to Earth and commence a series of events that will ultimately culminate in the demise of Humanity on Earth, through the so-called Armageddon. Consequently, they tend to perceive such efforts as preserving the climate and Earth for future generations as being ultimately futile and ill-advised (ibid).

This wide heterogeneity in perspectives may have significant effects on the ways and extent to which mitigation and adaption strategies are supported and adopted by the public. Understanding this diversity of religious-environment opinions, the cultural and cognitive underpinnings of these different opinions, and the informational needs and interests of subgroups within a particular country and religious context can play a vital role in the designing and facilitation of adaptation and mitigation strategies that are locally relevant and more effective. As a Small Island Developing State, the Republic of Mauritius is among the most vulnerable countries which will

face the dramatic impacts of climate change but as to date, however, no such study addressing the religious perspective on environmental and climate change has been undertaken in the country. The present study has attempted to fill part of this gap by exploring the extent and ways the religious beliefs and values of the 2 main faith groups of the country (the Hindus and Christians) shape their adherents' perspectives on issues of climate and other environmental changes. The ultimate aim is to better understand how environmental communication programs can be optimized and improved to resonate more strongly with the interpretative frames of the local population. The research was undertaken from a critical realist perspective which offers a radical alternative to the established paradigms of positivism and interpretivism (Alvesson and Sköldbberg 2009, p. 39). A mixed methods approach that involves a combination of survey questionnaires and in-depth interviews was employed in order to develop deeper levels of explanation and understanding and postulate about the underlying structures and generative mechanisms that account for the phenomena studied. While the survey allowed for the exploration of patterns and trends between religious affiliation and environmental concern, the in-depth interviews allow the teasing out of cultural and religious frameworks that respondents draw upon when making sense of environmental and climate issues.

2 Methods

A purposeful sampling strategy was adopted to recruit the participants based primarily on their being either of Hindus or Christian faith and certain age (above eighteen to late fifties) and educational level (above primary level of education). Every possible effort was also made to ensure a fair gender balance. The data were collected in two sequential phases, a small-scale quantitative survey followed by the subsequent in-depth interviews of some of the survey respondents. A total of 50 self-completion questionnaires were handed out to the participants (25 to each faith group) and in-depth interviews were conducted with 4 participants selected purposively from each of the faith group. This included one clergy/priest and one lay member from each group. The priests are known religious devotees that engage frequently in religious activities organized by the local communities. The lay participants are community members known to express some interest in religious matters but without showing any deep commitment. This approach was adopted so as to obtain balanced views from both parties and avoid bias to the extent possible in the data collected. Interviewing a larger sample of people would have been desirable and much helpful but could unfortunately not be undertaken in view of the limited scope and scale of this study.

The questionnaire comprised a combination of 28 ranking scales and close-ended questions and sought to capture the following categories of information:

- Level of climate science knowledge;
- Degree of pro-environmental attitudes;

- Degree of pro-environmental behavior;
- Level of religiosity;
- Sociodemographic attributes.

Endorsement of a “pro-ecological” worldview was assessed using an adapted version of the New Ecological Paradigm (NEP) scale (Dunlap et al. 2000). Respondents were asked to indicate their strength of agreement (Strongly Agree → Agree → Unsure → Disagree → Strongly Disagree) with each of the statements that include endorsement of limits to growth, anti-anthropocentrism, belief in future eco-crisis, belief in a fragile nature, and rejection of human exemptionalism. Overall, the scale attempted to contrast ecological and human exemptionalism worldviews.

Degree of pro-environmental behavior was assessed by providing participants with a list of pro-environmental behavior items and requesting them to indicate how often they perform each of these behaviors. Behaviors were selected based on their environmental impact, including their potential to contribute to reductions in greenhouse gas emissions. These include common day-to-day household operations such as turning off the lights/TV set when not in use, gestures such as cutting down on air conditioning and limiting time spent in the shower to promote energy conservation. Additionally, participants were provided with an open-ended question to allow them to freely indicate other pro-environmental actions that they usually engage in with a view to reduce their individual carbon footprint. This provided the respondents a greater degree of flexibility and freedom in formulating their responses.

Levels of religiosity were assessed through the use of a simple religious index called the Duke University Religion Index (DUREL), a five-item measure of religious involvement developed by Koenig and Bussing and used previously in several studies conducted throughout the world (Koenig and Bussing 2010). The instrument assesses three major dimensions of religiosity, namely:

- Organizational religious activity (public religious activities);
- Non-organizational religious activity (religious activities performed in private);
and
- Intrinsic religiosity (personal religious commitment or motivation).

These dimensions are viewed as adequate and accurate enough to assess level of religiosity in the respective religions explored in this study. But it should be pointed out that religiosity is a complex construct and there exist more comprehensive measures of religion/spirituality that can be adapted for more in-depth investigations.

The survey data were analyzed using the statistical software package IBM SPSS Version 16.0. The three components of religiosity were combined into a single measure of religiosity for ease of analysis.

The interviews were conducted face to face at the respondents’ place of residence and worship, respectively. The ethical guidelines of the British Educational Research Association (BERA) were applied to ensure optimal response from the respondents and full respect for their values. The local dialect and guiding questions were used throughout to facilitate the discussion. The duration of each interview was also kept

to around 20–30 min to avoid fatigue. The data were recorded in the form of notes and audio records. After transcription, the audio recordings were coded and comprehensively analyzed for specific themes, concepts, and processes. Anonymity and confidentiality of all participants were maintained.

3 Results

3.1 *Quantitative Results*

3.1.1 Characteristics of the Participants

On average, slightly more males took part in the survey than females (28–22). About half of the participants fall in the age group of 36–50 years and all hold a level of education at least beyond the primary school level. Around 50% of the respondents were not knowledgeable about the physical/scientific cause of global warming/climate change. 30% believed it had something to do with the ozone layer and some 10% even related it to acid rain and plant growth.

3.1.2 Cross Tabulation Between Religious Affiliation and Environmental Attitudes

Table 1 reports the percentage distribution of Christians and Hindus who agreed or strongly agreed with the attitudinal statements evaluating environmental attitudes. Of note, there are very minor differences on average in the proportion of Christians and Hindus who tended to espouse a particular opinion. Significant divergence could be observed only on items relating to whether humans were meant to rule over the rest of nature and the effects of human on the climate system.

- The majority of the respondents tended to be of the opinion that the balance of nature is indeed very delicate and easily upset, with the Hindus slightly more so than the Christians. Of note, all of the Christians and 92% of the Hindus acknowledged that when humans interfere with nature, the consequences produced are disastrous. Over 80% of the respondents are also of the opinion that humans are seriously abusing the environment, with the Christians a little bit more so.
- Over 90% of the respondents believed that plants and animals should have as much right as humans to coexist.
- 28% of the participants acknowledged that humans have the right to modify the natural environment to suit their own needs.
- Over 80% of the respondents believed that the scientific evidence for global warming and are of the opinion that preventing global warming would lead to less suffering in others. Over 75% of the respondents tended to attribute the effect on the climate system to humans, with the Christians more so than the Hindus.

Table 1 Cross tabulation between religious affiliation and environmental attitudinal items (Agree → Strongly Agree)

Religious affiliation		
Attitudinal items	Christians (%)	Hindus (%)
1. The Balance of Nature is Very Delicate	84	92
2. When Humans Interfere With Nature, It Produces Disastrous Consequences	100	92
3. Humans Are Seriously Abusing The Environment	88	80
4. Plants and Animals Have As Much Right As Humans To Exist	92	92
5. Humans Were Meant To Rule Over The Rest of Nature	32	8
6. Humans Have The Right To Modify The Natural Environment To Suit Their Needs	28	28
7. Humans Have Very Little Effect on The Climate System	12	24
8. Scientific Evidence Points To A Warming Trend In Global Climate	92	84
9. Preventing Global Warming Decreases Suffering In Others	92	88

Table 2 reports the percentage distribution of Christian and Hindu respondents who sometimes or always adopt the listed pro-environmental behaviors.

- The majority of the participants tend to sometimes/always engage in pro-environmental behaviors in their day-to-day lives. On average, no significant differences could be discerned in the frequency with which Christians and Hindus engage in pro-environmental behaviors.

3.1.3 Bivariate Analysis

Correlation Between Level of Religiosity and Strength of Pro-environmental Attitude (Humans Have the Right to Modify the Environment to Modify Their Needs)

See Table 3.

Table 2 Cross tabulation between religious affiliation and frequency of environmental behaviors (Sometimes- → Always)

Religious affiliation		
Pro-environmental behavior	Christians (%)	Hindus (%)
1. Turn off the Lights When Leaving a Room	92	92
2. Cut Down On Air Conditioning To Limit Energy Use	88	88
3. Limit Your Time In The Shower To Conserve Energy	76	84
4. Walk or Cycle Instead of Driving	72	84
5. Preferentially Select Products With An “Energy-Efficiency Label”	72	68
6. Talk To Others About Environmental Issues	80	76

- In general, as the level of religiosity increases, the strength of pro-environmental attitude decreases. As religiosity increases, the degree of conviction that humans have a right to modify the natural environment tends to increase. However, the relationship does not reach the point where respondents “start to agree”. Of note, the correlation was more substantive and statistically significant among the Hindus than among the Christians.

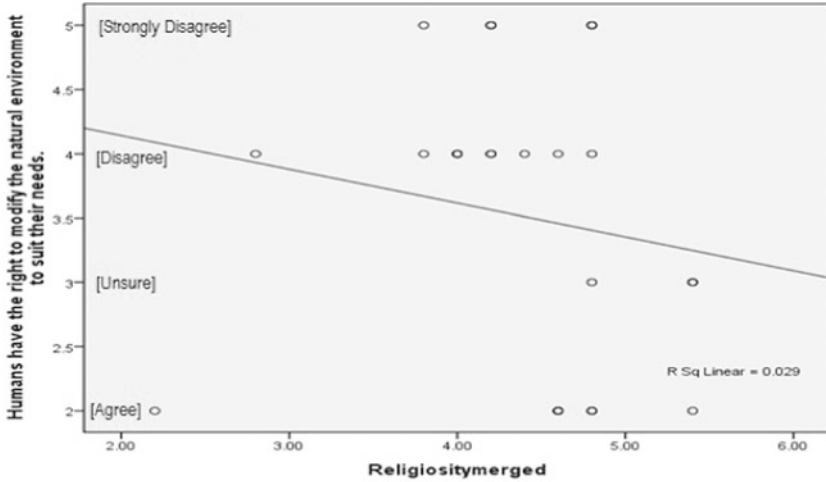
Correlation Between Level of Religiosity and Strength of Pro-environmental Attitude (Humans Have as Much Rights as Animals to Exist)

See Table 4.

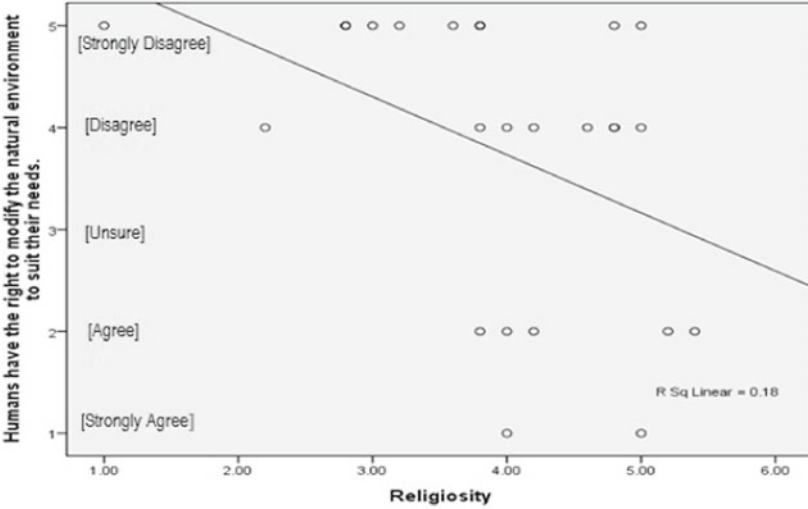
Correlation Between Level of Religiosity and Strength of Pro-environmental Attitude (Humans Have Very Little Effect on the Climate System)

See Table 5.

Table 3 Correlation between level of religiosity and pro-environmental attitude (Humans have the right to modify the environment to modify their needs)
CHRISTIANS



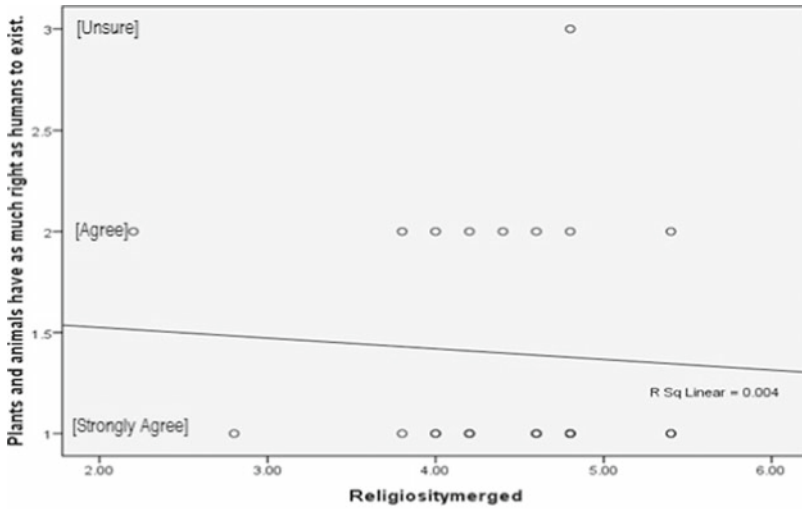
HINDUS



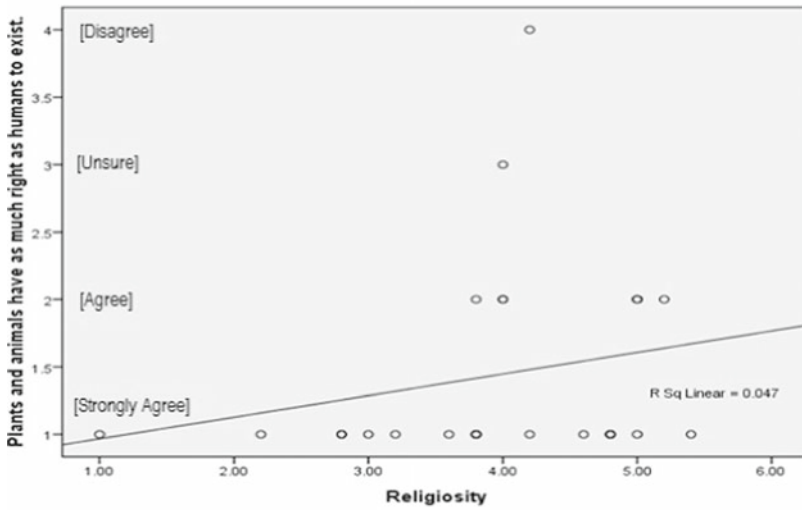
Religion	Christians	Hindus
Spearman Rho Coefficient	-0.328	-0.513**
Significance Level (2-tailed)	0.109	0.009

** Correlation is significant at the 0.001 level

Table 4 Correlation between level of religiosity and pro-environmental attitude (Humans have as much rights as animals to exist)
CHRISTIANS

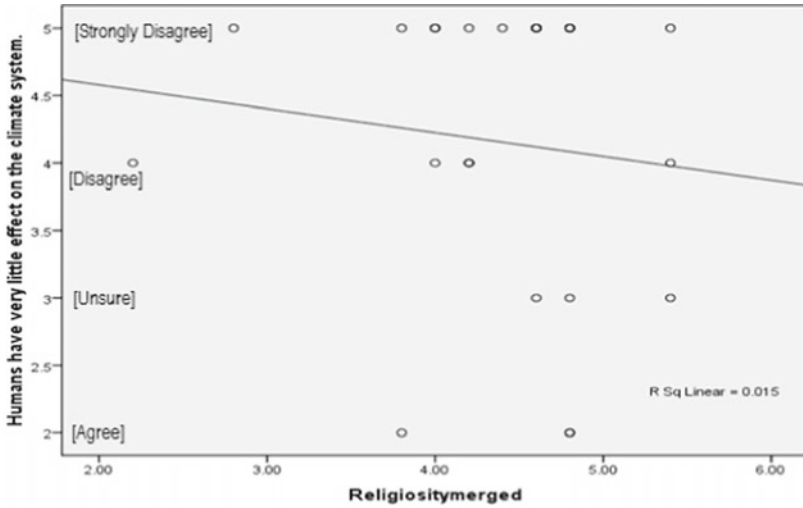


HINDUS

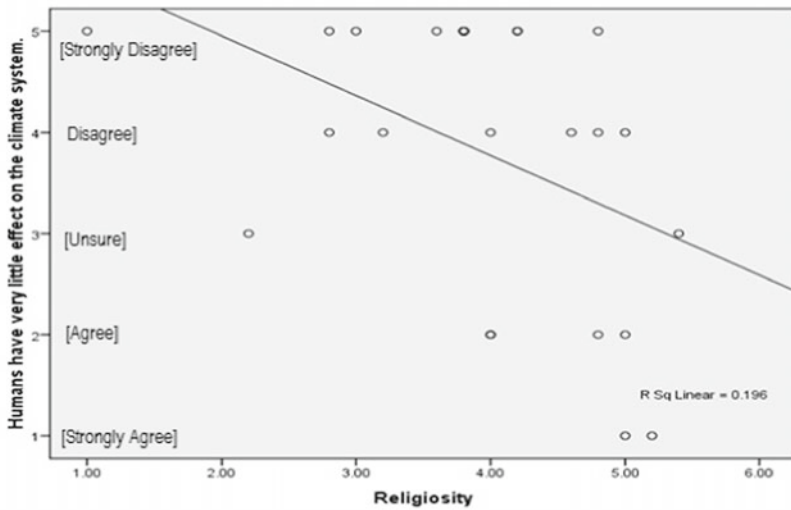


Religion	Christians	Hindus
Spearman Rho Coefficient	-0.056	+0.314
Significance Level (2-tailed)	0.789	0.126

Table 5 Correlation between level of religiosity and pro-environmental attitude (Humans have very little effect on the climate system)
CHRISTIANS



HINDUS

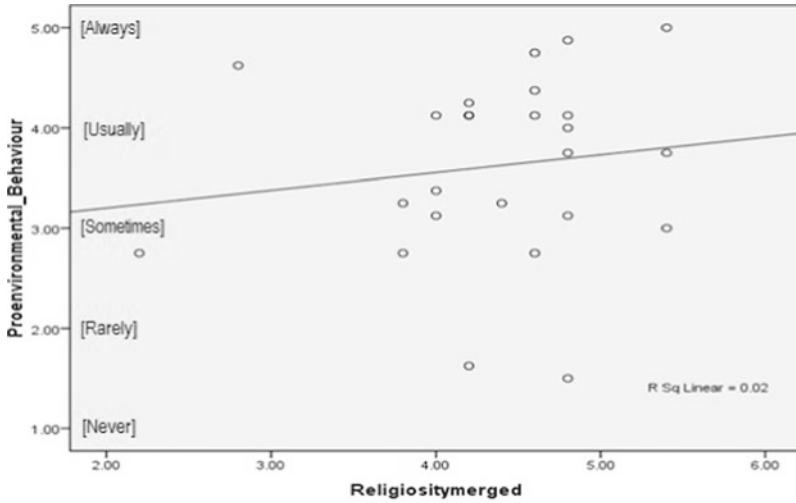


Religion	Christians	Hindus
Spearman Rho Coefficient	-0.127	-0.519**
Significance Level (2-tailed)	0.545	0.008

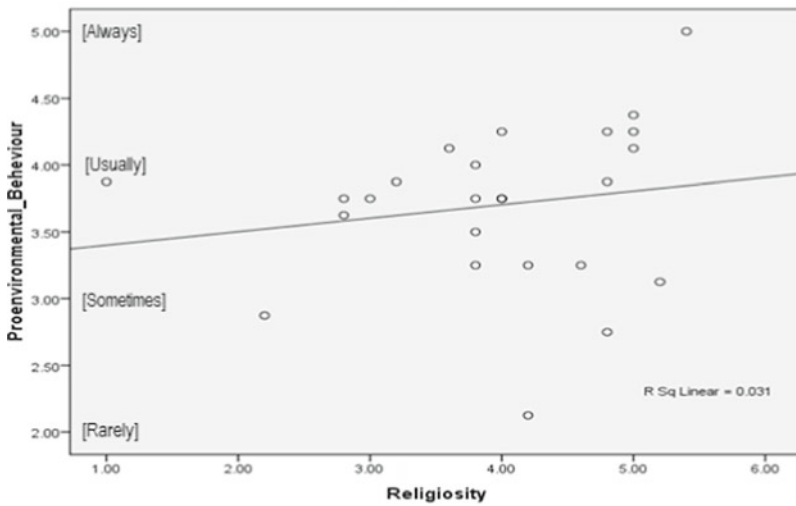
**Correlation is significant at the 0.001 level

Correlation Between Level of Religiosity and Frequency of Pro-environmental Behavior

CHRISTIANS



HINDUS



3.2 *Qualitative Results*

Three main narratives have emerged from the in-depth interviews and are as follows:

- Reality and Cause of Environmental Degradation;
- Balance of Nature;
- Personal Sacrifice.

3.2.1 **Reality and Cause of Environmental Degradation**

All four interviewees agreed that environmental degradation and climate change are occurring at an unprecedented rate. However, they are of the opinion that environmental changes have both natural and anthropogenic origins. With regard to the issue of climate change, the Hindu priest replied:

I would rather support a 50 / 50 thesis that climate change is not being caused entirely by humans, but also has some natural causes

With regard to the human contribution, both the Hindu and Christian interviewees strongly pointed [without any prompting] that it is the rise of our materialist/consumerist society which is to be blamed for the changes noted in our environment. This is reflected in the statement in one of the Hindu priest:

We are consuming more and more everyday... We have no choice, our society has become like that. We have more and more shops and supermarkets everywhere...and I believe this is affecting our environment to a great extent

None of the interviewees brought up the subject of a possible divine cause on their own. Moreover, when the Christian participants were prompted on their beliefs about any links between end times and climate change impacts, they categorically denied any direct connections between these two events. As one of the Christian laity mentioned:

It is far-fetched to say that climate change is being caused by God. We are not yet living in the end-times; it is true we will be experiencing similar changes when same arrives, but they will be much more drastic than what we are currently witnessing

3.2.2 **Balance of Nature**

All the interviewees were of the opinion that humans, animals, and plants should be allowed to coexist peacefully. The Hindu priest mentioned the following:

All animals are sacred to us, and it is a sin to treat them abusively and disrespectfully; we have guidelines in our sacred texts to respect animals

The Christian interviewees rejected the idea that God intended humans to use the Earth solely for their own benefit. They stated that it is true that they believed

humans and animals are quite distinct, but affirmed that God gave humans the task of living responsibly with animals and plants and the Earth's resources should be shared responsibly with all living beings. When referred to specific texts in Genesis, the Christian laity made the following comment:

We are actually oversimplifying the issue...human's responsibility is to care for creation first and foremost; alteration of the environment and natural systems is acceptable only if done in full awareness of the consequences so as to limit damage

3.2.3 Personal Sacrifice

Interviewees were queried on personal and societal measures that they believed that can take to reduce their ecological footprint. The responses were uniform across the two faith groups. On the whole, the respondents showed less willing to sacrifice the comforts of modern life for environmental protection. However, responses varied between different actions. The Hindu laity stated the following:

I cannot reduce my use of air-conditioning, it is getting warmer and warmer, the government must find a solution, resort the more solar energy for instance

On his side, the Christian pastor declared:

I always switch off the light when leaving the room, but if you ask me to cycle or walk to the local store instead of driving, I concede this is will be very difficult. I have got used to a way of life and it is very difficult to change these habits sometimes

The respondents were also queried on the extent to which they perceive their religious beliefs to play out into their choices of pro-environmental behavior. They all declared that their religious beliefs and values have no connections whatsoever to their pro-environmental actions. For instance, the Christian laity stated the following:

I sometimes reduce my use of the air-conditioning just to cut down on the monthly electricity bills

Overall, the responses from these in-depth interviews indicate that generally participants do not seem to be actively drawing on their religious worldviews when making sense of their environmental behaviors/actions. Moreover, there appears to be a salient value-behavior gap in terms of what respondents affirmed and what they tend to do in actual terms. The implications of these observations will be discussed later in this paper.

4 Discussion

Overall, participants tend to view nature from an "egalitarian" perspective and this includes the majority of the Hindus and Christians. The egalitarian myth of nature, as described by Steg and Sievers (2000), represents a precarious and delicate balance of

nature whereby the least jolt may lead to disastrous consequences. The participants perceived the balance of nature as very delicate indeed and admitted that humans are seriously abusing the environment. They were also predominantly of the opinion that plants and animals should have as much right as humans to coexist and that humans should not be allowed to modify the natural environment to suit their own needs. It is to be noted that people adhering to this myth of nature are generally very concerned with environmental problems and think they could and should contribute to the solution of environmental problems by reducing their needs.

This uniformity between Christians and Hindus appears to be consistent with results reported previously by Hayes and Marangudakis (2001) in their study on environmental attitudes in Britain. These authors, as in the present study, found no significant difference in dominion over nature attitudes for followers of Abrahamic religions (Jews, Christians and Muslims) as opposed to their category of non-Abrahamic which included the Buddhists, Hindus, Sikhs and other faiths with a stated belief in a higher power. Similarly, the observations seem to tally with Kanagy and Nelson (1995) who have challenged the dominant view that those in the Judeo-Christian traditions are less concerned about environmental issues than are other individuals.

It was also observed that, as the level of religiosity increases, there was a general tendency for the participants to believe that humans have a right to modify the natural environment to suit their own needs. Of note, the correlation was more substantive and statistically significant for the Hindus. This was rather surprising as Hinduism is generally viewed as an environmentally friendly religion that demonstrates deep ecological awareness and a great respect for the natural world. It is possible that, due to expanding materialism, migration and the increasing influence of western culture, there has been a progressive dilution of traditional values. Indeed, as evidenced during the in-depth interviews, both the Hindus and Christians blamed, without any prompting, the rise of our materialist/consumerist society for our ecological ills. Greeley (1993) and Kanagy and Nelson (1995) have highlighted the problem of focusing only on religious variables to explain variations in concern for the environment. Their studies showed that when cultural, social, and demographic influences were taken into consideration, significant relationships between Christian perspective and dominion over nature were no longer apparent.

During the in-depth interviews, none of the participants brought up the subject of a possible divine link for their environmental concern on their own. Furthermore, when the Christian participants were prompted on their views about any connections between end times and climate catastrophes, they categorically denied any direct link between these two events. This is of significance as end-times believers tend to perceive such efforts as preserving the Earth and the climate for future generations as being ultimately futile and ill-advised (Barker and Bearce 2012). Along the same line, participants described their beliefs as influential but affirmed that they had no direct impact or relevance on their ecological behavior. When discussing their patterns of ecological behavior, none of the participants draw on any particular dimension of their faith. Tomalin (2004) has proposed an interesting explanation of this apparent incongruity between human-nature epistemologies and conservation

behavior in Eastern religious traditions. She distinguished between what she termed “bio-divinity” and “religious environmentalism”, making a clear distinction between instances of nature worship and the conscious, reflexive application of these religious ideas to contemporary environmental concerns. Similarly, Biel and Nilsson (2005) found that in general people may not explicitly have their religious values linked to environmental issues. As the authors argued, although religious values were available, they may not have been activated and accessible in relation to environmental issues that respondents were prompted to discuss. It may also be due to the fact that religions are seen as providing concerns towards nature generally but not in terms of specific behavior (Mainieri et al. 1997; Wall 1995).

In addition to the incongruity between religious epistemologies and conservation behavior, a general value-behavior gap could also be noted among the participants with regard to their ecological actions. Though they described the environment as delicate and acknowledged that it should be protected, they do not seem to “walk the talk” and engage proactively in conservation behaviors. Such discrepancies between attitudes and behaviors have been partly explained by Blake (1999) who reported on a range of psychological and institutional factors that generally tend to affect individual action. He has identified and described three main types of barriers that seem to operate between environmental concern and action, namely barriers of individuality, responsibility, and practicality. All three categories of barriers seem to have partly influenced the behaviors of the participants in this study. For instance, the Hindu respondent who declared that she cannot reduce her use of air conditioning and that it is up to the government to do something about the issue of climate change may have been influenced by the “barrier of responsibility”. She ascribed the responsibility to the government and feels it is not within her locus of control to do something to protect the environment. Similarly, the Christian pastor who said he would prefer to keep on driving rather than cycle may have been influenced by practicality barriers such as lack of time or individuality barriers such as seeing himself the wrong type of person to ride a bicycle! Additionally, it is important to stress that there could be a range of other factors that tend to influence environmental behavior such as childhood experience, personality and self-construal, sense of control, political worldviews, and urban–rural differences which were beyond the scope of this study (Gifford and Nilsson 2014).

Last but not least, it is worth emphasizing that the findings reported in this study were all based on self-reported information. So it is necessary to be aware of their limitations. More objective measures might produce different results. Indeed, there is some scholarly evidence to suggest that self-reported informedness and objective measures of informedness were almost entirely uncorrelated (Durant and Legge 2005). Inaccuracies may stem from a variety of sources. For example, self-report measures may be prone to exaggeration. Some evidence suggests that individuals tend to overreport their pro-environmental behavior and social desirability bias has been suggested as a cause for this (Kormos and Gifford 2014, p. 360). The same applies for religiosity. For instance, in a major study, Hadaway et al. (1993) compared self-reported attendance from polls with actual counts of people in church and found substantial differences between the two. In this same line, interviewees may

have had a tendency to modify their responses to sound more pro-environmental or religious after knowing that they are being studied. A second issue is that attendance or frequency of prayers may have different meanings in different contexts. For instance, it is possible to be a religious and compliant Hindu or Christian while attending church or praying less often. However, the exact mechanisms of these effects and their magnitudes could not be quantified in this study.

5 Conclusion

Overall, this study indicates that there is no major difference in the environmental attitudes and behaviors among the Hindus and Christians of the Republic of Mauritius. However, the particular role of religion in shaping human–environment interactions was more nuanced and varied than expected. Sometimes, religious beliefs and values tended to be of a stewardship type, while at other times they espoused the character of mastery over nature, depending on the specific environmental variable tested. Importantly, participants do not seem to explicitly relate their ecological behaviors to their religious beliefs and do not act in a way that is congruous with their values in general. Although limited in scope, this work provides a refreshing perspective on the patterns of eco-theological diversity operating in Mauritius and contributes to the larger literature on religion and environmental concern. It underscores the fundamental importance of taking the local context into consideration and illustrates the potent role of other nonreligious factors in influencing peoples' ecological worldviews. These results should provide a stepping stone for better understanding how spirituality and religious themes can be incorporated in environmental education programs to link people more strongly to their meaning systems and to bridge the value-behavior gap. Further works with other faith groups and a larger sample of participants will also shed more light on the myriad factors that seem to determine people's attitudes and behaviors towards the environment, particularly the growing influence of political worldviews, westernization, childhood experience, and urban–rural differences. Additionally, the use of more objective measures of informedness might reduce inaccuracies and bias resulting from self-reported information.

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What Can We Learn from Pope Francis About Change Management for Environmental Sustainability? A Case Study on Success Factors for Leading Change in Change-Resistant Institutional Environments



Wendy Nelson and Johannes M. Luetz

Abstract Leading and sustaining change efforts is widely recognised as an important success factor for achieving progress on matters pertaining to environmental sustainability. There are several reasons for this. For example, transitioning from a fossil fuel based global economy to one that is based on renewable energy is a challenge that is widely understood to remain difficult to achieve for humanity in the absence of influential and robust change management, sustained over time and space. Hence, there is a need for strategic leadership that can drive and sustain far-reaching societal behaviour change. While political duty bearers and senior corporate executives are typically identified as those stakeholders who are best positioned to lead change efforts towards increased environmental sustainability, there is a paucity of case studies that explore the role of ‘spiritual leaders’ in this important area, which sits at the intersection of business and environmental management, and social science investigation. This case study on Pope Francis addresses this knowledge gap. As the current head of the Roman Catholic Church, a global organisation which has been identified as being among some of the most influential and at the same time change-resistant organisations in the world, Pope Francis exemplifies the pivotal role, which spiritual leadership can play in progressing the global environmental sustainability agenda. By conducting a broad review of the literature, including popular, ecclesiological, managerial, and peer-reviewed scientific publications, this case study contributes to this important discourse. Noting important connections between

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sustainability and the humanities, the study identifies the power of personal example as a key success factor for influencing change-resistant environments.

Keywords Change management · Change resistance · Leading change
Environmental sustainability · Encyclical · Laudato si' · Pope Francis · Climate change · Roman Catholic Church

It ought to be remembered that there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things, because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new. This coolness arises partly from fear of the opponents, who have the laws on their side, and partly from the incredulity of men, who do not readily believe in new things until they have had a long experience of them. (Niccolò Machiavelli (1513/2010). *The Prince*, p. 21)

I believe in Christianity as I believe that the Sun has risen, not only because I see it, but because by it I see everything else. (C.S. Lewis, *Is Theology Poetry?* Oxford Socratic Club, 6 November 1944)¹

Example is not the main thing in influencing others, it is the only thing. (Schweitzer 1996, p. xviii, emphasis original)

1 Introduction: Research Rationale, Intended Contribution, Methodological Considerations

This paper presents a case study of the importance of leadership in managing change in the Roman Catholic Church (RCC). The RCC is ‘arguably the largest, oldest and historically most successful corporation, firm, organization known to mankind’ (Kimberly 2015, para. 1). It has been identified as the ‘oldest institution in the western world’ (Stanford 2011, para. 1), ‘the world’s oldest multinational’ (Schumpeter 2013, para. 1) and the ‘biggest charity in the world’ (Paton 2017, para. 15). Furthermore, considered to be the ‘richest religion in the world’ with ‘more than a billion members around the world’ (Said 2013, para. 11), the RCC ‘can trace its history back almost 2000 years’ (Stanford 2011, para. 1). Consequently, bringing about and managing change in such a globally influential, complex, enduring and change-resistant organisation can have powerful implications on a global scale (Bradt 2013). According to Moorhead (2017), ‘Francis is trying to rebuild his church, but to say this is a mammoth task is an understatement, and all the indications are that, to use his own analogy, he seems to be rowing his boat in one direction while others on board are pulling the oars the other way.’ (para. 5). For these reasons, an understanding of such an institution and its ethos seems to be of fundamental importance to any comprehensive change management study. Given its influence and magnitude, the RCC provides a rich contextual environment for a case study into organisational

¹Later published in a collection of essays (Lewis 1962).

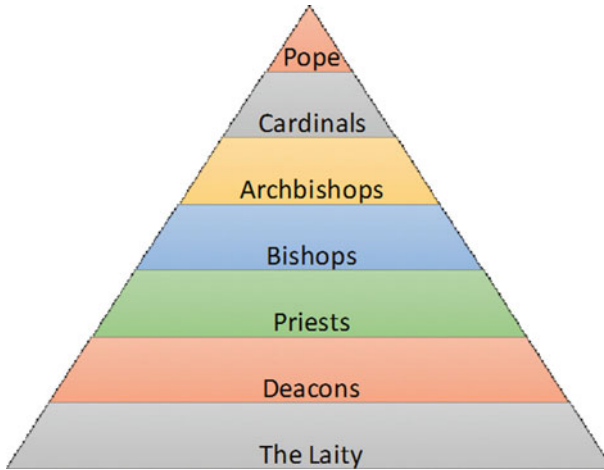


Fig. 1 Leadership layers in the RCC

change management and how humanity can link social values and change management theory to theology, spirituality and sustainability. This case study contributes to this important discourse and highlights important connections between sustainability and the humanities.

To assist in understanding the hierarchy of the RCC, a doctoral study undertaken by Verhoye (2015) compares the RCC to the conventional organisational structures encountered in corporate entities:

Organizationally speaking, the Pope would be analogous to the CEO of an organization, cardinals would be executive vice-presidents, and bishops would represent upper level management, leaders in charge of specific regions. In organizational terms, priests would be considered department managers, as they are leaders of a particular RCC congregation and finally the laity the people (p. 67).

According to the Vatican (2013), the hierarchical organisation of the RCC comprises multiple layers of leadership (Fig. 1).

Verhoye (2015) notes that although the Pope may be considered to be equivalent in power to a CEO, it needs to be understood that he is the worldwide leader of a religious institution and, unlike a CEO, is responsible both for those *in* his organisation and those *outside*, including non-Catholic Christians in every part of the world, and even if they do not directly regard him as their leader. It follows that any changes he instigates can have significant implications with important ripple effects that can reach far beyond the sphere of influence of the RCC itself (Schumpeter 2013). According to Landrum et al. (2017),

His popularity, resonating as much with general populations of Catholic constituents (e.g., Europe, United States, Latin America; see Pew Research Center, 2014) as with A-list public figures (e.g., Leonardo DiCaprio, Oprah Winfrey [...]), has crystallized into a sort of celebrity status as “The People’s Pope” (Chua-Eoan and Dias 2013). (p. 1)

Furthermore, although in secular terms, the inspiration for change emanates from the Pope himself, in religious circles, the inspiration for change might even be seen to be divine, coming from the inspiration of the Holy Spirit through the Pope (United States Conference of Catholic Bishops [USCCB] 2013). Unlike other CEO's, the Pope's word is 'the final word on matters of faith and morals (known as "papal infallibility")'. In the words of the Catechism of the Catholic Church (937) (1997): The Pope enjoys, by divine institution, "supreme, full, immediate, and universal power in the care of souls"' (Phillips 2008, para. 5). Another significant difference is that the Pope is understood to be God's representative on earth and 'the successor to Saint Peter whom Christ appointed as the first head of His church.' (Stanford 2011, para. 3). One of the Pope's many titles is 'Vicar of Christ', a term which is derived:

from Anglo-French *vicare*, meaning deputy or second in command and from the Latin meaning substituted or delegated and in the ecclesiastical sense a substitute, deputy or proxy ... The original notion is of "earthly representative of God or Christ". ("Vicar" 2001–2018, para. 1)

A CEO is usually appointed by the board of a company, whereas the Pope is selected from within the Collegiate of Cardinals by the College, which consists of the highest ranking members of the Catholic priesthood (USCCB 2013). The Pope's tenure is usually until he dies, whereupon the process of selecting a replacement begins. The College of Cardinals takes 15–20 days to discuss the needs and challenges facing the RCC and then gathers at St Peter's Basilica for the Papal conclave. It is within this context that a new leader is elected. This changing of the guard is the greatest catalyst for change in the organisation, as each Pope has his own unique style and direction for the Church (USCCB 2013).

In conceptually describing this case study, the basic research method undertaken consists of systematic literature analysis pertaining to the accession of Pope Francis and his subsequent management of organisational change within the RCC. Given that the study of change management is typically confined to the domain of business management and/or corporate culture (Hiatt and Creasey 2012; Johnson 2017; Kotter 2012), interdisciplinary research studies on change management within religious institutional contexts offer the promise of rich, insightful and even unexpected observations (Gladwin et al. 1995). Religious institutions are bound by traditions and doctrines that non-religious organisations are not similarly defined (or confined) by. Given that contemporary writers have highlighted the RCC's traditionally 'slow response to political, social, economic and technical changes around them' (Bradt 2013, para. 2), this paper seeks to scrutinise recent change management advances under Pope Francis with the aim of extrapolating lessons learned in respect of leading change and managing resistance in change-resistant institutional environments. These lessons seem to be applicable and important beyond the confines of the RCC, and they suggest that change can be possible even in cautious, conservative and/or rigid organisational environments. In view of the urgent need for a comprehensive 'great transformation' (German Advisory Council on Global Change [WBGU] 2011) to transition the global economy from fossil fuel dependency to a post-fossil fuel era (Intergovernmental Panel on Climate Change [IPCC] 2014), lessons about leading

change in change-resistant environments have never seemed more timely (Kendall 1997; Ripple et al. 2017). By conducting a broad review of popular, ecclesiological, managerial, and peer-reviewed scientific literature, this case study contributes inductively to this important discourse.

This paper is organised into four parts. Section 2 introduces Pope Francis as the principal agent of change in the RCC. It also identifies the changes he is attempting to introduce and applies relevant change management and leadership theories to his plans to implement proposed reforms and negotiate resistance. The section also addresses Pope Francis' concern for the poor and the environment and then concludes with a short synthesis, which also sketches limitations and opportunities for further research. The discussion in Sect. 3 analyses the findings from Sect. 2 with a view to extrapolating lessons learned from Pope Francis that may similarly apply in other change-resistant institutional environments elsewhere. The study synthesis presented in Sect. 4 recapitulates the main findings of this paper with concluding reflections on the power of personal example.

2 Pope Francis: Change Management in the Roman Catholic Church

Jorge Mario Bergoglio of Argentina was elected as the 266th leader of the RCC on 13 March 2013 (Libreria Editrice Vaticana 2013). He took the name Francis in honour of Saint Francis of Assisi, saying, 'I believe that Saint Francis is the example par excellence of care for the vulnerable and of an integral ecology lived out joyfully and authentically.' (Libreria Editrice Vaticana 2015, para. 10).

He is the first Pope from the Jesuit order, the first from outside the northern hemisphere, the first from the Americas, and the first from outside of Europe since the eighth century (Brown 2017; Sullivan 2013). His choosing of the name Francis also seems significant in that it encapsulates his vision and priorities envisaged for his pontificate. Long-time RCC historian Jesuit Fr O'Malley said:

St. Francis loved the poor, he was concerned about nature, and he was a person of peace [...] I think he set the big priorities of his pontificate, and that is his big vision [...] He takes seriously the mission of the church, a new mission that is really old and the most fundamental mission of the church: to be love among all, patient and full of mercy and goodness. (interview cited in Dunne 2013, paras. 4, 10)

2.1 *Pope Francis: A New Kind of Papal Leader*

Francis has brought about a new kind of papacy. He is active on social media with the twitter name @pontifex (Bradt 2013), and he currently has 16.7 million followers.²

²<https://twitter.com/Pontifex>—viewed in February 2018.

On 19 March 2016, Francis became the first Pope to join Instagram, and promptly broke records, hitting ‘one million Instagram followers within 12 h of launching his account’ (Garcia 2016, para. 1). In the modern world, social media constitute a critical platform for communication. Not only is his engagement with this medium of communication a change but it also helps change the perception of the RCC. Communication is key to successful change management (Kotter 2012), and the Pope is now in touch with the greatest platform of communication and social commentary of this generation (Kimberly 2015; Verhoye 2015, p. 153; cf. Libreria Editrice Vaticana 2015, para. 47). At the same time, Pope Francis values the simple mystical communications and meanings encountered in nature:

The universe unfolds in God, who fills it completely. Hence, there is a mystical meaning to be found in a leaf, in a mountain trail, in a dewdrop, in a poor person’s face. The ideal is not only to pass from the exterior to the interior to discover the action of God in the soul, but also to discover God in all things. (Libreria Editrice Vaticana 2015, para 233)

As pope, Francis prefers the simple life and would rather be addressed by his informal title of Bishop of Rome (McElwee 2013). He chooses to live in a humble guest house, instead of the papal apartment (Wooden 2013), flies economy class and drives an older car (Kirchgaessner 2015). He goes out late, dressed as a regular priest to meet with the homeless (Williams 2013), and desists wearing the traditional papal mozzetta cape, instead paring down his papal wardrobe (Griffith 2015) to be ‘fit for his call for simplicity and humility’ (Associated Press [AP] 2014, para. 1), which has earned him the title ‘slum pope’ (AP 2014, para. 4). He also chose silver over gold for his piscatorial ring, kept his pectoral cross he had as cardinal and, instead of the elaborate papal robes, wears his white priestly attire (AP 2014).

His public presence reveals a man who appears thoughtful, compassionate and authentic. This, along with his accessibility and openness stemming from his desire to live out the gospel, ‘seems to be what is the most attractive part of this Pope, why so many people find him inviting, why so many people follow him, why so many people are coming back to the practice of the faith.’ (O’Connell 2015b, para. 10).

According to a conceptual framework approach about authentic leadership developed by George (2003; George and Sims 2007) and popularised by Northouse (2016):

authentic leaders have a real sense of purpose. They know what they are about and where they are going. In addition to knowing their *purpose*, authentic leaders are inspired and intrinsically motivated about their goals. They are *passionate* individuals who have a deep-seated interest in what they are doing and truly care about their work. (p. 197; emphasis original)

Moreover, authentic leaders ‘have a genuine desire to serve others, they know themselves, and they feel free to lead from their core values.’ (Northouse 2016, p. 197; cf. George 2003; George and Sims 2007). Pope Francis is the embodiment of this description and it is here where much of his success as a leader and change manager lies. Further, Kotter and Cohen (2002) posit that a common denominator in change competent organisations is a leader who eliminates the disparity between words and deeds: ‘Deeds speak volumes. When you say one thing and then do another, cynical feelings can grow exponentially. Conversely, walking the talk can

be most powerful.’ (p. 92). Thus, by his authentic behaviour, Pope Francis has not only increased his ability to create successful changes, but also reduced resistance. ‘In short: *Nothing undermines the communication of a change vision more than behavior on the part of key players that seems inconsistent with the vision.*’ (Kotter 2012, p. 99, emphasis original).

Pope Francis’ influence extends far beyond the RCC and even the wider Christian community, and this has been acknowledged and commended by influential media outlets. In 2013, both *Time* and *The Advocate Magazine* named him Man of the Year, because of the way he handled various controversial and doctrinal issues (Chua-Eoan and Dias 2013). These issues include sexual ethics, his response to the sexual misconduct of priests, his actions on corruption within the RCC, his availability to engage with the poor, his advocacy for justice for the earth and its people and his being in touch with the public (Chua-Eoan and Dias 2013).

In 2016, *Forbes* named Pope Francis the fifth most powerful person in the world (Ewalt 2016), and in 2017, *Fortune Magazine* named the Pontiff number three on their list of the greatest world leaders (Colvin 2017). Such recognition demonstrates the vastness and scope of his influence and the close connectedness with his contemporaries, which has earned him far-reaching respect both within and without the RCC (Bradt 2013; Garcia 2016).

Pope Francis’ ability to influence and create change comes from the power vested in him as God’s mouthpiece on earth, referred to in *Lumen Gentium* (Vatican Council 1998) as ‘the sacred primacy of the Roman Pontiff and [...] his infallible magisterium’ (Chap. III, para. 18). In leadership literature, this has been called ‘legitimate power’ and is ‘[a]ssociated with having status or formal job authority’ (Northouse 2016, p. 10). In the words of Northouse (2016), ‘The concept of power is related to leadership because it is part of the influence process. Power is the capacity or potential to influence.’ (p. 10). As a leader, Pope Francis appears to understand how to yield that power effectively. His authenticity, charisma, vision, accessibility, communication skills and humility are hallmark traits of ‘transformational leadership’ (Northouse 2016, pp. 161–193), which further enable him to create change and influence people (Kerr 2017).

Pope Francis understands the value and importance of people and authentic relationships (Verhoye 2015). According to Lippitt et al. (1958), it is the role of the change manager to help the organisation and employees work toward change: ‘This means that the relationship between the change agent and the client system, the channel through which all the agent’s knowledge and influence must pass, is the most important single aspect of the change process.’ (p. 143).

Effective change managers can develop human potential and can create, maintain and manage significant interpersonal relationships. They understand that, for change to happen, for people to want to follow a vision for change, there must be someone that people want to follow. ‘Vision plays a key role in producing useful change by helping direct, align, and inspire actions on the part of large numbers of people.’ (Kotter 2012, p. 7). Pope Francis surprised the world at his inauguration by inviting people to pray a blessing over him and his ministry. Francis also washed the feet of prisoners, women and Muslims, rather than performing this on selected priests,

which is the norm. He seems to understand that it is his role to lead and model the change (Bradt 2013).

Although seen to be progressive, Pope Francis is of course a traditional Catholic Jesuit (New York Times [NYT] 2015). He is not teaching new doctrine, but a new way of knowing and understanding the gospel. ‘Francis is not so much telling us *what* to see (which our dualistic minds will merely fight and resist) nearly as much as teaching us *how* to see and what to pay attention to.’ (Rohr 2013, para. 12; emphasis original). He has emphasised that true Christianity itself is about love and mercy and despite other differences, most Christians, whatever their denomination, broadly agree with this interpretation of the gospel (Rohr 2013).

There is nothing unique about a prominent Christian figure promoting social justice. However, this shift from doctrine to a pastoral focus has significantly changed the culture of the RCC (Engelhardt 2015; NYT 2015). Furthermore, because of the Pope’s far-reaching influence, this change does not only affect the RCC but has implications for society globally. What is happening in Rome is not revolutionary change, but it may make way for just that (Engelhardt 2015), and ‘[m]any [...] are rooting for him on these changes’ (Moorhead 2017, para. 9).

2.2 *Pope Francis: A New Kind of Change*

The overarching reforms that Pope Francis is advocating seem to centre around ways and means to progress from a Cleric-Centric (CC) organisational culture to a Catholic Social Teaching (CST)-centric orientation. While a focus on CC emphasises power and bureaucracy, CST orientation reflects more of a pastoral care approach that is ‘more poor-centric’ (Verhoye 2015, p. 67), and characterised by relationships that emphasise the centrality of the poor and marginalised. Cardinal Donald Wuerl of Washington said:

Pope Francis is calling for a church that, to my mind, is much more in contact with the Gospel, with the living out of the Gospel. Not just the articulation of the Gospel [...] but the personal living of it, and that seems to be what is the most attractive part of this pope, why so many people find him inviting, why so many people follow him, why so many people are coming back to the practice of the faith. And for reasons known only to them, there are some who find this somewhat threatening. (interview cited in O’Connell 2015b, para. 10)

His apostolic exhortation entitled *Evangelii Gaudium*, or ‘The Joy of the Gospel’ (Francis 2013), elaborates this vision of moving the Church closer to a poor-centric orientation, and away from a CC dominated culture:

I prefer a Church which is bruised, hurting and dirty because it has been out on the streets, rather than a Church which is unhealthy from being confined and from clinging to its own security. (Francis 2013, p. 41)

In her doctoral dissertation, Verhoye (2015) elaborates clericalism as follows:

Cleric-centrism is operationally defined as an orientation to Church organizational culture where leaders perceive structures, power, authority, ritual over meaning, authority over other,

and rigidly defined dogma to be of significant import as manifest in wardrobe, behaviour, writing, preaching and relationships. (p. 61)

To illustrate the detrimental effects that CC culture may have on priestly service, Verhoye (2015) refers her readership to a homily given by Pope Francis on 25 May 2013:

A girl-mother goes to the parish to ask for Baptism for her child and hears “a Christian” say: “no, you can’t have it, you’re not married.” Look at this girl who had had the courage to carry her pregnancy to term and not to have an abortion. What does she find? A closed door, as do so many. This is not good pastoral zeal, it distances people from the Lord and does not open doors. So when we take this path [...] we are not doing good to people, the People of God”. Jesus “instituted seven sacraments, and with this approach we institute the eighth, the sacrament of the pastoral customs office. (Verhoye 2015, p. 52; attributed to Christian Acceptance 2013)

Essentially, it appears that the RCC to which Francis aspires is one where Christ’s vision of evangelism and mission is not impeded by any form of cleric-centric obstinacy or bureaucracy. This seems to echo the words of Jesus who reminded his followers to assume the role of servants:

You know that the rulers of the Gentiles lord it over them, and their high officials exercise authority over them. Not so with you. Instead, whoever wants to become great among you must be your servant, and whoever wants to be first must be your slave— just as the Son of Man did not come to be served, but to serve, and to give his life as a ransom for many. (Gospel of Matthew 20:25-28, *Holy Bible, New International Version* 2015)

In the words of the United States Conference of Catholic Bishops:

Catholic social teaching is a central and essential element of our faith [...] It is a teaching founded on the life and words of Jesus Christ, who came “to bring glad tidings to the poor [...] liberty to captives [...] recovery of sight to the blind” (Lk 4:18–19), and who identified himself with “the least of these,” the hungry and the stranger (cf. Mt 25:45). Catholic social teaching is built on a commitment to the poor. This commitment arises from our experiences of Christ in the eucharist. (USCCB n.d., para. 3)

Pope Francis (2013) clearly states this vision:

God shows the poor his ‘first mercy’. This divine preference has consequences for the faith life of all Christians [...] This is why I want a Church which is poor and for the poor. They have much to teach us (p. 156).

In short, Pope Francis seems to consistently emphasise that he wants transformation, and that he wants to lead by example and not just by discussion, and that he wants to practise what he preaches (Verhoye 2015). In the change leadership literature, these qualities of lived authenticity, professional practice and personal example have been highlighted as important success factors (George 2003; George and Sims 2007; Kotter 2012, pp. 97–99; Kotter and Cohen 2002, pp. 91–91).

In his mission to change the culture of the RCC, some of the organisational changes he has made include: Demoting and removing certain people from power, allowing for transparency and cooperation on matters relating to sexual misconduct by priests, restructuring the Roman Curia, and initiating an independent audit of the

Vatican Bank and a change in finance management. When asked about reforms at the RCC, he denounced resistance to change on the basis that change implies being alive:

people should see that the central command of the church “is not an immobile bureaucratic apparatus.” Using to [*sic*] the Latin phrase *Ecclesia semper reformanda est* (‘The church is always to be reformed’), Francis said that in the changes at the Vatican people should see “first and foremost a sign of life, a Church that advances on her pilgrim way, a Church that is living and for this reason *semper reformanda*; in need of reform because she is alive. (McElwee 2016b, para. 9–10)

One of the first big changes he made was curbing the power of the Vatican’s Secretary of State. Over time, the position had grown to include authority over finances, hiring, being the chief of staff in the papal court, in addition to the original role of top diplomat. The Vatican’s most powerful diplomat, Cardinal Tarcisio Bertone, was stripped of the role, and replaced by ‘frugal, publicity-shy career diplomat - Cardinal Pietro Parolin - who, according to those who know him, is the antithesis of his most recent predecessors in the post.’ (Pullella 2014, para. 5). Further, ‘the Pope stripped the office’s authority over finances and gave it a smaller role relative to internal bureaucratic matters’ (Verhoye 2015, p. 78; attributed to Pullella 2014). He also removed Cardinal Raymond Burke, Arch Bishop of St Louis, from Curial leadership. This was symbolic as Burke was seen as representing the cleric-centric leadership whose powerful influence the Pope was attempting to curb (Verhoye 2015, pp. 79–80).

The extent of the Pope’s commitment to instituting change was exemplified by a headline in *The Independent* on 20 December 2013: ‘Pope turns to management consultants in bid to reform Vatican’ (Popham 2013). It was reported that the Vatican had hired four internationally respected consultancies, McKinsey & Co, KPMG Accountants, Promontory Financial Group, and Ernst & Young, to review its management, accounting, financial, planning and communication practices (Popham 2013, para. 3).

Another unprecedented move was his selection of eight cardinals, from all continents, to act as advisors on governing and reforming the RCC (Allen 2013). This move was also about decentralising the RCC structure and growing a kind of leadership influence that reflects the universal nature of the RCC (Verhoye 2015, p. 77; attributed Povoledo 2013). Furthermore, demonstrating the Pope’s understanding of the need for cultural competence and awareness in such a large global organisation, Father Federico Lombardi, the director of the Vatican Press Office, explained that the reforms are intended to lead to a ‘much less Roman and more widely representative way of governing of the Universal Church.’ (Zaimov 2013, para. 7). These men are said to be experienced diplomats, have extensive pastoral and governing experience, are known to have strong opinions and one is an experienced Holy See diplomat. Thus, they provide a range of experience and comprise multiple cultures and ideologies (Allen 2013).

Plagued by scandals, the Vatican Bank was in grave need of attention from the Pontiff (Povoledo 2013; Pullella 2014). When he took over in 2013, it was fresh on the back of a money laundering scandal, which saw Priest Monsignor Nunzio

Scarano arrested. Within months of Francis becoming pope, the Bank complied with international banking standards for the first time in 73 years (Vallely 2015). He then replaced many of the Bank's top advisors with a new department and fresh leadership and set up a commission to advise him on complex financial matters and economic affairs (Pullella 2014).

It appears that, in recent years, people have been conditioned to think that only matters relating to sexual ethics and the judging of others are of importance to the RCC (Engelhardt 2015). Pope Francis is trying to change such assumptions by providing social commentary on the exploitation of people and the planet, war, poverty and other issues close to his heart (Duncan n.d.). For example, he declared a year of jubilee for women who have had abortions (Kimberly 2015). Pope Francis has not changed Catholic doctrine, but through his leadership seeks to change perspectives. He has alluded to a change of thinking about the use of contraception in the face of diseases like the Zika virus and Aids, saying that in those circumstances it may not be considered as evil (McElwee 2016a). He is not afraid to criticise the RCC where he feels it necessary and is trying his best to bring people back to a contemporary RCC that is no longer seen as outdated (Kimberly 2015). This has included pronouncements of 'zero tolerance' on sexual abuse of minors committed by priests, as conveyed in a letter by Pope Francis (2017):

It is a sin that shames us. Persons responsible for the protection of those children destroyed their dignity. We regret this deeply and we beg forgiveness. We join in the pain of the victims and weep for this sin. The sin of what happened, the sin of failing to help, the sin of covering up and denial, the sin of the abuse of power. The Church also weeps bitterly over this sin of her sons and she asks forgiveness. [...] I would like us to renew our complete commitment to ensuring that these atrocities will no longer take place in our midst. Let us find the courage needed to take all necessary measures and to protect in every way the lives of our children, so that such crimes may never be repeated. In this area, let us adhere, clearly and faithfully, to "zero tolerance". (para. 13)

Further, Francis appears to want to change the mindset of the RCC on marriage, the family, homosexuality and sexual ethics (Brown 2017; Moorhead 2017), and preaches a message of 'who am I to judge?' (Engelhardt 2015, p. 3). He stands by an open-door policy of love, which treats everyone with respect and kindness in accordance with his understanding of the gospel message. Even while he adheres to the current stance of the RCC on many issues, he nevertheless seems to call for a more merciful approach (Verhoye 2015).

Perhaps unsurprisingly, 'his reforms have infuriated conservatives' (Brown 2017, para. 1), triggering significant resistance inside the RCC, with some even denouncing his views as weak thinking and theologically unsound and claiming that he wants to win the popular vote at the expense of staying true to biblical doctrine (Engelhardt 2015). At the same time, his reforms appear to bring people who have felt marginalised back into the RCC fold (Walsh 2014). According to Walsh (2014), the numbers could be significant:

A recent study, in Italy's Centre for the Study of New Religions, showed that of 250 priests interviewed, more than half reported a "significant rise" in attendance at their churches since the Pope was elected. "If we project these figures nationally," the centre's head explained,

“we’re talking hundreds of thousands of people who are returning to the Church [...] in some cases after decades.” (para. 10)

Inspired by St Francis of Assisi, and in the face of significant opposition from within (Brown 2017), Pope Francis seems determined to continue his reforms of the RCC from a Cleric-Centric (CC) organisational culture to a Catholic Social Teaching (CST)-centric orientation.

2.3 *A Pope for the Environment and for the Poor*

Significantly, the Pope’s ambition for the RCC to adopt a CST orientation was linked early on in his papacy to his desire for the ‘creation of an encyclical on the care for God’s creation. In July of 2014, while meeting with the leadership of the Franciscan order, Pope Francis demonstrated deep concern for the environment’ (Verhoye 2015, p. 124; attributed to Rome Reports 2014). This passion to engage the public on behalf of the Planet appears to have arisen from the Pope’s holistic interest to conjoin the forces of science and spirituality for the good of humanity and ecology:

Fr. Michael Perry, Minister General of the Order of Friars Minor, says: The Pope himself brought up the issue of the environment. And he talked about his deep concern that we need, the Church needs, to find the way to respond, using the best of science. But also using the best of goodwill of all of humanity, to bring together a consensus on trying to respond to the crisis, the ecological crisis. (Verhoye 2015, p. 124; attributed to Rome Reports 2014)

According to Duncan (n.d.), the Pope has two priorities, both of which, in a wider sense, involve care for creation and concern for conservation: ‘the drawing up of the post-2015 Development Agenda, with the adoption of Sustainable Development Goals, and the drafting of a new Climate Change Agreement’ (para. 16). Hence early on in his papacy, the notion of good stewardship of the environment and care for the poor have stood out as central issues of CST for Pope Francis, including raising awareness on climate change (Kimberly 2015).

Subsequently, these priorities found expression in his encyclical, which was released on 18 June 2015 ‘to much fanfare from climate change mitigation advocates’ (Landrum et al. 2017, p. 1): ‘Addressing “every person on the planet” in a groundbreaking encyclical, “*Laudato Si*”, Pope Francis speaks frankly and passionately about the “global environmental deterioration” of “our common home,” appealing “for a new dialogue about how we are shaping the future of our planet.”’ (O’Connell 2015a, para. 1).

According to Landrum et al. (2017):

The effect of the document hinged largely on Pope Francis leveraging his moral authority to influence public opinion on issues related to climate change. In particular, *Laudato si* advanced the message that there is a moral imperative to act to address climate change because, among other reasons, it threatens God’s creation and disproportionately affects the poor and vulnerable. (pp. 1–2)

Issuing his encyclical a few months prior to the 2015 Paris Climate Conference also suggests that the Pontiff may have sought to bring his global influence to bear in efforts to counteract what critics have called ‘the failure of global summits on the environment [...] too many special interests and economic interests easily end up trumping the common good and manipulating information so that their own plans will not be affected.’ (O’Connell 2015a, para. 10). More specifically, ‘[a]dvocates for climate change mitigation hoped that this moral appeal by the popular leader [see Pew Research Center 2014] of a socially-conservative religious institution would increase climate change concern among U.S. conservatives in general and Catholic conservatives in particular.’ (Landrum et al. 2017, p. 2).

His encyclical elaborates a comprehensive change agenda that comprises equitable concern by all and for all:

The urgent challenge to protect our common home includes a concern to bring the whole human family together to seek a sustainable and integral development, for we know that *things can change*. [...] I urgently appeal, then, for a new dialogue about how we are shaping the future of our planet. We need a conversation which *includes everyone*, since the environmental challenge we are undergoing, and its human roots, *concern and affect us all*. (Libreria Editrice Vaticana 2015, para. 13–14; emphasis added)

Importantly, this change agenda includes poor communities: Although poor people ‘tend to live far more sustainably than the wealthy’ (Luetz et al. 2019, p. 6; cf. United Nations Development Programme [UNDP] 2007, pp. 47–48; World Wildlife Fund [WWF] 2016), climate change impacts fall disproportionately on the destitute because they can least afford to prepare for or protect themselves from many of its adverse impacts (Brainerd et al. 2009; Luetz 2008, 2018; Luetz and Havea 2018).

Hence, there is an issue of inequity in the sense that those who are least responsible for global greenhouse gas stocks in the atmosphere today³ are nevertheless suffering disproportionately more from its arising ill-effects (Friedrich et al. 2016). This makes the encyclical a pertinent example of how Pope Francis’ leadership may promote change management for justice and equity through linking social values, theology and spirituality towards sustainability. These examples highlight some of the critical connections between sustainability and the humanities.

2.4 *Synthesis, Limitations and Opportunities for Further Research*

In view of the three areas discussed above (Sects. 2.1–2.3), it appears that Pope Francis has captured the imagination of large cross sections of society for his global change agenda, both within and without the RCC (Brown 2017). This impression also appears to be supported by research conducted in the U.S. one year into his pontificate, which suggests that ‘Catholics view Pope Francis as a change for the better [...] Pope Francis remains immensely popular among American Catholics and is widely seen as

³<http://www.wri.org/resources/websites/cait>.

a force for positive change within the Roman Catholic Church.’ (Pew Research Center 2014, pp. 1–2). While there are also nuanced opinions and counter-perspectives to this overall impression (The Guardian 2018), there nevertheless remains a strong sense that Pope Francis has set in motion a global change agenda ‘to reform an institution that the whole world knows is in dire need of change’ (Brown 2017; Moorhead 2017, para. 2). Hence, this case study offers important lessons that may inform change management contexts beyond the confines of the RCC (Schumpeter 2013). A brief discussion of pertinent success factors is offered in Sect. 3.

In respect of research limitations, it should be noted that the leadership perspectives offered in this paper are neither comprehensive nor fine-grained enough to allow for razor-sharp distinctions between change leadership and change management (Kotter 2011). In this sense, the perspectives presented in this literature analysis may be best perceived as indicative rather than definitive, conclusive and/or exhaustive. Moreover, there is scope for future research to fine-tune the macro focus of this discourse to reveal more microanalytical angles and perspectives.

3 Discussion: Managing Resistance and Promoting a Culture of Change Readiness

From the above discussion, it is quite evident that Pope Francis, over his years as Pontiff, is a reformer who has implemented measurable change within and without the RCC by introducing a rejuvenated vision on global issues such as social justice and environmental sustainability. This helps to explain why he has been recognised as Man of the Year by *Time*, with *Forbes* listing him as the fifth most powerful man in the world (Ewalt 2016; Chua-Eoan and Dias 2013).

Although management theory defines distinct styles of leadership, in practice they often overlap, and any successful leader typically exhibits more than one style (Northouse 2016). Pope Francis demonstrates multiple styles. He is authentic, transformational, servant-hearted, simple, humble and adaptive, possessing several relevant skills and traits. Undoubtedly, his efforts have created change within the RCC, slowly moving the culture away from cleric-centric (CC) bureaucracy towards Pope Francis’ vision of a poor-centric and Catholic Social Teaching (CST)-oriented RCC, which focuses on the gospel message and the needs of the people and our world, rather than rigid traditionalism or ritualistic grandeur.

Given that the theorisation of change management has been traditionally confined to the domain of business administration, management and/or corporate culture (Hiatt and Creasey 2012; Johnson 2017; Kotter 2012; Kotter and Cohen 2002), makes interdisciplinary research studies on change management within religious institutional contexts a fertile area of investigation, which offers rich and unexpected observations (Gladwin et al. 1995). Religious institutions are bound by traditions and doctrines that non-religious organisations are not similarly defined (or confined) by. This in-built or organic resistance to change allows for some very interesting perspectives on

overcoming institutional inertia to emerge, if/when ‘change’ does succeed. Seeing that contemporary writers have highlighted the RCC’s traditionally ‘slow response to political, social, economic and technical changes around them’ (Bradt 2013, para. 2), has prompted the authors of this paper to scrutinise recent change management advances under Pope Francis with the aim of extrapolating lessons learned in respect of leading change and managing resistance in change-resistant institutional environments. These lessons seem to be applicable beyond the immediate confines of the RCC, and they suggest that change can be possible even in cautious, conservative and/or rigid organisational environments. Importantly, insights may also enable more progress to be achieved toward realising the ‘great transformation’ of the global economic system (WBGU 2011), from fossil fuel dependency to a post-fossil fuel era (IPCC 2014). In view of the urgency of decarbonising the global economy, exemplified by recurrent and growing calls by ‘thousands of scientific experts who advocate urgent change’ (Luetz et al. 2018, p. 66), these lessons about leading change in change-resistant environments have never seemed more timely (Kendall 1997; Ripple et al. 2017). More specifically, scientists have employed stark imagery to warn of the consequences of global warming and urge serious action. For example:

[E]xpressed in Hiroshima atomic bombs, the energy trapped by man-made global warming pollution is now ‘equivalent to exploding 400,000 Hiroshima atomic bombs per day 365 days per year’ (Hansen 2012; cf. Braasch 2013; Cook 2013). Clearly, visualising yearly cumulative global warming energy as exploding 146 million Hiroshima atomic bombs annually makes it clear that anthropogenic climate change is likely to have severe long-term consequences that may well have some rather ‘apocalyptic’ end results. (Luetz et al. 2018, p. 64)

Expressed in simple language, changes instigated and progressively instituted by Pope Francis are linked to his values, simple lifestyle and authentic demeanour. For instance, much of the traction Pope Francis has achieved on change management seems to arise from his authentic, humble and simple approaches that have characterised his engagement with the public. The literature identifies several success factors for change management, including focusing on ‘the people side of change’ (cf. Hiatt and Creasey 2012), ‘communicating the change vision’ (Kotter 2012, pp. 87–103) and ‘authentic leadership’ (Northouse 2016, pp. 195–219; cf. George 2003; George and Sims 2007), among others.

Further, Kotter (2012) advocates for ‘clarity and simplicity of the message’ (p. 91), and warns: ‘Technobabble and MBA-speak just get in the way, creating confusion, suspicion and alienation. Communication seems to work best when it is so direct and so simple that it has a sort of elegance.’ (pp. 91–92). These success factors are reflected elsewhere in the literature, where traditionally oriented organisations are admonished to act honestly, simply, transparently and humbly:

Whether you’re a start-up founder or an established brand with a global presence, the time for illusion, smoke and mirrors is over. Not so much because you want it to be, but because there’s nowhere to hide anymore. Expectations are changing in a pretty profound way. People expect a certain amount of honesty and transparency and if you don’t provide it, they’ll find a path to it on their own. That’s upsetting and frustrating, it’s causing a lot of pain in more traditionally-oriented organizations that are used to a higher-level of control over information flow and brand control. To thrive in today’s world, you need to know how to tell a brand

story in a way that doesn't sound like a whole bunch of prepackaged BS. *You must master the art of getting real.* (Johnson 2017, p. 54; emphasis added)

Further, there is a sense that it is paramount to lead by example, or in the words of Kotter (2012), to 'Walk the Talk, or Lead by Example' (p. 97; cf. Kotter and Cohen 2002, pp. 83–100). The leadership literature highlights leading humbly by example as a critical success factor for effectively promoting change (Kerr 2017). As Albert Schweitzer is famously quoted as having said: 'Example is not the main thing in influencing others, it is the *only* thing.' (Schweitzer 1996, p. xviii, emphasis original).

Recent research scrutinised the papal encyclical through perceptual filters, observing that 'the release of *Laudato si'* offered an interesting research context for evaluating climate change cognition.' (Landrum et al. 2017, p. 3). The research concluded that 'the messenger played an outsized role compared to the message':

Opening up the "black box" of climate change cognition in the context of *Laudato si'*, it appears that Deacon Ditewig – echoing Marshall McLuhan almost 50 years prior – was correct. When it comes to Pope Francis and *Laudato si'*, "the medium is the message" (McLuhan 1964). Driven by political ideology, assessments of the credibility of Pope Francis (the messenger/medium) were what urged acceptance of the messages in *Laudato si'*. (Landrum et al. 2017, p. 8)

In summary, the critical analysis presented in this section appears to harmonise with other research, suggesting that 'even brief exposure to Pope Francis's efforts to spur global action on climate change can impact perceptions of climate change as a moral issue.' (Schuldt et al. 2017, p. 176). As such, the '[r]esults complement recent correlational findings and offer further evidence of the Vatican's influence on climate change public opinion.' (Schuldt et al. 2017, p. 167). In the final analysis of this case study, Pope Francis exemplifies how authentic spiritual leadership can enact change management, enhance equity and promote justice through linking social values, theology and spirituality towards sustainability. In influencing change-resistant environments, it appears that a credible messenger will ultimately supersede the message by *personifying* or *becoming* the message.

4 Concluding Synthesis: The Power of Personal Example

Transitioning from a fossil fuel based global economy to one that is based on renewable energy will be difficult to achieve for humanity in the absence of influential and robust change management, sustained over time and space. Hence, there is a need for strategic leadership that can drive and sustain far-reaching societal behaviour change. While political duty bearers and senior corporate executives are typically identified as those stakeholders who are most ideally placed to lead change efforts towards environmental sustainability, there is a paucity of case studies that explore the role of 'spiritual leaders' in this important area, which sits at the intersection of business and environmental management, and social science investigation. This case study

on Pope Francis addresses this knowledge gap. As the current head of the Roman Catholic Church, a global organisation which has been identified as being among some of the most influential and at the same time change-resistant organisations in the world, Pope Francis exemplifies the pivotal role, which spiritual leadership can play in advancing the global sustainability agenda. By conducting a broad review of popular, ecclesiological, managerial, and peer-reviewed scientific literature, this case study contributes inductively to this important discourse. Noting critical connections between sustainability and the humanities, the study identifies the power of personal example as a key success factor for influencing change-resistant environments. This accords with the leadership maxim made famous by the French-German theologian, humanitarian and Nobel Peace Prize winner Albert Schweitzer: 'Example is not the main thing in influencing others, it is the *only* thing.' (Schweitzer 1996, p. xviii, emphasis original). In the final analysis, it appears that a credible, authentic and authoritative messenger will ultimately supersede the significance of the message itself. Therefore, influencing change-resistant environments succeeds best if the messenger *owns, exemplifies, personifies* or even *becomes* the living message.

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Law's Ethics and Sustainability: Corporate Tax and Sustainable Social Structures



Adaeze Okoye and Chisa Onyejekwe

Abstract This paper examines what law as an aspect of the humanities could contribute to sustainability. It proposes that corporate tax can be viewed as a social 'value' or 'ethic' enshrined in law and potentially channelled towards sustainable social structures and system. The corporate vehicle is seen as an equitable wealth generation mechanism and taxation is one of the tools through which corporations can contribute to society. It examines the use of corporation tax in the United Kingdom as an exemplar. The paper also identifies the limitations of expressing such social values through law, as law can be a rigid tool for reflecting progressive concepts, often resulting in gaps through which there can be 'strategic' compliance. The paper suggests that an explicit focus on the link between corporate tax and the sustainability agenda may create the additional moral impetus for compliance with the law.

1 Introduction

The law requires taxation and this in itself reveals the potential to pursue a social value objective, especially within a modern administrative governance system. It reveals the potential to create social value by paying taxes towards a sustainability objective such as supporting a social system. Yet corporate tax and the morality of taxation in the era of large corporate groups remain a contentious issue (Harris 2013).

This paper examines the potential and limitations of the tool of corporate taxation as a social value. It examines tax literature for identification of the 'social value' and also tax receipts for the linkages with equitable revenue generation. Although government tax revenues are derived from a wider base of taxes, the paper's scope

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is limited to corporation tax receipts because of the unique nature of the corporate legal person and the challenges of linking corporate wealth to social sustainability.

Snape (2017) identifies the constituent elements of the concept of tax as: “besides being payable under legal compulsion, to be a tax levy must be exacted under legislative authority, assessed and collected either by the government itself or by an institution carrying out functions of a public nature and **intended for a public purpose**”.

The focus on a public purpose is one of identifiable moral and social value. It could be a limited morality of a functional nature. A morality which delegates to government a contribution for protection of property rights within a society structure (Locke 1764). On the other hand, it could also involve taxation which seeks to enforce a form of strong ethical morality such as that envisaged by Rawls’s vision of distributive justice (1971). Both visions involve the coordination of society for good. Arguments about how such coordination is handled could be presented along similar lines to Locke or Rawls. Thus, the juxtaposition between property rights and distributive justice can be framed in the language of sustainability. This is because sustainability asks how society should be coordinated for the well-being of present and future generations.

Sustainability is epitomised by the Brundtland report as ‘*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*’ (World Commission on Environment and Development 1987, 8). It has come to embody the objective of the triple bottom line of ‘people, planet & profits’ (Elkington 1997, Hopkins 2003). It exemplifies the balance between wealth accumulation, meeting the needs of the present and future and the continued sustenance of the natural planet which ultimately provides these resources. It asks a question of preservation, allocation and redistribution. Social sustainability is a major aspect of sustainability. It involves a contribution to human lives and societies, present and future. It also involves social rights. Social sustainability is reflected in the 17 sustainable development goals (UN 2017) including the goal to end poverty [1], zero hunger [2], good health and well-being [3], quality education [4], clean water and sanitation [6], affordable clean energy [7] and decent work and economic growth [8].

Piketty (2014) points out that ‘modern redistribution as exemplified by social states constructed by the wealthy countries in the twentieth century is based on a set of fundamental social rights to education, health and retirement’. He further argues that ‘whatever limitations and challenges these systems of taxation and social spending face today, the nevertheless marked an immense step forward in historical terms’ (Piketty 2014).

Alongside the state, in the pursuit of wealth accumulation is the unique legal construct of the corporation. The corporation is both an association of persons and a separate legal person. It is also often imbued with limited liability, a privilege accorded by the law to enhance risk taking and the potential of profits. It is the most successful business vehicle when measured in terms of economic success [profit] and the underlying argument for such a structure has been that it enhances global

prosperity. It has been rightly described as 'the world's dominant economic institution' (Bakan 2004).

Yet it is at the heart of a growingly unsustainable global system. The relationship between wealth accumulation through private property and society's role in facilitating the protection of such private property drives the question of a greater role for corporation in global economies. The UN Global Compact suggests that 'business can also...contribute in other ways to improve the lives of the people they affect...' (2017). The large corporations are increasingly seen as global partners in the push for sustainable development because of their multinational nature, they are now expected to do more and (even in some cases) provide direct social infrastructure.

Yet this examination takes a step back from the doing of more to examine the basic required by law. It examines a developed country system and its use of corporate tax. The traditional tool for gauging the contribution to society is tax. Even free market capitalists such as Friedman accept that government's responsibility is to 'impose taxes and determine expenditures for "social" purposes' (Friedman 1970). This should however not preclude a company doing more for society.

The taxation of corporate profits is linked to the recognition of the personhood and success of the company. At the heart of commercial success is the question of the use of law for societal benefit, redistributive justice via social systems through the vehicle of taxation. This is why this paper examines corporate tax specifically and its utility to the sustainability objective. It examines limitations and potential of corporate taxation in the UK as an exemplar. This exemplar would indicate what potential utility, corporate tax as a vehicle could hold for sustainability even in less developed countries.

2 Law's Ethics

Tax as it is known today has evolved from a series of factors which could be traced to both personal need and governmental needs (Frecknall-Hughes 2015). Its justifications are closely connected to governance systems. Tax historically has been a required payment to the government (Thuronyi 2003). The compulsion on members of society to comply with tax payments can be traced back to the needs for tax revenue by the government especially redistribution. Johnson sees tax as '*a payment, exacted by authority, from part of the community, for the benefit of the whole. From whom, in what proportion such a tax a payment shall be required and to what uses it shall be applied, those only are to judge to whom the government is entrusted*' (1913).

However in the modern political economy, the relationship between corporations and government is a considered one. Strange (1992) captures the current picture as one of bargaining, where macroeconomic policies and industrial policy gain significant importance. Although this can be simplified in the assertion that 'corporations want profit and states want to increase national income... (Guy 2009)', this does not fully capture the complex picture. It does mean that the government will require

tools to use in the bargaining to achieve its objectives. Taxation can be an instrument of law channelled towards more holistic societal benefit.

The government can independently decide the total tax to be paid by the taxpayers, and dictate the purposes for which it is used. However this belies the complex balancing and bargaining that governments have to do when they take into account the global context, the level of tax rates vis-à-vis compliance and revenue, plus an assessment of other indirect benefits.

The rationale for imposing taxes in a market economy such as the UK stems from the government responsibilities to provide public goods, redistribution of income and wealth, promote social and economic welfare and economic stability (James and Nobes 2013, Frecknall-Hughes 2015). This reiterates Smith's seminal 'canons of taxation', (1776) where he reflects his concern on economic growth and development and advocates for an equal, certain, convenient and economically practical tax system through which the government will achieve a sustainable social structure (Book V, Chapter II).

Locke (1764) reputed for his strong thesis on property rights recognises the legitimacy of legislation for consent-based taxes. He points out the legitimacy of regulations by laws as self-preservation and societal preservation:

'The first power, viz. of doing whatsoever he thought for the preservation of himself, and the rest of mankind, he gives up to be regulated by laws made by the society, so far forth as the preservation of himself, and the rest of that society shall require; which laws of the society in many things confine the liberty he had by the law of nature' (Locke 1764, Sect. 129.). Furthermore he stresses that:

They must not raise taxes on the property of the people, without the consent of the people, given by themselves, or their deputies. And this properly concerns only such governments where the legislative is always in being, or at least where the people have not reserved any part of the legislative to deputies, to be from time to time chosen by themselves. (Locke 1764)

This limited approach to taxation however legitimises the power of elected members of parliament such as that found within the United Kingdom to raise taxes for purposes geared towards the preservation of humankind and society.

Rawls (1971) who on the other hand advocates strong economic justice in society following his difference principle [a redistributive principle] also emphasises the role of taxation. 'Social and economic inequalities are to be arranged so that they are ... [a] to the greatest expected benefit of the least advantaged...' (Rawls 1971, 72). These arrangements can be handled via taxation. He advocates the use of taxation towards the provision of public goods and to achieve aims indicative of his difference principle including equality of opportunity (Rawls 1971, 247). This redistributive principle shares commonalities with sustainability and could therefore be expressed as including the equality of opportunity for present and future generations.

The convergence of these jurisprudential scholars is on society, its development and survival. The mechanisms suggested may differ but there is also convergence on taxation as a means of funding a form of societal sustainability. These are objectives which reflect the social structure that often drives tax policies in modern

administrative states. The next section exemplifies this assertion by examining the use of corporation tax in the UK.

3 Corporation Tax in the United Kingdom

Corporations (companies) are fundamental to many aspects of life in society especially in a liberalised economy with the privatisation of the provision of public goods and services. It therefore follows that corporation taxation is also fundamental to society (Harris 2013). The Meade Report (1978) also identified the legal construct of limited liability as a special benefit that should be subject to taxation. Harris points out that: 'a corporate tax system involves the special rules of income tax law that exists only because of the peculiar nature of the corporation and in particular, its artificial legal personality' (2013, 12). The UK government depends on revenue from wider taxation to a large extent to meet its needs. With the income tax, national insurance contribution and VAT making up two-thirds of the tax receipts (Miller and Roantree 2017).

Yet corporate tax systems are an important part of the mix and are designed to minimise economic distortions and can help promote an efficient economy (Miller and Roantree 2017). Corporations are intertwined in all aspects of life in the UK and proceeds from tax payments play an important role in the tax system (Harris 2013). Particularly, corporation tax contributes to the general functioning of a tax system by providing not only income to the government but also to help buttress the personal income tax. However, the success of corporation tax laws also rests on its administration. Therefore, having a sustainable body to administer and monitor the regime is vital to its success.

While many accept the utility of corporation tax, there is nonetheless wide-ranging debate in Anglo-American countries on whether and how corporations should pay tax (Avi-Yonah 2004, 2008; Miller 2017). This is not the direct focus of the paper although its conclusions strengthen the case for paying corporation tax. This part of the work examines tax literature and some data from Her Majesty's Revenue and Customs (HMRC) and Institute of Fiscal Studies (IFS) 2016 and 2017 reports.

UK company taxation has an ad hoc history because it did not originate as a separate system from inception. At inception, income tax was simply extended to apply to corporations (Harris 2013, p. 11). Income tax had a history which predates the existence of the corporation. During the First World War, parliament enacted the excess profits duty [EPD] which was applicable to the profits of all business (Banks 2011 54). However, it was in 1920 that the first targeted tax for corporations emerged. The Corporations Profits Act 1920 introduced by the Finance Act 1920 (Banks 2011 54). This was still seen as additional to the income tax.

It was in 1965 that the 'classical' corporation tax emerged. The effect of the Finance Act 1965 was that: 'the income profits of a company will not be liable to the income tax or the profits tax after the fiscal year 1965–66. Instead, the profits of a company, defined to include any "body corporate" or unincorporated association

other than a partnership, are chargeable as from 1966–67 to a new corporation tax' (Lazar 1966).

In 1978, the corporate tax rate was 52%. In 1984, it was significantly reduced to 35% and subsequently, further cuts followed through the years (Auerbach et al. 2010, 845). In recent years, there have been more changes and reforms because of the liberalisation of the world economy and a bid for a stimulating business environment. In the drive to ensure economic growth and job creation, and making the UK a more competitive environment for business, the HM Treasury announced some more changes to the tax laws. The reforms brought a reduction in corporation tax from 23 to 20%, reducing the burden of business rates by 2% and doubling the annual investment allowance. The rate is now 19% for 2017 (Jackson and Houlder 2017).

The UK government uses its wider tax revenue to create financial security provisions for all and universal access to education and to health services (Beveridge 2005). These would be funded from taxation and were free at the point of use. It was expected that everyone in work would pay and since taxation increased with increasing income, the rich would pay more and with a separate legal personality, it was expected that corporations contributed through its profits (Beveridge 2005).

With globalisation and cross border activities, corporations have become not only vehicles for revenue generation but also instruments for economic stimulation and job creation especially in the UK. These are viewed as the indirect beneficial effects. This has resulted in a policy of adjusting or reducing the corporate tax rate, where the government, envisages that more corporations will choose the United Kingdom as their business hub and thereby these increasing indirect benefits for society.

In 2010, the UK government published a report that indicated the intention of the government to make the UK corporation tax regime the most competitive in the G20 with the aim to provide more certainty in business (Gov. UK 2010, UKTI 2013). It set to introduce a guideline for corporation tax reforms and reducing existing distortions. This is in line with the OECD's tax policy reforms that show that if corporation taxes are not changed or reformed regularly, they can hinder economic growth, capital investment and productivity improvements (OECD 2010).

These reforms and cuts have been deemed necessary to encourage business growth. This is in line with Strange's view mentioned earlier, because it exemplifies the relationship between the government and corporations as one of bargaining. There have been constant reforms of the corporation tax system and cuts of the corporation tax rate, in the drive for benefits to each party. For the government, the outcome of this bargaining would be realised either through direct benefits of increased revenue generation or through indirect benefits, where a stimulating business environment ensures that there is a higher rate of investment and inflow of capital through FDI.

This, in turn, stimulates an increase in productivity and a higher level of local and domestic investment. High productivity influences high employability which comes with higher salaries for the employees and increases consumption and spending. An increase in consumption and spending generates more revenue for the government through the sales tax of VAT, ultimately achieving an optimal social structure.

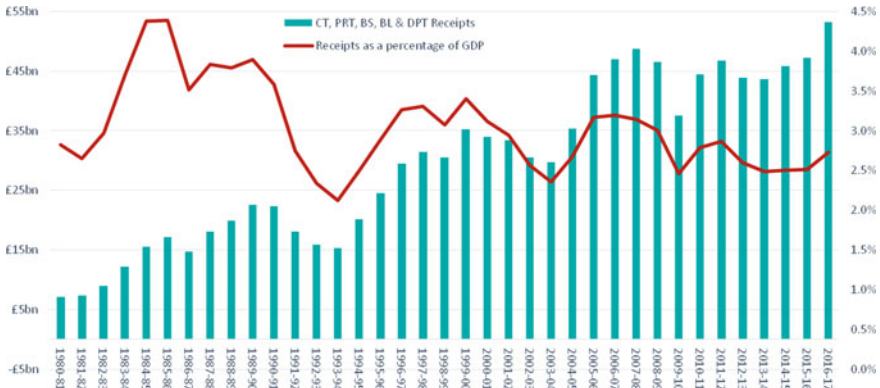


Fig. 1 Corporation tax receipts, 1980–2017

Nevertheless, the 2017 statistics from the Institute for Fiscal Studies (IFS) and the HMRC reveals a mixed picture. The results indicate that despite cuts and reforms to the corporation tax rate from 28% in 2010–11 and 19% in 2017–18, overall there is a fall in receipts (Miller 2017). This could also be a reflection of the fall in North Sea (oil) revenues but the forecast is for a rise in corporate tax receipts in 2020–22.

This forecast is strengthened by a record rise in the UK corporation tax receipts received in the 2016–17 financial year. The amount is £56bn and this represents a 21% increase from the previous year (Jackson and Houlder (2017).

This mixed picture is reflected in the evidence from data presented in the graph below. This graph was published by the HMRC (2017) and reproduced with their kind permission (Fig. 1).

The graph shows annual revenue and revenue as a percentage of GDP since 1980–81. CT receipts as a proportion of GDP have declined since the mid-1980s. There are dips in 1990–91, 2000–01 and 2009–10, with each period reflecting declining profits in economic slowdowns. The graph predicts a rising trajectory for corporate tax receipts.

One more observation from the data is that direct corporate tax receipts still make a relatively low contribution to the overall tax revenue. Tax receipts for corporate tax for 2017–2018 are just at 8% which is below property taxes at 9% (Miller and Roantree 2017, p. 3). The factors which drive the fall and rise of receipts could be linked to many issues including the adjustments in the corporate tax rate and compliance issues by the corporations. However, the next section tackles one of the major limitations to the issue of compliance and this is tax avoidance.

4 Tax Avoidance as Limitation

The issue of tax avoidance and its negative impact on the society is a demonstrable limitation on the full compliance with the corporate tax regime. To fully comply with the required tax legislation, the corporate taxpayer will need to imbibe an ethic which drives the motivation to be compliant.

The corporation being a legal person suffers from similar limitations in tax compliance as individual tax payers. Frey explains that the motivation for individual compliance lies in their intrinsic motivation known as tax morale (2012). He maintains that tax morale includes variables such as cultural, societal, religion, economic factors, justice and fairness and trust in the government (tax system) amongst others.

Corporations as part of society are also influenced by the same norms as individuals. Although their intrinsic motivation can only be alluded to by using an ethical code, various incidents have demonstrated that businesses and individuals are constantly confronted with moral problems especially in taxation matters. This is especially true of large corporate groups. In 2012, the representatives of Google UK, Starbucks and Amazon were questioned by the UK Public Accounts Committee (PAC 2012). The chair of the committee remarked on the moral dilemma: stating 'we're not accusing you of being illegal we're accusing you of being immoral' (PAC 2012). The peculiarity of the position of corporate groups operating in a number of countries lends some advantage to the potential for strategic tax compliance.

Hogan defined ethics as normative systems of rules of conduct developed to provide guidance in social or interpersonal settings (1973, Reckers et al. 1994). This guidance has long since surpassed social and interpersonal settings and has overlapped onto business settings. While it is expected that ethics may help regulate the relationships of humans with one another and individual human affairs, in business settings, it is expected to act as a form of conscience in activities undertaken by businesses especially in taxation matters.

Alm and Torgler (2011) argue that the taxpayer is not an intrinsic selfish and self-interested individual as portrayed in the standard neoclassical paradigm of tax evasion. Rather, they are often motivated by many other factors that have as their main foundation some aspects of morality, social norms, altruism, fairness or the like, all of which can be classified as ethics. A study that investigated tax ethics as a possible explanatory variable of tax compliance arrived at results that indicated that individual moral beliefs are highly significant in tax compliance decisions (Reckers 1994).

They found amongst their sample that if tax evasion is seen as a moral issue, individuals are less likely to evade taxes regardless of the tax situation. Although some individual perspectives of deterrence and tax morale compliance behaviour can be attributed to that of businesses; corporate decision makers' views may or may not reflect that of individual taxpayers. This is mostly due to the artificial nature of corporations. For instance, where certain individual taxpayers may be influenced by their religious inclinations, corporations would not be thus influenced as they do not to have religious beliefs. Nevertheless, some corporations (Chick-a-lee in the US,

Asher's Bakery in Northern Ireland) do have religious affiliations as well as having their cultures influenced by their founders and owners.

Furthermore, Ariel (2012) suggests that individuals and business taxpayers are different actors. Some businesses operate in groups for instance, multinational corporations (MNCs) whilst some may be partnerships or individually owned businesses. Most MNCs and some partnerships usually hide behind the veil of limited liability while holding varying degrees of corporate responsibility (Ariel 2012). Ariel further contends that certain issues, which include, stock values and market fluctuations, are unique to businesses and not individual taxpayers. Smaller businesses are directly affected by the above as their owners cannot always hide behind the veil of incorporation.

Recent avoidance and evasion scandals have helped raise both public and business awareness of the importance of corporate compliance. With the increasing tax gap as a result of tax avoidance practices by multinationals such as Google, Starbucks and Apple, the UK government together with the HMRC issued proposals towards mitigating tax avoidance aimed at increasing compliance (HMRC 2016). Emphasis on compliance, business ethics and corporate responsibility forces business owners to question how their business can serve the common good (Boda and Zsolnai 2016). Ethical values and common moral conceptions not only strengthen the effectiveness of compliance programmes but also help to promote positive behaviour (Joulfaian 2009). Moral values have a greater influence on behaviour than control or sanction mechanisms and the effects are shown in areas where there are no legal provisions or regulations.

Given the negative effect of tax evasion and avoidance, there is continued research to focus on understanding the tax compliance activities of businesses and identifying factors that would induce compliance and reduce avoidance. A significantly higher amount of research (Jackson and Milliron 1986; McKercher 2001; Saad 2014) has focused on the tax compliance behaviours of individual taxpayers than that of business taxpayers despite their importance as a revenue source for the government. This could be an area for further research.

Joulfaian (2009) contends that business of tax compliance is critical to the fiscal viability of governments, especially as a greater part of the government's tax revenues are paid for by businesses. Although deterrence plays a significant role on tax compliance and it is suggested that for businesses, this could play a major role as part of their compliance motivations. Braithwaite and Geis (1982) have suggested that the threat of sanctions may be stronger for corporate offenders because they have a higher stake in conventional conformity, and therefore, they have more to lose if they are investigated or prosecuted for noncompliance. It is argued that compliance is not only shaped by formal law enforcement but also by informal institutions, like social norms (Joulfaian 2009). Freedman (2016) rather proposes that the best way of ensuring business compliance is to create a relationship based on trust between the tax authority and the business taxpayers. By introducing trust, the taxpayer will have greater motivation to comply thus, more revenue is generated to achieve sustainable social structures (Freedman 2016).

Regardless of ethical codes and tax morale, corporations, both domestic and multi-nationals, use different schemes to avoid tax payments in the bid to boost profits and capital. These schemes result in a loss of tax revenues, which undermines government legitimacy and prevents economic and social development, and invariably affects the poorest of the society. Her Majesty's Revenue & Custom (HMRC) refers to tax avoidance as the bending of the rules of the tax system to gain a tax advantage that Parliament never intended (Gov.UK 2016). It often involves contrived or artificial transactions that serve little or no purpose other than to produce a tax advantage. It also involves operating within the letter—but not the spirit—of the law. It therefore involves the exploitation of loopholes and gaps in tax and other legislation in ways not anticipated by the law. Those loopholes may be in domestic tax law alone, but they may also be between domestic tax law and company law or between domestic tax law and accounting regulations. The issue of territorialism adds to this problem where large-scale corporations are in different countries and introduces the problem of taxing rights and laws between host and resident states.

To better maximise profits and escape from heavy tax burdens placed on them, such multinational corporate groups will work towards taking advantage of loopholes in laws of the host country where they are situated. Consequently, they may be regarded to be the greatest culprits of tax avoidance schemes although they account for a large part of the world's GDP and with intra-firm trade as a growing proportion (Library of the European Parliament 2013). Additionally, they have global operating models with integrated supply chains and functions centralised at regional or world levels.

Although tax avoidance has now become an international dilemma, the UK revenue has felt the impact in huge revenue loss. It has been reported that in 2012, Amazon paid just £2.4million of UK corporation tax on UK sales of £4.2bn, which is less than the £2.5 m it received in government grants (Hodge 2013). Google too has been accused of perpetuating tax avoidance schemes in the UK, with the UK being one of its largest markets. In 2013, it paid £20.4 m in taxes out of £3.8bn profits it made in sales from online advertising (Ahmed 2016). Estimates from the HMRC show that the UK's public finances missed out on tax revenues of £36bn in 2014–15 through tax avoidance (HMRC 2016). In an age of austerity and with a sustainability agenda, maximising government income is essential.

5 Sustainable Social Structures and the Use of Corporate Tax

The social system in the UK is referred to as the welfare state. The welfare state can take on many forms. This work will adopt the Barr's definition of a welfare state as both: 'a series of institutions which provide poverty relief, redistribute income and wealth and seek to reduce social exclusion... a series of institutions which provide insurance and offer a mechanism for redistribution over the life-cycle... (Barr 2012)'.

The first reflects redistribution, fairness and social justice (a kind of Rawlsian objective) and the second protection and risk-sharing (a kind of Lockean objective). The state finances this system of social spending from a mix of revenues which include taxation and insurance contributions (Barr 2012). The social expenditure database which provides information on OECD countries including the UK indicates high levels of spending for social purposes including pensions, health and family support. The total net social spending in UK reported for 2013 is 25% of GDP. This is higher than the OECD average of 21.4% GDP (OECD 2016). In line with direct and indirect benefits, the OECD points out that revenue can be obtained by taxing directly, indirectly taxing consumption and by 'tax breaks' geared at social purposes (OECD 2016).

In view of the picture of direct and indirect benefits, the overall picture is one of bargaining and trade-offs. Corporate tax is part of the mix necessary for funding social spending but tax rate rises do not always reflect higher revenues. The indirect benefits of tax cuts could include impact on employment and FDI. This was somewhat supported by a study carried out in 2008 on corporate taxation and the welfare state which concluded that: '...corporate taxation and social insurance have equivalent effects on unemployment and outbound FDI [and] while an increase in the corporate tax can raise corporate tax revenue, it is rather likely to worsen the government's total fiscal stance...' (Keuschnigg 2009).

Nevertheless, the suggestion is to maximise as efficiently as possible the amount of direct revenue collected and to ensure compliance, while adequately assessing the tax rates in order to remain globally competitive for FDI. These notions of redistribution, poverty relief and reduction of social exclusion all tie in the UN sustainable development goals. They are the core of sustainability. For example, Christian Aid in 2011 works on tax and sustainability states that:

Christian Aid wants to see an end to poverty, everywhere. One of the ways that we believe this can be achieved is through equipping developing countries to collect a fair amount of tax from the companies operating within their borders, enabling governments to pay for essential services for poor communities. (Christian Aid 2011)

The UK implementation of SDG report also recognises this link between domestic resource mobilisation and efficient tax systems (House of Commons 2016). Taxation is a traditional tool which has a legitimate 'social' value. Contribution derived from taxation can be utilised towards sustainability objectives. Conversely making explicit the sustainability objective will enable tax morale and provide a compelling moral reason for compliance.

6 Conclusion

The well-being of present and future generations is a central concern of the social systems funded by taxation which is backed by the authority of law. In doing this, the law makes social sustainability via the vehicle of public purpose, its central concern.

In spite of rate adjustment and flexibility of rates witnessed in the UK, the tool of corporate taxation is in the mix of government revenue generation. Income can help maintain a good level of sustainable development and social provision. The UK exemplar indicates the need for simplification, good administration and monitoring but there is still a significant role for companies to comply truly with the spirit of tax law and to reject tax avoidance schemes. The examination indicates the requirement for flexibility and tinkering with corporate tax systems to achieve a given objective.

The government can imbibe social sustainability as a goal in designing its tax system but corporations also need an ethical core which drives them to contribute to society through full compliance as well as helping to provide other indirect benefits. This may be even more necessary in developing countries with smaller administrative capacity and weak enforcement regimes.

Following the lessons of the UK exemplar, the potential of corporations to contribute to developing countries sustainability directly through full compliance with tax regimes must be explored alongside a balancing with other indirect benefits. This is a potential area for further research and study.

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A Model for Integrating Spirituality in Social Development in Latin America: Exploring Pope Francis Encyclical Letter *Laudato Si* (On Care for Our Common Home), the Ecology of Liberation and the Ancestral Wisdom of the South American People



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Abstract This article intends to assess the importance and the impact of the Encyclical Letter “*Laudato Si*” of Pope Francis (2015) in Latin America. Based on St. Francis of Assisi’s prayers, the encyclical letter intends to generate a change in the perception of and a consciousness of Mother Earth, bringing the following three essential aspects together: the scientific knowledge, the spirituality, and the indigenous knowledge. Pope Francis’ message states that the voices of indigenous peoples all over the world must be at the center of discussions and actions concerning climate change. This article proposes that out of the elements of the triad, the indigenous knowledge (*Suma Kausay*) is the most fundamental to operate the complete encyclical message in Latin America. Moreover, the article argues that there is a correspondence between the encyclical and the *Ecology of liberation’s* views. We argue that, in order to better understand the Pope’s message, it is important to look for aspects that this message and the systemic indigenous understanding, knowledge, and wisdom, developed over the millennia in the ancient cultures of South America, have in common. We believe that all actions that impair the quality of life on our planet should be of personal concern to all of us, as human beings living on Earth.

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We argue that the common good can be achieved when a systemic vision of these two (encyclical and ecological) voices blends into one, which focuses on the search for a spiritual and healthy relationship between human beings and their environment abandoning our claim to be the owner and the master of the Earth. We present a model of *spirituality-in-development*, which constitutes a new paradigm that systematically interrelates the vision of Pope Francis, the ideas of the *ecology of liberation* and the ancestral wisdom of the South American people.

Keywords Laudato Si · Common good · Sustainability · Mother earth · South American culture · Francis I · Ecology of liberation · Spirituality

1 Introduction

“Praise be to you, my Lord,
Through our Sister, Mother Earth,
Who sustains and governs us, and who produces
various fruit with colored flowers and herbs”¹

A change that leads to a deterioration of humankind’s quality of life should be of individual concern. Each one of us can contribute to the common good through the diverse talents that we possess, as well as through our wisdom, particularly the spiritual one. The common good is achieved through a healthy relationship between human beings and the environment, which requires the human to abandon the claim to dominate the world. In addition, the current world is characterized by an endless consumerism, which has led to the exaltation of the individualism in society, leaving aside the social aspect of belonging to specific communities, which is necessary in the process of development. The exacerbated individualism has widened the gap between the rich and the poor, with disastrous consequences for the social and community balance. Moreover, the distance between humans and nature has increased, leading to exploitation of natural resources without further considerations. All of these impose on a human the need to rethink his role as part of a new Ecology.

The Encyclical *Laudato Si* is relevant in this context, as it poses the need to initiate a dialog involving the different parties’ consideration of the role that a human should play in the time of the current environmental crisis. It is evident that natural resources are being squandered by the first-world countries, whose idea of development is tied to a lifestyle based on the present and the moment. They do not consider future consequences of their actions; neither do they account for what can happen to the next generations. Pope Francis attributes this crisis to the lack of spirituality as expressed through the message of the Gospel.

There is a significant overlap between the message of the Encyclical and that of Leonardo Boff’s *Ecology of the Liberation*. Both reflections provide a review of the

¹ *Canticle of the Creatures*, in *Francis of Assisi: Early Documents*, vol. 1, New York-London-Manila, 1999, 107–108.

way in which a human is connected with his fellow human beings, with nature, and with God. In addition, both of these two reflections refer to the life of Francis of Assisi, as an example that should guide human's life, as well as the source of a new spirituality of development that would reestablish the harmony between humans, on one side, and nature and all other creatures, on the other side. This new model of spirituality is based on the fundamental teachings of the gospel concerning the life in simplicity, in communion with others and with God's creation.

The new spirituality that emanates from the gospel is not exclusive to Christianity, and it has been present in the ancestral wisdom, like the wisdom of the indigenous communities. According to this wisdom, there is an exemplary harmony between man and nature. Furthermore, unlike individuals nowadays, the indigenous communities are reunited in their belief in social values, which, as part of their own existence, imposes on them the need to think about others' well-being. In this way, Mother Earth is revered and respected because it sustains the survival of the community.

We need to listen to the wisdom discussed above, in order to adopt a new concept of development that incorporates the spirituality. Only this can permit us to rebuild the fractured relationships between a human, on one side, and his fellow human beings, nature, and God, on the other side.

2 Theoretical Framework

Our research begins with Pope Francis' call for more care to be given to our "common home" highlighted in the *Laudato Si*. From there on, we focus on two aspects of the modern man's life that we believe should be interrelated in our proposal: the notion of development and spirituality. As shown in Fig. 1, in order to understand the notion of development that is consistent with the encyclical (1), and with the idea of "common home" (2), we have analyzed scientifically (3) international organizations' viewpoint on the subject.

With regard to the spirituality, our analysis focuses on the interpretation derived from the *Ecology of the liberation* (4), which will be developed later in the paper. However, we can say already that the notion of spirituality will be reflected in a twofold manner. First, there is harmonious spirituality, which is embedded in a balance between humans, nature, and God, and it is reflected in the life of Francis of Assisi (5). Second, there is the notion of spirituality that points towards the ancestral knowledge possessed by the indigenous communities, which can be viewed as a new way of understanding the position of humans toward Mother Earth. Given these notions of development and spirituality, we will propose a new model of spirituality of development (6). This model, which addresses various aspects of environmental crisis, e.g., climate change and poverty, will confront and challenge these problems by means of acting responsibly and showing understanding towards each other in the world.

In summary, the present study proposes the model of the spirituality of development in Latin America. This study constitutes a part of a larger project, in which we

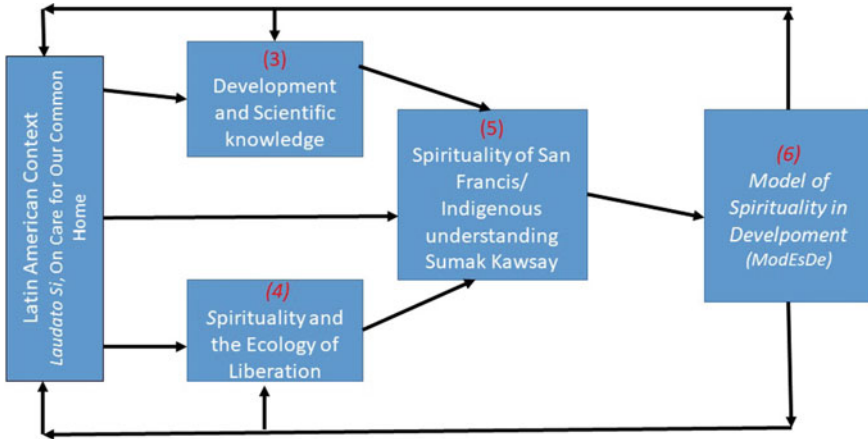


Fig. 1 Conceptual framework for exploring the Encyclical letter *Laudato Si a* (Francis 2015) and ancestral Knowledge: Model for a spirituality of development in Latin America (ModEsDe)—(Numbers in parentheses indicate the sections in the article)

attempt to apply the proposed conceptual framework in an indigenous community in the region of Colombia, thus, trying to explore its feasibility.

3 Development, Scientific Knowledge, and the Latin American Context: International Organizations

In this section, we discuss what the international institutions (organizations) propose in relation to the care of Mother Earth, and how this compares to the ancestral wisdom in Latin American states.

The document of the Good Living—Sumak Kawsay, from the Secretariat of the Good Living, Huanacuni (2010), provides a historical overview of the term development. The authors report that since 1930, the concept of development starts gaining an international recognition through its association with progress, improvement, and well-being. This concept is further reinforced in 1934 when some economic groups speak of happiness resulting from an improvement in the material conditions. Later, in 1942, the International Labor Organization (ILO), refers to some areas as “underdeveloped”. In 1943, Joseph Schumpeter (quoted by Secretariat of the Good Living, Huanacuni 2010) labels development as the “key to economic growth” (p. 13). That same year Paul Rosenstein-Rodan [quoted by Secretariat of the Good Living, Huanacuni (2010)] speaks about the multiplier effect of an investment and various sectors of the economy referring to the “great theory of development” (p. 14), which calls for the hegemony of development. According to the author, the use of the notion of development becomes official since the creation of the UN in 1945 and continues

to this day. In 1949, President Harry Truman draws attention to the “underdeveloped” countries, which, according to him, should be protected through the actions of the US because of their inability to maintain their freedom. Additionally, the World Bank refers to the development as a politically legitimate concept linked to industrialization, cities, and mega-projects.

More recently, Zuleta (2001) calls for a reinvention of the notion of development, which converts the societies into closed and inhuman systems. He defines this notion as the Global Human Development. This definition stems from this authors criticism of development, which, according to Zuleta (2001) is solely based on the technological progress. In the author’s words, technology is the “ability to manipulate nature and other human beings” (p. 50) and this is classed as a human progress. Zuleta (2001) believes that human development advances at a rate that is different from the rate at which technology develops. Therefore, it cannot determine the interrelations between humans. According to Zuleta (2001) “a particular technological development can be considered a human underdevelopment; it tends to be the case, and this will remain so, and this is not because of a society being agricultural or being in transition” (p. 49).

The Catholic Church (2000) states that the authority should make decisions for the common good of society and its members, as well as it should provide each person with an opportunity to have a decent life, including the provision of food, health services, clothing, employment, education, culture, precise information, and the right to start a family, among others. Therefore, the Catholic Church highlights the development, and it demands the common welfare for the whole community. “Development is a result of all social duties” (pp. 639–640).

In this research, development is understood as a concept that integrates ecology, so that three relevant aspects to the present discussion can be addressed. First, we examine the relationship of the human being with himself and his fellow human beings; second, we analyze the relationship of men with nature and other living creatures; and third, we characterize the relationship of human beings with the transcendent.

3.1 Organization of the United Nations (UN)

Articles 64, 65, and 66 of Chap. 2 of the United Nations’ Declaration concerning the rights of indigenous populations (UPF and UN 2007) state that these communities have the right to “promote, develop and maintain their institutional structures, customs, spirituality, traditions and legal systems” (p. 15). Moreover, in the same paragraphs, it is declared that these communities have the right to “maintain, control and develop their cultural heritage and traditional knowledge” (p. 15) and “not to be subjected to forced assimilation or destruction of their culture”.

According to Article 67, the States must ensure the prevention and the reparation of any consciously or unconsciously undertaken actions that intend to damage the integrity of the indigenous people, their cultural values or ethnic identity. Addition-

ally, and in accordance with article 66, the States oblige themselves to amend any damages caused by forced assimilation or integration.

From the above, one can infer that the dignity and the importance of the culture pertaining to indigenous people is a cross-cutting issue, which is defined in this document as the understanding of:

... tangible and intangible manifestations of their ways of life, accomplishments and creativity, and an expression of their determination and their spiritual and physical relationships with their lands, territories and resources. The indigenous culture is a holistic concept based on common material and spiritual values, and it includes distinctive aspects, such as language, spirituality, group composition, arts, literature, traditional knowledge, customs, rituals, ceremonies, methods of production, celebrations, music, traditional sports and games, behavior, habits, tools, housing, clothing, economic activities, the moral, value systems, worldviews, laws and activities such as hunting, fishing, trapping and wild gathering. (p. 15 and 16)

Similarly, by means of Article 8(1) from the Convention on Biological Diversity (UPF and UN 2007), the Organization of the United Nations refers to the responsibility of the State to protect and to ensure the respect for knowledge, innovations, practices, and lifestyle chosen by communities, so that the biological diversity can be preserved, conserved, and used in appropriate ways (p. 15 and 16).

Article 73 recalls the aims proposed by the Committee of the Racial Discrimination's Elimination within States, to:

...“recognize and respect culture, history, language, and the way of life of the indigenous people, as a way to enrich the cultural identity of the State and to ensure their preservation”; to provide the “indigenous people with the conditions to a sustainable economic and social development, which is compatible with their cultural characteristics”; and “to ensure that indigenous communities can exercise their rights to practice and revitalize their cultural traditions and customs, and their rights to preserve and practice their language”. (p. 16)

In addition to the stated arguments, the indigenous concept of spirituality is intrinsically embedded into the culture. The adoption of policies that promote particular religions or prohibit indigenous spiritual practices, or the lack of actions of government institutions, the police, and the courts to protect such practices, can undermine the right of these cultures (p. 16).

3.2 Economic Commission for Latin America and the Caribbean (ECLAC)

The document on “The Human Development of Indigenous People” urges for a change of view on the realities that indigenous people face (ECLAC (2005) known as CEPAL in Spanish <https://www.cepal.org/en>). It proposes a transformative vision, which, through a harmonious and balanced social life, can generate the conditions for development of the Latin American cultures. However, the feasibility of this proposal requires joining diverse and new plans “in which we can establish a link between history, culture, philosophy, spirituality, reason, conscience and aspirations” (p. 3).

One must consider the realities that the ECLAC (2005) document refers to from the future perspective. “It is imperative to incorporate other approaches to our scientific research on development and its measures, so that a profoundly human vision can be maintained” (p. 3).

The human vision that we refer to foresees the development of spiritual practices, beyond the religious practices. According to ECLAC (2005), spiritual practices “form the basis of the relationship of respect, between humanity and its environment” in the indigenous communities (p. 12).

For example, the appreciation of nature and the cosmos, which are the sources of life, is a very demanding and important practice for indigenous communities. This appreciation is expressed through collective rituals and practices, in which the level of consumption is determined by natural elements. Hence, a fundamental principle that supports the development of a human is to first ensure the development of nature (p. 12).

4 Spirituality and the New Integral Ecology: The Francis of Assisi’s Example and the Ecology of the Liberation

In the encyclical *Laudato Si*, Pope Francis calls for a dialog between different sectors of the society in order to stop or to reverse the negative consequences of human’s actions as well as those that affect the natural environment. Specifically, the encyclical calls for the ecology, in which not only the relationship between man and nature is analyzed but also the relationships of man and God (spirituality) and a man and his fellow beings. In this way, the Pope urges for a new way of life, which opposes the present model based on consumption and technocracy. “The urgent challenge to protect our common home imposes the unification of the entire human family in the pursuit of sustainable and comprehensive development” (§13). There are three relevant considerations contained in the reading of the Encyclical. These are its interest in and the proposal of an integral ecology; its social perspective that sees the poor as a central part of the new ecology; and Francis of Assisi as an example to follow in the new times. Analyzing these three aspects, one can see a correlation between the encyclical and the proposals announced in the Theology of Liberation by Leonardo Boff,² as part of his study titled *Ecology: Cry of the Earth, Cry of the Poor*. Hence, we can divide the exposure of the Encyclical into three parts demonstrating enrichment of Boff’s proposals. These parts are (a) the relationship of man with nature; (b) the relationship of a man with other men; and (c) the relationship of man with the transcendent. We will conclude by demonstrating the need for a new model

²Leonardo Boff is one of the representatives of the so-called *Liberation theology*, but there are several authors that have developed their reflections from this perspective. In the future and to particular refer to Boff’s thoughts we will use the *Ecology of liberation*, as it proposes a new paradigm that connect with the ancestral knowledge and with a reading of the Gospel as Francis of Assisi does.

(paradigm) that would have a profound impact on our understanding of indigenous cultures and that provides a new way of viewing the world, which is reflected in the life of Francis of Assisi.

4.1 *Relationship of Man with Nature*

4.1.1 The Encyclical

The encyclical proposes to view the environment as the place in which we all live. However, the actions of a human being and its dominating position have undermined the integrity of the environment. The pollution produced in cities has led to an acceleration of damages to the climate. The gases released into the atmosphere are damaging a large part of the ecosystem in an irreversible manner. The latter makes it necessary to take a step away from the current model of society to see what can be done to prevent nature from being destroyed. The clean water, which is crucial for survival of all species, becomes scarce due to unbridled economic policies that assume natural resources to be endless. The polluted rivers and seas are leading to an extermination of many species and, above all, are affecting the quality of drinking water. The cutting down of forests also leads to the extermination of a large number of plant and animal species that are part of a balanced ecosystem. Pope Francis warns “these effects could be worse if we continue with the current models of production and consumption” (§26).

The dialog proposed by Pope Francis gives different perspectives on how to inter-link local and international societies. This calls for a reconsideration of the roles of science and technology in addressing the theme of integral ecology. The model of consumption that mystifies technology as the only way to understand the progress and the advancement of humanity has led a human being to despise a simple life. Those who hold this power cannot have balanced relationship with other countries, as they effectively constitute a threat to a free development of life within all the communities.

Giving this rather discouraging tendency observed in science and technology, the Pope’s proposal tries to draw attention to other sources of knowledge. In particular, he points out to the need to pay more attention to local communities. No projects should be executed without informing the local communities, particularly if these projects require some type of intervention to be implemented. It is essential that those directly affected through such projects can be heard and listened to, and that the decisions made are a result of a consensus between all the parties that benefits, not just a few but the entire community.

We must change the direction that has led us to the current model of societies in order to reduce the threat to the ecosystem. Following the current path of consumerism and exploitation could lead to a great part of biodiversity of the planet and a significant number of species to become endangered or even extinct in a few years’ time. This would further deepen the social crisis and it would contribute to

worsening of conditions necessary for a dignified life. Pope Francis asks for a dialog that transcends the differences between the creeds and the perspectives of individual communities' in order to diligently address the current challenges in the relationship between the human and its fellow beings as well as nature. To meet this requirement, people should also take into account the solutions derived from science and technology, so that the environmental problems can be mitigated. More importantly, other forms of knowledge, such as the wisdom of indigenous communities, should be recalled and considered, as they too could contribute to correctly understanding the relationship of human, on one side, and other human beings and nature, on the other side.

It is clear that this study calls for a change of one's lifestyle. Even more transparent is the fact that the current model of consumption approaches its limit. Hence, in the light of the current situation, it is necessary to expand and change our understanding of the relationship with the world. This change can be crucial in creating a global consciousness, which enables people to see the extent of the damage that has been done and continues to be done. We should initiate a search for a new model of a lifestyle that would ensure the balance between a human and nature.

This education of healthy habits for the planet should be taught starting from childhood and should be promoted within families. From early years, habits such as respecting others and caring for the environment can be taught from our gratitude to receive goods for our benefit. This requires a humble recognition of us being a part of life on the planet, and of others having a right to live in dignity and in harmony among all other creatures. This philosophy behind our relationship with nature goes far beyond the indiscriminate exploitation in a rush to possess resources. Specifically, it relies on adopting an austerity attitude that demonstrates the appreciation of the fair value of cost we pay but also of the benefits we receive.

4.1.2 Ecology of Liberation

The proposal of Leonardo Boff (2006) of what Ecology starts by affirming that it is a question of knowledge. In order to be able to say what kind of knowledge it is, one must consider all types of knowledge. In a way, the ecology is a knowledge of all wisdom that is transversal in the way the knowledge and all the other wisdom are related. It is a holistic knowledge, that is to say, it is based on the relationships of all elements with all parts of the universe. This knowledge is advanced as it offers a new future for the generations of creatures, human beings, and the universe. This knowledge also goes backwards, as it embeds the wisdom of our ancestors and earlier generations. Finally, this knowledge captures the complexity of nature as a living thing and as a dynamic *organism*. Hence, ecology is the complete knowledge that covers everything in its past and its future, and captures the most complex expression of a human's spirituality. This definition of ecology differs from others in the aspect concerning the man's role on earth. It is not a question of inhabiting a *common home*, as expressed by Boff, who states that "the human being is not only on Earth; he is not a wandering pilgrim, a visitor from other places belonging to other

worlds; no, he is the son of the Earth; in fact, he is the earth itself in his expression of conscience, freedom and love” (p. 28). Hence, in the ecology of Boff, the human being is part of the earth, not as a guest or as a privileged one, but rather the human has the same connections with the Universe as all other things have. The human does not have a privileged position because the earth is not an object or a house, but a living being, Mother Pacha, the Gaia. All these things imply that it is essential to consider a change of paradigm to understand this new concept of ecology, which combines the totality of all that is, that was and that will be, and all the things that are interrelated. According to this new concept, the human being is considered a member of the *cosmic community*.

In this definition of ecology, elements are related as they share the same origin. There is an interdependence between all things that occur on earth and in heaven because the universe is made up of the same elements. Conditions that allowed a human being to possess a consciousness were formed over millions of years. For that reason, a human being should not view himself as someone who *only inhabits* the earth, but as someone who is an integral part of the Earth, and whose destiny/fate is intimately linked to the fate of others. Moreover, everything that affects the balance of nature also affects the human being and has consequences for his life.

The Encyclical view of human beings does not exactly correspond to the new concept of ecology. The Encyclical employs the order established by the anthropocentric tradition, according to which the man has a differentiating position among others. To say that the human inhabits a common home does not clearly express the idea of the universe as a living and complex organism that has transformed over hundreds of years allowing it to facilitate complex and numerous relationships that make everything possible. From this point of view, we believe that the Encyclical approach would be enriched and more value could be assigned to the ancestral knowledge if the idea of man as a guest to a common home were abandoned. Rather, we should revive the idea of the human being as a child of the earth united with his fate.

4.2 Relationship of Man with His Peers

4.2.1 The Encyclical

The call of Pope Francis not only talks about aspects that in an equal manner affect the environment and a human but also the weakest members of the society, and the poor. The natural damage to the ecosystem reduces the chances of those in need to have access to food, water, and basic resources necessary for a dignified life. On the other hand, the Pope points out that everything in a human’s life that affects society and the natural development has a negative impact on the environment, too. Hence, these two things: human life and the well-being of nature and the environment are inseparable. The encyclical states that:

Among the social components of global change one includes the employment effects of some of the technological innovations, social exclusion, the inequity in the availability and in the consumption of energy and other services, the social fragmentation, the increase in violence and the emergence of new forms of social aggression, drug trafficking, the increasing consumption of drugs among young people, and *the loss of identity*. These are only some signs proving that the growth achieved over the last two centuries does not correspond in all its aspects to an integral progress and to an improvement in the quality of life. (§46 emphasis added)

Human life has been degrading due to a particular lifestyle, which has been imposed as a norm in the society. This lifestyle is characterized by excessive consumption and a complete reliance on technology. Both of these characteristics have led to a high level of waste, and a great dissatisfaction among those who are less fortunate and do not have access to such luxuries.

In accordance with the Gospel and following the life of Jesus, Pope Francis proposes the figure of Francis of Assisi as an example to follow in life. The life of Francis of Assisi can be admired for two main reasons. First, he lives in harmony with the surrounding nature; he considers himself a brother to every living creature, and he maintains a horizontal relationship full of respect for all the existence. Second, his life is based on a harmony with God and a spirituality nested in his own humility and in the detachment from material things. In the current world, where *having* is the measure on which people are judged, the message of Francis of Assisi provides an alternative model to the presently adopted logic. Hence, it is not about *having* but about *being*. To appreciate every aspect of nature and respect, it is a part of ourselves as natural beings.

The figures of Jesus and Francis are particularly relevant nowadays because the current model of society greatly underrepresents people like them: the weak, the poor, and the marginalized. The logic behind consumerism involves detesting those who *do not possess*, since they are a heavy burden to others' interests. The Pope speaks about Francis of Assisi

He manifested a particular attention toward God's creation and toward the poorest and most abandoned. He loved and he was loved back for his joy, his generous dedication, and his universal heart. He was a mystic and a pilgrim, who lived in a simplicity and a wonderful harmony with God, with others, with nature and with himself. His figure demonstrate the extent to which the concern about the nature, justice for the poor, the commitment to the society and the inner peace are inseparable (§10).

4.2.2 Ecology of Liberation

Similarly to the encyclical, Leonardo Boff (2006) emphasizes that, in order to fully understand the new concept of ecology, in which the human being and all beings are aware of their mutual relationships and dependencies, it is necessary to pay more attention to people who are being humiliated and oppressed. The failures that have led man to marginalize and exclude other individuals can be by themselves considered as an ecological disaster, as the new definition of ecology goes far beyond the consideration of the environment. More attention has to be devoted to the poor

people's case because this is an aspect, which causes the breakdown with nature, as the poor are part of earth's organism. According to Boff, the poor should occupy an important epistemological place in order to reflect on ecology. Moreover, the theology of liberation aims to free the poor from the exploitation as well as the rich from the evil model of lifestyle that has led to the gradual destruction of the planet.

Boff states (2006) that the "ecological crisis involves two basic imbalances at the social level—the excess of consumption among the rich and the deficiency of consumption among the poor" (p. 97). According to the new ecology, the fate of these two groups is inseparable, which coincides with the proposal of the Holy Father. Thus, one can see the influence that the Theology of liberation has in the proposal of the Encyclical.

4.3 Relationship of Man with the Transcendent

4.3.1 The Encyclical

The crisis that the environment is experiencing calls for our reflection about our own role on the planet. Specifically, the crisis calls for our recognition of being a part of nature, being "brothers" of all creatures surrounding us, and being children of Mother Earth, rather than being its masters. All the beings in the world are connected to each other and play a leading role in the universal ecology. One should acknowledge the earth that we inhabit as a gift was given to us in order to take care of it and protect it. Furthermore, we should watch our planet with humility, acknowledging that we are part of nature and that our decisions have an impact on the natural order. The awareness of these facts can only be reached if we take a deep look at ourselves and discover whom we really are. This is the spirituality that Pope Francis talks about—the acknowledgment of the need for inner peace that is needed to live in a harmony with other living creatures. However, we also need to recognize that our current way of life is not adequate for a dignified life because it harms the poorest. Hence, it is essential to recover the harmony with all creations, so that the new generations have the opportunity to live decent lives in peace and harmony with other creatures on our planet earth.

It is interesting to see that Pope Francis calls a dialog between the different types of knowledge, as in this way he recognizes that spirituality is not exclusive to the Catholic Church; "[...] the solutions cannot come from a single form of interpreting and transforming reality. Likewise, it is necessary to reach the richness of diverse cultures, their people, their arts and poetry, their inner life and their spirituality" (§63). There is a great value to other cultures' wisdom. Therefore, it is important to listen to what people from other regions propose. The opinions of other cultures should not be silenced, but rather they should be brought to life, because they are necessary to restore the lost harmony with the environment. In particular, the Pope speaks about the wisdom of aboriginal communities who, consistently with their cultural traditions, recognize the intrinsic value of nature, thus, defending the basic

balance necessary for the conservation of resources. These are the indigenous groups whose understanding of the world has glorified the value of nature and the need to safeguard the assets obtained by using them in a responsible and grateful manner.

The spiritual richness of indigenous communities should be put into dialog with others' wisdom, so that the lost harmony can be recovered and the right path to a decent life and to a sensitivity toward other natural beings can be retaken. To some extent, the indigenous and ancestral wisdom coincides with Jesus' teachings. Both tend to promote a simple life, an appreciation and a respect for others' services, as well as reflection. They both talk about a life in harmony with nature and with others, and in harmony with the Father of creation. Only once we understand that ecology is not something alien to us, but rather that we are the ecology, we will be able to redirect the course of our actions. Hence, only when we abandon the thirst for power, for possession, for domination, we will be able to find the wealth of the world that is among us.

4.3.2 Ecology of Liberation

As mentioned already, Leonardo Boff (2006) proposes a Theology of liberation as a way to change the direction that civilization is going to. Moreover, he emphasizes the responsibility that Judeo-Christian tradition has in promoting the deviation from the disaster that the current social model is associated with. Unlike the Encyclical, the work of Boff entails a review of six points that go against the ecology and that are the principles of this tradition. The first point is the patriarchy that has promoted the male values against those of women. Second, in the monotheism and in the relentless struggle against the pagan gods, one lost the opportunity to recognize these different types of knowledge and the sacred values that nature has to them. The third point is the anthropocentrism that puts a man as a lord and a master of everything that exists, which maintains a perverse appropriation of resources, as if they were unlimited. The fourth point applies to the tribal ideology that breaks with a common ecology and, in this way, as it separates the people by imposing one leading ideology among many. The fifth point describes the nature of the fall, which demonizes nature like sin rules the man. Hence, as long as a man sins the earth will be cursed. The final point addresses the idea of the original sin that makes the human being capable neither of adopting the message of the gospel nor of the "liberation" that the gospel brings. These six points highlight the importance of the Church in taking responsibility for transmitting the doctrines to the faithful nowadays. As mentioned earlier, the notion of nature as the "common home" is nested in the logic of the anthropocentrism and does not have the same value as a human being.

The themes of the spirituality and the relationship with the transcendence can be seen from two complementary perspectives: on the one hand, the life of Francis of Assisi, which exposes a new spirituality based on the understanding of the Universe as a living organism and humans as its part; and, on the other hand, the spirituality that emerges from the ancestral and millennial wisdom of primitive cultures. With regard to the first point, Boff can see that Francis of Assisi provides a new model of

how to lead a life, in accordance with the teachings of the Gospel. What Francis of Assisi does and preaches is not a novelty, but rather the embodiment of the teachings and actions of Jesus. Further, it is clear that Christ's proposal is centered on the weak, the marginalized, and the poor. Recognizing in others own fair value within the order of the universe is the only way to approach the transcendence. Boff (2006) says that "Francisco created a synthesis that got lost in Christianity. This synthesis involves the encounter with God, with Christ and with the Spirit by means of nature, consequently, enabling the discovery of the vast cosmic fraternity" (p. 259).

5 The Spirituality of Francis of Assisi

With the figure of Francis of Assisi, two new views on the spirituality emerge. First, the teachings of the Gospel that demarcate an experience of self-neglect. Spiritual values, such as those of simplicity, cooperation, delivery, care for themselves and for others, are all integral to the Christian teachings. The second view relies on Francis' deep communion with nature and with all the creatures that surround him. One can see his resignation from the title of a master and a lord of the earth. In contrary, he envisions a new *way of being*, a new paradigm, which reestablishes a justified position of man in the world. This new man recognizes his fate being interlinked with that of nature. Despite everything that surrounds him, this man looks for a better way of life that benefits everyone else, especially focusing on the poorest and the weakest, since they are the ones that are most in need of support.

This new spirituality is aligned with the wisdom professed by the primitive people who recognize in nature Mother Earth. This spirituality is also vivid in the indigenous communities of Latin America, although the pace of civilization has tried to keep it hidden. However, the new times, the dialog between different types of knowledge, the reflection derived from different points of view, all have led to a rediscovery of all this wisdom that refuses to disappear. In some way, we can see from both perspectives, from the ecology of the liberation as well as from the encyclical, how the modern man is searching for new ways of understanding himself as part of nature. All these ways point to a new spirituality of the gospel, which is represented by the life of Francis of Assisi and the new spirituality derived from the indigenous communities' wisdom.

In the next section, we outline the main features of the ancestral knowledge, in particular, that of the indigenous communities in Latin America. We do so to understand the extent to which the different types of wisdom concerning *seeing and being* in the world overlap.

5.1 *The Path to the Ancestral*

Leonardo Boff (2006) reminds us of the existence of indigenous people that, in spite of being surrounded by civilization, have maintained their traditions and knowledge with regard to their relationship to Mother Earth. These people live in harmony with nature in a way that is exemplary for the people in developed cities, who follow the trend of a consumerism and a destruction to the planet. Boff (2006) states that there is a *reverence* of Mother Earth that is greatly needed by a modern man. The message of the indigenous people can be appreciated because of the following characteristics. First, the ancestral wisdom is reflected in the myths, which express a deep respect for the environment. Second, the indigenous people use nature in a manner that corresponds to a harmonious coexistence. Humans do intervene in the environment, but the intervention it is determined by the wisdom and it is based on a respect and an assessment of the entire ecosystem as a means for survival. The intervention is not dictated by a meaningless exploitation of resources. Rather, the intervention enables the integration of the human being in nature, so that nature is understood as a living organism that people depend on, must care for, and should maintain responsibly. The third characteristic is a mysticism of nature, where land is not considered as a means of production, but as a living organism, such as Pacha Mama. Pacha Mama gives everything making us dependent on her, and is “the Great Mother that everything generates, feed and welcomes” (p. 161). This is the reason why, as part of the mystique demonstrated by the indigenous people, one recognizes the gifts provided by Mother Earth and gives her tributes to thank for everything that was received. The fourth feature is the understanding of work as a collaboration with Mother Earth to ensure the survival of human needs. Hence, the primary objective of work is to allow that all men can enjoy the benefits provided by Mother Earth and to search for a better life. Fifth, the celebration and the dance are means by which one can establish the connection with the transcendent and experience the divine. To some extent, this communion with Mother Earth is the manifestation of the spirituality of the primitive communities. The current paradigm destroying the life on the planet could change if all these principles were followed. That is why according to Boff, the current paradigm must change and a new way of life and be in the world must be introduced. It is necessary to replace the current paradigm based on the unlimited consumerism and the exploitation with a new logic of respect, reverence, of the sacrality, and the harmony between all living creatures. This new paradigm would then be consistent with the teaching of Francis of Assisi and with the *way of life* adopted by the primitive communities hundreds of years ago. We should definitely abandon the current way of employing nature and viewing our own position in it. For this reason, as already shown, the Encyclical falls short of this proposed change in a paradigm and maintains the definition of nature as a home that man inhabits. The new paradigm requires that the man is understood as a creature made of earth and made by the earth, as well as, as a part of a living organism that we all entirely depend on. This new model recognizes the harmony and the transcendence in the balance of nature.

We can see that there is an overlap between these two interpretations of the new ecology, since both offer a move forward to a new spirituality. This new aim can be achieved by following a change of paradigm that imposes the recognition of our way of being in the universe and the acceptance of being an integral part of the Earth. We need to understand that our destiny is shared by all other beings in the universe, and for that reason, we should seek a harmony within this large community. For both, the Encyclical and Boff, the life of Francis of Assisi constitutes a model that revives the ancestral knowledge.

5.2 *Sumak Kausay in Latin America*

Given the analysis above, we should get to know better the ancestral and millennial wisdom to discover its richness. Moreover, we ought to give nature an opportunity so that we can change the current paradigm into a better one, free from a devastation and inappropriate actions of man. This new paradigm must go beyond the logic centered on capital and development, and it should promote *good living and living well*. This new paradigm implies the recuperation of the culture of ancient and primitive communities; their knowledge concerned the harmony with nature; and their own logic of capital. This new paradigm is based on the idea of the complete equilibrium and interrelationships between everything and everyone, so that everything that affects one part of this system has consequences on all the relationships. This is why the notions of balance and harmony are fundamental to the new paradigm based on the wisdom of primitive cultures and indigenous people. The concept of the *development* is usually associated with the exploitation, the destruction, and the competition. This definition accentuates individualism and *knowing how to live* is not part of the understanding the essence of individuals. Consequently, what should have been a good living for all the beings and elements of nature has become a field of battle between all involved, where the environment suffered the most being pillaged without respite.

Sumak refers to an ideal and beautiful realization of the planet, while the Kasey refers to a life of dignity and fullness, and both of these names have different roots. For instance, Suma Qamaña comes from the Aymaras (Bolivia and Peru), while Teko Porã or Teko Kavi dominate among for the Guaranis (Paraguay, Brazil, Argentina, and Bolivia). Therefore, the philosophy of Sumak Kausay indicates a way of life that allows personal and collective happiness, which brings together the thought and the wisdom of many ancestral people. Moreover, Sumak Kausay centers on the life and maintains the harmony between man and nature. As a consequence, this philosophy “has two major dimensions: the material dimension (the conditions for a dignified life) and the individual dimension (the feeling and thinking)” (Secretariat of the Good Living, Huanacuni 2010, p. 9).

The Good Living points to an ethic of sufficiency for the entire community; hence, it is not designed exclusively for an individual. The Good Living is a holistic vision that integrates the human being as someone immersed in the great earth community. The latter also includes

the air, water, soil, the mountains, trees and animals. This philosophy implies staying in a profound communion with the Pachamama (Earth), with the energies of the universe, and with God. (Boff 2009)

The Sumak Kausay or Good Living reunites the traditions of the Andean people, the people with Mayan origin from Mesoamerica, and the Tzeltal of High from Chiapas in Mexico, who employ a similar philosophy called kuxlejal Lekil, which emphasizes the “harmony of life”. Additionally, the Kuna of Panama refers to the relationship between Mother Earth and a human being (called Balu Walay), too. Moreover, the indigenous people of Miskito in Nicaragua “use the term laman laka to refer to the harmonious life” [Secretariat of the Good Living, Huanacuni (2010)].

The author also refers to the various pre-Columbian groups of settlers in North America, who also highlight the importance of the relationship between human beings and nature. Moreover, a reference is made to the letter written by Chief Seattle, in which it is stated that “the Earth does not belong to a man, the man belongs to the earth” (Secretariat of the Good Living, Huanacuni (2010), p. 6). This letter aims to question the form of the development that was imposed in his territories.

The following describe some notions present in Sumak Kawsay (Rodríguez, August 28th, 2017):

- The *Rekoha Nande* (the way of being) expresses a series of virtues such as freedom, happiness, celebration in the community, reciprocity and the treat. All these virtues aim to articulate the search for the land without evil (The Guaraní people, <http://filosofiadelbuenvivir.com/buen-vivir/definiciones/>).
- The philosophy of Living Well of the Kolla people in Argentina shares the principles of living in harmony and community, following the principles of harmony and balance, and growing with nature and not against it. “The human being is a land that walks” (Huanacuni 2010).
- The *Shiir waras* (Living Well) is understood as a domestic peace and a harmonious life, including a state of balance with nature. This philosophy comes from the population of Ashuar in Ecuador.

In Ecuador, several thinkers and philosophers rescued the concept of Sumak Kawsay or Good Living. For instance, “Carlos Viteri Gualinga, an anthropologist and an indigenous leader, noted in 1993 that, with the global failure of the ideology of development, the Sumak Kawsay should become the new paradigm to achieve a good life. He defines good life as a state of harmony among people and cultures and as a balance with nature” (Secretariat of the Good Living, Huanacuni (2010), p. 6). Likewise, the presence of this philosophy of life in the declaration of the Ecuadorian Constitution follows a purpose of surpassing the reductionism of **economic growth** as an idea of development. Moreover, its purpose is to expose a vision, according to which “the center of the development is the human being and the final objective is to reach the Sumak Kausay or Good Living” (Larrea 2011, p. 60).

Therefore, the philosophy of Good Living constitutes a criticism of the dominant paradigm of capital that currently governs western life and that has generated a number of conflicts and problems in the world. One of these problems entails an

increased gap between the rich and the poor. Most importantly, the current paradigm of capital led the human being to a solitary and miserable life and to loneliness, where a great proportion of the individuals is left without the minimum conditions for a dignified life, not even mentioning conditions for good living.

The philosophy of Sumak Kawsay has gained the importance in Bolivia, specifically, since the presidency of Evo Morales. However, the Aymaran philosopher Fernando Huanacuni highlights an important distinction between living well and living better. The concept of living better resembles a western thought that requires a predation and an economic model of competition and consumerism, in which some win and many lose. Thus, this concept can lead to the generation of a global crisis of extreme poverty. The concept of good living derived from the indigenous people, in contrast, implies an ancestral experience that proposes a more equitable social system that involves a harmonious relationship between human beings and nature.

Comparing these two concepts, Huanacuni (2010) states that “the terms used to describe the *suma qamaña* (Aymara) or *sumak kawsay* (Quechua) in Spanish are *living well*, which is used in Bolivia, and *good living*, which is used in Ecuador. However, it is necessary to reflect the most reliable translations of the Aymara and quechua terms [...]. For the cosmo-vision of the indigenous people, the most important aspect is the life in harmony and balance, so “*QAMAÑA*” applies to one who ‘knows how to live’.” (p. 13). This concept goes beyond the individualism that requires the capital in order to understand *living*, which suggests that the new concept is based on the relationship of interdependence and communion with other individuals and with Mother Earth.

6 Model of Spirituality of the ModEsDe (Development)

Our proposal aims to convince that spirituality ought to be the basis for any proposals concerning development. The current crisis of the environment depends on the prevailing paradigm of capitalism and on the notion of development that emerges from this model. This model has led a human to an obsession with possession, which only makes him move away from his fellows and think only of himself. This model demonstrates misery and exploitation, it shows no evidence of the *knowledge on how to live* in the community and it does not seek good living.

In Fig. 2, we propose a model of spirituality-in-Development/Espiritualidad en el desarrollo (ModEsDe). We argue that the model outlines a new paradigm of development that accounts for the balance with nature, thus going beyond the individualistic approach. The proposed model is impregnated with a new spirituality that enables the restoration of the balance and harmony between a man and nature.

Here, we find that the new paradigm is aligned with the guidelines and principles of scientific knowledge, which calls for changing the current mode of human beings and warns about the detrimental effects that the lack of such change may have on the ecology and the natural environment. The model also includes a Christian call for

interpreting spirituality in the context of a gospel, taking as an example the life of Jesus, which is reflected in the teachings, and the way of the life of Francis of Assisi. With Christianity, it is possible to confirm the large overlap between the message of a Gospel and the wisdom of the primitive people.

In particular, a vivid wisdom that coexists with and completes the vision of the Gospel can be found among the indigenous communities of Latin America. In these wisdom, we can find a reflection of the ideas behind Mother Earth, according to which, everything is interrelated in a harmonious and balanced manner. The indigenous communities in the Andes recognize this harmony and pose a paradigm shift that takes into account community, since this is the only way to save the planet. Moreover, it is evident that the relationship with Mother Earth goes beyond that of the earth being simply the place that we inhabit. Specifically, the relationship implies a special veneration and respect for the Earth as the sacred place of worship. All these elements are interlinked and we are part of this network, just as all other human beings are too. To conclude, we propose a change of a paradigm that enables a better understanding of an ancient knowledge, which facilitates the harmony in the world in a sense of *good living*.

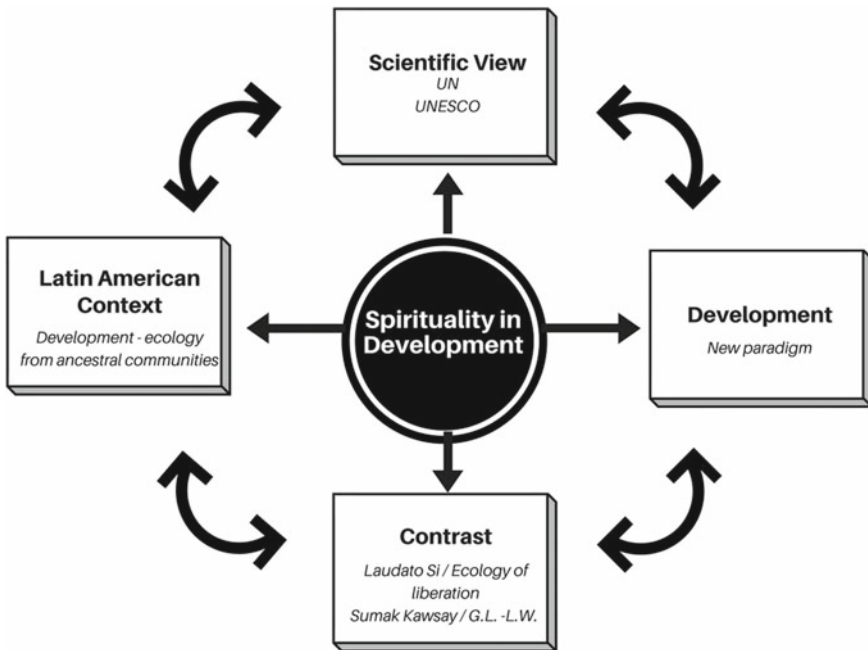


Fig. 2 The proposed model of spirituality of the ModesDe (development) including the interrelations between the different types of knowledge ranging from scientific knowledge, international organizations and the ancestral and the indigenous knowledge, contrasted by the encyclical and the ecology of the liberation

According to Huanacuni (2010):

All people's views of good living share common aspects that can be summarized as follows: *Living Well is living the life fully. Living well implies learning to live in harmony and balance; in harmony with the cycles of Mother Earth, with the cosmos, with life and with history, and in balance with all forms of existence in a permanent respect* (p. 49).

Our approach aims to demonstrate that the new spirituality of development implies a dialog between different types of knowledge, as well as an interrelationship of perspectives that allow a man to understand his position in the world, so that the process of a recovery from the disasters brought by the current paradigm may start. Only if we listen to each other and we decide to act, our life on earth will point to the well-being of all that exists.

7 Reflections and Conclusions

We find that there are several cross-cutting themes that we have addressed in the present discussion and that require reiteration.

In the first place, we identified that there is a deep mistrust with the notion of development that has been framed historically as part of the economic growth. This can be attributed to the fact that the philosophy that markets pursue are deeply nested in the notions of individualism and unlimited exploitation of resources. This definition of the development has actually widened the gap between rich and poor and led to an inequity in the distribution of goods, so that only a few have access to the majority of the resources, while many, mostly poor, do not have access to even minimal resources necessary for a dignified life.

Consequently, we can say that the development is one of the paradigms of the current societies that goes hand in hand with an unbridled consumption of natural resources. This paradigm is hegemonic, in that it does not permit other types of knowledge and other ways of understanding the relationship of man with the world to be involved.

In addition, the development has led to an irreversible ecological disaster, as it destroys nature, sources of water, ecosystems, biodiversity, and life. This unhealthy paradigm has been embedded in many areas, such as social life, politics and the economy, and it has altered man's view of himself, of his relationship with other living beings, his understanding of nature and of his being in the world. Moreover, this paradigm has changed the way of understanding each other as human beings, which has further impregnated our interests, wishes, and desires. As a result, the spirituality was replaced with the immediacy, with the moment, and with the eternal presence, so that we ignore questions concerning the future.

The development paradigm is so complex affecting many human aspects, so that it seems that replacing it with an alternative paradigm is not possible. For example, a noncompetitive model of sales would not have space in the global market.

The second important aspect discussed in this study was an assessment of the spirituality as a principle of change. This principle promotes going back to our own roots and recognizing that we are more than just individuals. Specifically, spirituality implies that we are a part of a harmonious and balanced social ecosystem, where everything is united in a total interdependence. This return to spirituality has at its basis the adoption of a specific attitude: going back to what is simple.

This study calls for recognizing in the other living beings its intrinsic value and its right to exist. It also calls for an understanding of the role of a human being in the world—the human is not called to possess and dominate the world, as a great lord, but to take care of it, to respect it, and to live in it as an essential part of it. In this return to spirituality that we are calling for, we can revitalize other forms of wisdom, and we can get to know primitive people who have lived for centuries in perfect harmony with the environment.

It is important to listen carefully to what other human beings, other creatures, and nature have to say. We must open a dialog between different knowledge to stop the destruction of nature and to reidentify ourselves as part of an integral ecology and the ecology of liberation that allows us to see the world from a different perspective.

Furthermore, the ancestral knowledge that we discussed touches upon several aspects that infiltrate the present reflection. These are a concern about living well and about knowing how to live. This implies a respect for Mother Earth and a recognition of being part of a living organism. This is to say that we do not inhabit the earth, we are made of the earth, and we are the land. Hence, the ancestral knowledge is directing us to a new way of being, a way of being more focused on a community rather than on an individual, and where the holistic vision of interrelations between all earth elements is apparent.

That is the fundamental principle. Ultimately, what the ancestral knowledge of the primitive and indigenous communities proposes is the change of the current paradigm governing our lives into a new one. The new paradigm should propose a new way to understand humans in the world, a new way to see one and everything alive. This new paradigm implies abandoning the current paradigm and shift to a perspective of a common interest and community, where the harmony with Mother Earth to determine the course of our existence in the praxis of living.

Finally, we believe that the overlap between the new spirituality, the ancestral knowledge and the need to change the current model of living will all converge into a new view of the Gospel and the life of Jesus. The intercultural spirituality that embeds the care of oneself, others, and nature, promotes a life of dignity characterized by a minimum use of resources. However, is it possible to implement this new paradigm in today's society? Or, is rebuilding and reconstructing civilization necessary? The new paradigm is found in the life of Jesus who lives in perfect harmony with man, nature, and with God. The Gospel of Jesus Christ announces the new paradigm, Saint Francis of Assisi vivifies it, and the Pope Francis invites us to adopt it.

We believe that in order to have a better approach to this new spirituality and to the change in the model of living, it would be recommendable to contrast specific views of an indigenous community and the vision of some of the representatives of the Church. Thus, the second part of this research would examine the contrast in these different views of the development as well as spirituality.

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Shepherding Sustainable Development: Possible Lessons on Leadership from Judaism and the Early Christian Church



Roger Auguste Petry

Abstract The rise of the humanities in the early sixteenth century in Northern Europe occurs with new trilingual colleges designed to teach greater proficiency in the Biblical languages of Hebrew, Greek and Latin. Through this more accurate study of ancient texts, humanist scholars developed not only a greater understanding of the classical world but also advanced a humanist ethics and new forms of leadership. This chapter unites these early humanist pursuits in the service of sustainable development by examining a model of rule repeatedly expressed in the Hebrew and Christian Scriptures, namely that of the shepherd. The nature of this form of rule, particularly in the early Christian Church, is explored as a possible model of leadership for sustainable development. While this ancient ecclesiastical governance model inverted Roman power relationships, it still retained a role for centralized authority expressed in the early office of bishop. The chapter will also explore parallels between the formation of early bishoprics in the Roman Empire and the kinds of leadership found in Regional Centres of Expertise (RCEs) on Education for Sustainable Development (ESD).

Keywords Bishop · Early church governance · Leadership for sustainable development · Regional Centre of Expertise · Shepherding

1 Introduction

The link between the humanities and sustainable development finds an early expression in the attempt of Northern European universities to sustain themselves in the sixteenth century. As is frequently the case with sustainable development, a good strategy is one that uses minimal resources by repurposing something old to build something new. In this case, ‘the old’ was the older scholarship of the European

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schools and universities tied to the teaching of language. In the 1400s and early 1500s, the teaching of classical languages in Northern Europe (and scholarship of those employing these languages) was impaired by the imperfect translation, copying and transmission of classical texts, many of which had unclear provenance. This, in turn, meant a lack of understanding of the historical context of their composition. The rise of humanism depended on a critical re-examination of these texts which, in turn, required a revitalized understanding and teaching of the ancient languages of Hebrew, Latin, and Greek within the university (Petry 2014, 245). This was made possible through the formation of the Trilingual College of Leuven in 1517 led by the famous humanist scholar Desiderius Erasmus who hired the requisite language scholars from other parts of Europe (Petry 2014, 253). This scholarly innovation was rapidly copied by other universities at the time for a number of reasons. The re-translation and critical examination of Jewish and Christian scriptures played an important role in addressing various theological debates of the day and fueled much scholarship during the Protestant Reformation. Analysis and publication of non-Christian texts from antiquity led to a rediscovery of their historical context and a wealth of forgotten technological, political, and philosophical knowledge. Those who studied these texts with a mastery of the languages in which they were written also acquired a greater knowledge of ethics—the ‘humanizing’ impact of this kind of study—and greater social eloquence. Last, the improved scholarly capacities of humanists led them to quickly assume leadership roles and administrative responsibilities in towns and cities across Northern Europe. This enabled Nicolaus Vernulaeus, a Professor of Latin at the Trilingual College beginning in 1646 to boldly declare ‘[t]here has not been during these hundred years in any part of the commonwealth any one of any renown or any doctrine, who has not been a disciple in this College, which is in fact the Palaestra of Princes, of Nobility and of Great Men’ (DeVocht 1951, 1).

The purpose of this chapter is to re-engage in the spirit of the early humanist scholarship in the service of sustainable development. I intend to examine various Jewish and Christian Scriptural texts within the context of power and institutional structures of the ancient world. The goal is to understand a particular model of leadership emphasized in these religious texts, namely that of a *shepherd*. I then present what might be strategically learned from this ancient leadership model to address pressing questions about the nature of successful leadership for sustainable development. New models of leadership are needed given the daunting degree of social and economic transformation required to substantively advance the 17 United Nations Sustainable Development Goals by 2030 (United Nations 2018). However, many of the crises we face are new to our species and planetary ecosystems as we enter the Anthropocene era. As such, it may seem strange to look for strategic direction on leadership and social transformation to a much earlier period in time characterized by very different forms of government, kingships and empires, and very different production systems, with tribute being paid to rulers and extensive patron–client relationships existing between subjects. This is the ancient Mediterranean and Mesopotamian world that saw the rise and fall of many empires. Yet, it is in this context that both Judaism and Christianity take root and flourish, not only presenting rival ideological and spiritual systems to dominant powers but also rival social and educational organiza-

tional structures. Many of the problems for social transformation found within these ancient empires mirror those of the existing globalized market economy, if not market society, where there exist no overarching authorities with broad accountabilities to advance sustainable development; nor are strategic points of intervention obvious. It might further seem strange to look to these religious roots for guidance to the extent spiritual elements of Western Monotheistic religions, in particular, views on power and dominion, are often seen at the heart of the current ecological crisis. However, it is precisely the model of God's kingdom found within both Judaism and Christianity, that inverts the ancient notions of power over others that can potentially serve as a model for future transformation. This alternative model is found in the rule exercised by the shepherd in both these religions. Features of this rule, in turn, become later embedded in the organizational development of early Christian bishops. These early models of rule provide a fascinating alternative for building new regional structures needed to advance sustainable development. Elements of such a model can be found in the development of Regional Centres of Expertise (RCEs) on Education for Sustainable Development (ESD) under the United Nations University (United Nations University 2018).

While the chapter will employ fairly traditional textual approaches of humanist scholarship in attempting to understand the ancient model of shepherd leadership found within these religious scriptures, I will briefly mention two avenues of research that have helped shape this work. One has been my own research into the social transformation of empires, where the globalized market economy is understood as a kind of empire. The Roman Empire is a useful analogue to our current global economy as it is historically well documented. Similarly if one sees the early Christian church as a successful *social* movement within the context of the Roman Empire, even in the Empire's decline, we can ask what strategies did the early Christian Church employ that gave rise to this success and how might these be applied in transforming our current globalized economy for sustainability? Much of this success, I contend, has to do with how the social movement exercised power in its early years, something reflected in its leadership model tied to shepherding. The second research avenue has to do with my own active involvement in RCE Saskatchewan since its formation in 2007 (RCE SK 2018). RCE Saskatchewan is part of a scholarly movement pioneered under the authority of the UN University starting in 2005 (UNU 2018). As a philosopher of religion with an interest in political philosophy and organizational development, in particular that of universities, I became fascinated by how the global RCE movement in light of its success might parallel earlier significant transformations in the Academy. This led me to structurally compare the RCE movement with the Trilingual Colleges sponsored principally by religious organizations—often bishops (Petry 2014, 248) along with the Royal Society of London for the Advancement of Natural Knowledge primarily responsible for pioneering the modern scientific method and the rise of science (Petry 2014, 240). This research highlighted the role of volunteerism for mobilizing scholarly resources in the development of RCEs (Petry 2014, 244). Yet, this voluntary model reflects, in turn, a non-coercive style of leadership which, I will argue, is reflected in the shepherd leadership model to be discussed. Elaborating on this model can potentially play an important role in strategically

advancing the global RCE movement and other global educational movements for sustainable development.

2 Understanding the *Kingdom of God* as an Alternative Model of Rule

To situate a discussion of shepherd rule in an ancient context, we need to first reflect briefly on the nature of kingly rule or monarchy, and then how this rule is contrasted with Jewish and Early Christian notions of kingship. Ancient monarchies relied on the coercive authority of a monarch who, supported by armies, could demand ‘tribute’ over a territory and impose rules on subjects living within that territory. According to the Christian Scriptures, Jesus often also spoke of kingdoms, but in this case the ‘Kingdom of God’ (e.g., Matthew 6:33, 12:28; Mark 6). But what is the ‘Kingdom of God’ and why is it an important idea within Judaism and early Christianity? While we seldom think of kingdoms as a kind of governance structure these days (especially in a world in which democracies increasingly predominate), this question is actually about the nature of rule or governing. For these religions the notion of God’s kingly rule was about understanding how God made changes in the lives of God’s people and advanced larger plans for society and God’s entire creation. This was traditionally called divine providence. Our scientific understanding of the world and our mapping out of cause and effect relationships and the laws of the universe at ever smaller and smaller levels places this view in doubt, to the extent it is quite unclear how divine action or agency could be meaningfully expressed for individuals much less God’s supposed plans, promises, and purposes fulfilled over longer time horizons. However, to see the possibility for this kind of rule as understood within Judaism and early Christianity it is worth reflecting initially on the nature of rule or kingship as understood in the Hebrew and Christian Scriptures.

In the much-debated passage from Genesis 1: 26–31, God famously gives humans ‘dominion’ or ‘rule’ over plants and animals. This dominion has been seen as foreshadowing our ecological crisis to the extent modern interpretations viewed this text as a license to exercise rule over nature in our own self-interest as a species—something that has certainly occurred with the drastic loss incurred by other species in recent years (WWF 2016, 12). This unprecedented loss of species habitat (leading to what is seen now as one of the world’s great extinction events) is tied to development practices often viewed as ‘taming the wilderness’ or ‘developing’ unproductive land. While this scriptural passage from Genesis may be at the root of our ecological crisis based on modern interpretations of the text, as trained humanists it is worth looking at the passage more closely to see whether its reading is accurate or whether it has been misread to support a modern development agenda. One issue with the foregoing interpretation of dominion is its inconsistency with other comments in the Hebrew Scriptures about how nature should be treated. When this passage is read closely one sees that at this point in the text, God is only giving plants to humans for food—hu-

mans are to be vegetarians, and, in fact, further restricted to eating only the seeds of plants and the fruit of trees (Gen 1:29). Only later does God allow the eating of meat (Gen 9:3). Some in Jesus' time continued this older law. Jesus' brother James, the first bishop of Jerusalem, was a vegetarian (Eusebius 2:23); John the Baptist's diet is also very restrictive, supposedly consisting of locusts and wild honey (Matthew 3:4). Furthermore, according to this passage in Genesis, God has given this plant material for food for *all* animals (not just humans): beasts, birds, and everything that creeps on the ground (presumably insects). Whatever human dominion might mean, it is severely restricted by this passage. The key story expressing God's care for all creation, what now might be viewed as a centrepiece story for biodiversity, is the story of Noah, the flood, and God's intentional rescue of all species; in Genesis 9:10, God makes a covenant not only with humans but with all living creatures, including wild animals, promising to never destroy the world in such a way again.

We also need to think about *the kind of rule* suggested in this earlier passage from Genesis used to legitimate human dominion. It is because humans are created in the image of God (Genesis 1:27) as opposed to other plants and animals that originate from the earth and waters in the Genesis account (Genesis 1:24) that humans have a special standing. However, in this case, this standing again has limits. Humans serve strictly as stewards of God's creation, not owners, as God alone is the owner of the land (see Lev. 25:23–24). God's ownership is made explicit with humans required to give the land a period of complete rest ever 7th year and in the Jubilee year occurring every 50th year (Lev. 25:4, 11; see Berlin and Brettler 2004, 14, note 26–28). Not only are humans merely occupants of God's land, the kind of rule exercised by these human stewards more reasonably reflects the kind of rule of a shepherd over a flock of sheep rather than a king with authority over subjects. That this would be the kind of rule most familiar to a near east pastoral society in relation to living organisms is not a surprise. Who were the rulers the Israelites were familiar with? Abraham, Jacob, Moses, Amos, and David—all shepherds. In the Christian Scriptures, Jesus' birth is announced to shepherds (Luke 2:8–9). Jesus calls himself the 'good shepherd', who, as the owner of his sheep is willing to die for them (as opposed to the hired hand who abandons the sheep to an approaching wolf; John 10:11–13). The modern word 'pastor' used for religious leaders in many Christian congregations derives from the Latin word for 'shepherd'.

So to understand the kind of rule envisioned in human *dominion* over plants and animals in Genesis, it is important to reflect on how shepherds rule. This rule is quite distinctive from other forms of rule that would have been prevalent in ancient societies. First, how did a shepherd *not* rule. A shepherd did not rule based on prestige and reputation. At the time of the Second Temple in Jesus' day, shepherds would have been viewed as having lower social standing; being out in the fields for lengthy periods they would have been unable to keep many of the ritual purification practices and likely annual requirements for temple participation. Shepherds also did not rule on the basis of wealth. Their need to constantly move flocks to better pastures meant they could not carry much and the income generated by this livelihood would have been low relative to the public and priestly offices available in larger urban centres and the merchants trading activities between these cities. A shepherd did not rule on the

basis of family support and connections. The occupation was very lonely—isolating oneself from one's family for lengthy periods of time. Even the basics of maintaining an established household would be problematic. When David, the youngest son of Jesse, is to be anointed king by the prophet Samuel, Samuel repeatedly asks whether Jesse has any more sons and finally David is summoned from the fields where he is tending the sheep (1 Samuel 16:11).

So if shepherds do not rule on the basis of reputation, wealth, or family relationships, *how does a shepherd rule?* A shepherd rules by being attentive and actively watching to keep the flock united and protected from danger. The rounded edge or hook of a shepherd's crook is used to pull sheep from peril while the lower end is used to move the herd along with minimal effort. In doing so, the shepherd's rule over the flock is primarily gentle requiring minimal effort. The bishop's crosier models the shepherd's crook but has a symbolic function: it marks the Bishop as shepherd of the flock in her jurisdiction with the hook in this case able to symbolically pull back those straying from a morally good path and the lower end to move the flock of believers along the spiritual path (presumably through the bishop's traditional teaching authority and ability to rule in Church matters). The shepherd also takes special care of what is weak and vulnerable. This is embodied in early images of Jesus as the 'good shepherd' with a young lamb over his shoulders or welcoming a little child into his arms (Mark 9:36), something quite surprising within ancient societies where the status of children was quite low.

In addition to understanding dominion in relation to the *kind of rule* of the shepherd, one also needs to examine *the purpose of rule* within Judaism and Christianity to understand the dominion given to human beings in Genesis. Perhaps what is most revealing is the story in the Hebrew Scriptures related to the Israelites acquiring their first king. Prior to the prophet Samuel appointing Saul as the first king of Israel, the people of Israel had looked to their neighbours who had powerful kings; they wanted one too. The prophet Samuel, however, repeatedly warns them that they do not, in fact, want a king, for a king will subjugate, if not enslave them; he also reminds them that God is their only King (1 Samuel 12:12). Yet, they insist; Samuel calls this insistence a 'wicked thing' that they are doing 'in the sight of the Lord' (1 Samuel 12:17); yet, eventually, he concedes due to their stubbornness. He does not, however, anoint a 'king' (in Hebrew 'melekh'), however—a term Samuel rejected—but rather a 'ruler' (in Hebrew 'nagid'; see Berlin and Brettler 2004, 577 note 15–16). The second term suggests a governor appointed by God. When God selects David as king, it is because David is a person 'after his own heart' who will follow God's commands (1 Samuel 13:14). That the goal of ruling or statecraft is the pursuit of something greater than oneself (versus the self-aggrandizement of kingship) would have been (and continues to be) reflected in other professions or crafts. For example, while some become doctors for material gain, the ancient Hippocratic Oath sets out the goals of the doctor related to helping (versus harming) the sick. In general, the medical profession as a profession seek to advance a cause beyond the medical practitioner, namely the improvement of health while at the heart of each profession (for example, a scholar, an artist, or a lawyer) is a goal beyond the self (in these cases traditionally knowledge, beauty, or justice, respectively).

What is the goal of ruling if its true goal, like other professions, goes beyond the self? In the Christian Scriptures, Jesus' disciples debate one view of this goal when they argue among themselves over who is 'greatest' among them (Mark 9:33). This debate reflects the goal of rule found in the broader society. In the Roman Empire, the purpose of rule was the accumulation of power over others—yet, not as a means to advancing one's own self-interest: it was accumulation of power for power's sake, what Carl Jung termed the Romans' 'devil worship of power' (Jung 2013, 204). For Jesus, however, who explicitly rejects his disciples understanding of rule (Mark 9:35), ruling is a vocation that one is called to in the service of God, in the service of one's fellow human beings, and as a steward of God's creation. When Jesus is tempted in the wilderness, he refuses to command the rocks to become bread—despite his hunger, nor to command the heavenly angels to rescue him from the top of the temple, nor to take power over all the kingdoms of the world despite the devil's seductive offer (Matthew 4). This shows Jesus' rejection of wielding power over the material world, the heavenly world, and other human beings. For Jesus, the greatest ruler is the greatest servant—a complete inversion of the Roman notion of power and rule. In his final days, Jesus' 'triumphal' entry into Jerusalem is not on the warhorse of a general but on a colt (Mark 11:7–10), he himself washes the feet of his disciples (John 13:5–14), and ultimately, according to the Christian Scriptures, he gives up his life on the cross (Matthew 27:32–44), an act that is done, according to Christian tradition, for the redemption of his followers and all people.

3 Implications of Non-coercive Rule for Others in Advancing Sustainable Development

The previous analysis has outlined a number of constraints for how human dominion (as outlined within Jewish Scriptures) and the nature of rule (as outlined within Christian Scriptures) can be understood. This kind of rule is at odds not only with the notion of rule found in ancient kingdoms and empires but also the kind of rule exercised within modern governments and businesses (to the extent these rely on exercising the powers implicit in legislative state organizations and legally enforceable business contracts on behalf of existing members). The advantages of exercising a non-coercive rule for the benefit of others and/or in service of a larger (created) order is that it can be exercised more broadly, both spatially and temporally, beyond the bounds that restrict existing organizations. A long-term time horizon and parallel commitments to address human poverty and ecological degradation at various geographic scales are central to achieving sustainable development (WCED 1987). Within the early Christian church, it became quickly evident that a ruler who enjoys rule for the sake of ruling—both in relation to ethical goals and in the service of others—has tremendous freedom and opportunities to rule. Indeed the rapid spread of Christianity, depicted symbolically in the vine, was often viewed as the greatest miracle of the early Church. Why is this form of rule less restrictive? For the early

Christian, he or she did not need (nor even want) the trappings of power; in many ways, enjoyment of rule itself on God's behalf was tested precisely in circumstances where none of these trappings of power were present. Just as Jesus had taught his followers not to make a show of their prayers in public (Matthew 6:5–8; Mark 12:40), in part as a way of testing their own intentions, power exercised discretely beyond what was held by those with high status in positions of high office also tested one's motives in using power. In understanding the kind of rule Jesus was talking about, transforming one's own use of power first thereby leading by example and only then calling others to use their power ethically and in service (Matthew 7:4–5), Jesus' followers were then able to move to seeing truer and/or different spaces of power where action could take place with humility. These spaces of power in ancient and modern times reflect different social roles from the one's we ordinarily associate with power: as ordinary citizens or subjects, as parents, as friends, in public forums or gathering places, and within one's profession or workplace.

At a practical level, a movement based on this conception of power and rule naturally flows to fill or mobilize the existing social structures and the institutional linkages between them. In the case of Jesus, he proclaimed his message where people already gathered in Galilee: in the synagogues, at the public wells, and in private homes; he later takes his message to the temple in Jerusalem, a public space his disciples refuse to subsequently give up even after Jesus' crucifixion and facing threats from the temple authorities (Acts 3&4). The movement then moves through the Jewish synagogues throughout the Empire, but especially in the larger urban centres with significant Jewish populations. It then further expands through the patriarchal households that were the prominent basis for Roman social and economic organization, again in defiance of Roman authorities. These same authorities had to repeatedly witness power structures being transformed for alternative purposes under their very eyes by those able to legitimately use them. This is exemplified in the attack on Jason, the head of a household in Thessalonica who is sheltering Christians and uses his authority over his household to provide them with protection, much to the dismay of the local authorities (Acts 17-6-9).

The early Christian church also creates its own novel structures where they are needed to exercise strategic direction and rule within the movement. In this case Jesus brother James becomes effectively the first bishop of Jerusalem: coordinating activities in Jerusalem, sending and receiving letters and centrally coordinating missionary activity in other centres (see Letter of James, Acts 12:17, Acts 21:17–19), and providing final rulings in doctrinal disputes (Acts 15:13–21). By the end of the first century, bishops providing this centralized coordinating function had been established in Antioch, Alexandria, and Rome with subsequent bishoprics mirroring geographic and political divisions in the Roman Empire (see Eusebius' *The History of the Church*).

In the case of sustainable development, the structures through which movements committed to sustainable development can advance by employing non-coercive, primarily educational strategies and 'rule through service' differ from these ancient contexts. In this case, the organizational structures able to effect change at local, regional, national, and global levels, given their resource use and global dominance, need to be

market and state organizations. However, mirroring the origins of the early Christian church in Jewish communities in Galilee, market organizations that are sympathetic to the message of sustainable development are natural starting points. These sympathetic market organizations include cooperatives that have formally committed to sustainable development as one of the seven principles of cooperation governing all cooperatives (ICA 2018). Further, sympathetic market enterprises include those enterprises, such as insurance companies, whose costs and profits are directly and negatively impacted by unsustainable activities more so than others. Similarly, while governments from around the world have committed to the UN Sustainable Development Goals, those governments with longstanding, robust commitments to their citizens and those national or state governments who have historically not benefited from the dominant market system are likely equivalent to the early synagogues in rural Galilee in which Jesus launched his ministry as ‘first movers’ for sustainable development. The United Nations and its agencies are also governmental structures with strong commitments to sustainable development that can help bridge these market and state organizations who have structural reasons to be on the cutting edge of sustainable development.

At the same time, it is evident that given the new forms of innovation needed to advance sustainable development, educational and research structures (including universities, technical institutes, and schools) are also organizational structures through which sustainable development needs to be advanced. In this case, as in the case of the early Christian church, new, lightweight scholarly structures need to be developed that provide linkages between these formal learning organizations and other organizational structures to help them learn about and embed sustainable development in their operational activities and policies. One good example of such a scholarly structure is Regional Centres of Expertise on Education for Sustainable Development. RCEs, now numbering over 164 acknowledged globally, have been established by the United Nations University as part of its commitment initially to advance the *Decade of Education for Sustainable Development 2005–2014* (United Nations University 2018). RCEs as ‘centres’ of expertise mirror the centralizing role of bishops in oversight, information gathering, and communications within their political regions of the Roman Empire. In this case, however, RCEs mirror production boundaries rather than political boundaries; RCEs are geographically shaped as regions based on existing and potential livelihood patterns, ecosystem boundaries, and appropriate geographic scale needed for the formation of social capital. To the extent the earliest bishops rose to prominence based on their moral authority as ‘pillars’ of the ‘new temple’ of the early Christian church (Galatians 2:9), RCEs also exercise a kind of moral authority tied to their structural dedication to advancing ESD in their regions over the long term. This is also due to RCEs not being formed on the basis of resources being provided by the UN University or other outside bodies, but rather by local individuals and organizations who come together freely at a regional level to advance the cause of ESD. Specific sustainability thematic issues within the region become the basis for resource mobilization while the UN University, in turn, synthesizes and coordinates these thematic goals at a global level to the benefit of other UN agencies and national governments.

The early Christian church is also instructive to the extent the roles of the office of bishop, namely to (1) teach, (2) govern, and (3) sanctify, are also reflected analogously in many RCEs. Mirroring bishops' oversight of *teaching and education* within their territories, RCEs play a role in ensuring that sustainable development is incorporated into local and regional curricula in a way that includes global learning around sustainable development, particularly through the UN system. RCEs also provide a *governing role* to the extent their partner organizations often incorporate and report on their sustainability activities to the RCE and new local and regional structures are also created. In particular, these can include living laboratories for sustainable development and RCE flagship projects that are regionally managed. Finally, while bishops played a central role *sanctifying*, by, for example, ordaining priests and officiating in religious ceremonies, RCEs can provide a *legitimizing role* by identifying and celebrating local sustainability initiatives and recognizing those who are showing leadership for ESD within their organizations, communities, and/or regions. This recognition or legitimizing role is in turn mirrored globally by the UN University both in its initial acknowledgement of an RCE and also through its Global RCE Award program (United Nations University 2017).

4 The Kingdom of God and the Growth of Sustainable Development

A final potential insight from the Early Christian Church relates to an understanding of how God's kingdom supposedly advances. Jesus seems to have viewed God as making small investments in many areas that then grow into something great. Jesus tells the following parable that illustrates this point: 'The kingdom of heaven is like a mustard seed, which a man took and planted in his field. Though it is the smallest of all seeds, yet when it grows, it is the largest of garden plants and becomes a tree, so that the birds come and perch in its branches' (Matthew 13:31–32). This would suggest that a good long-term strategy employing the notions of dominion and rule found in the Hebrew and Christian Scriptures (particularly where one does not know where specific ESD ideas might take root) is for an RCE or other ESD structure to make small investments across a large range of organizations and individual actors. These small initial activities, in turn, might have synergies with other activities that a regional structure can then seek to enhance. This would be analogous to syntropy or companion planting: the ability of certain plants when grown alongside other different plants to provide mutually supportive benefits. For example, one plant might provide nitrogen for the soil, while another wards off insects, or another provides shade for smaller plants, or another has a sturdy stalk to allow other plants to climb. It may be possible, over time, for regional centres that focus on ESD to anticipate and enhance not only educational synergies in a region but actual forms of production that are mutually complimentary, for example in areas of food production, shelter, and small-scale manufacturing. An RCE could, then, nudge and goad a region in small ways

(much like the knowledgeable shepherd) to achieve great goals, especially when what is learned is shared with other regions. This is not a top-down form of power nor a heavy-handed kind of rule, but rather one that respects ways of life and allows natural and human systems to become radically resilient and abundant in incremental ways. Just as Jesus sent his disciples in two's in a non-threatening manner as a witness to the arrival of God's rule (Mark 6:7), an RCE or other regional structure can, over time, work with many organizations in many small ways to enable each to take on its own agendas and projects for sustainable development. At the same time, the lightweight connection to a regional and global structure allows these organizations and individuals to see themselves as part of a much larger global movement for sustainable development.

5 Conclusions

To advance sustainable development rapidly and in a way that endures over time requires new models of leadership. Yet these models, it is argued, can build on earlier models that have had significant transformative impacts. A close reading of Hebrew and early Christian scriptures through a humanist lens points out an alternative model of leadership found in the ancient occupation of shepherding. Such a model while neglected (or perhaps even abandoned) in later versions of Christianity, in the early Christian Church emphasized the role of non-coercive social change and leadership through service. This chapter has highlighted several ways such a model might be applied in the contemporary global context for advancing sustainable development. This includes transforming one's own power and resources to model sustainable practices, the active engagement with existing organizations that are structurally sympathetic to the goals of sustainable development (such as cooperatives and governments embracing the UN sustainable development goals), and the creation of new, lightweight structures that provide global connectivity while engaging local sustainability issues. While such a structural innovation in the early Christian Church is found with the development of centralized territorial administrative offices in the form of bishops, the United Nations University's Regional Centres of Expertise on Education for Sustainable Development share important parallels to such structures: helping to advance teaching for sustainable development through curriculum reform, building a lightweight reporting and networking governance structure between partner organizations, and acknowledging and legitimizing local sustainability initiatives that would otherwise not be recognized and only minimally supported. The leadership model of the early Christian Church also suggests the value of 'planting seeds': making a large number of small investments in education for sustainable development across a region in a variety of organizational contexts, seeing which flourish, and then finding and nurturing synergies between them. Such a strategy minimizes resource use while maximizing impact in an environment of considerable unknowns.

The research also points to a number of future areas for study. What analogues are there to models of leadership found in the early Christian Church in the Roman

Empire that are found in other cultures and religious traditions that have succeeded in transforming empires? If these can be identified, humanist scholarly resources can be applied to compare and contrast these strategies in seeking to transform our own global systems for sustainable development. A close analysis of the rise of humanism in Northern Europe and the main organizations involved in their formation might also be instructive in finding resources and strategies for transforming our scholarly organizations to advance sustainable development. To the extent, it was the older parts of the university, the language scholars that gave rise to humanism, might the humanities, now the older part of our modern university, be central to transforming Higher Education? Lastly, the stories of transformation found in early religious and other cultural texts may have a role in finding alternative pathways for sustainable development that have been forgotten. In addition, a pedagogy that emphasizes storytelling might be more compelling and motivating for people in transforming their own livelihoods and lifestyles for sustainability. Stories of shepherd rulers found in the Hebrew Scriptures, such as Moses or King David, could be possible examples.

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Humanism and Business: The Case of a Sustainable Business Experience in the Florentine Tourist Sector Based on the Civil Economy Tradition



Marco Tortora

Abstract Is it possible to have a sustainable tourism experience through the humanities (art, culture, and religion) in a city of arts? Florence is worldwide known as the city of Renaissance and Humanism. Its culture and art are the reason why millions of people every year travel to Florence to discover its beauty, richness, and culture. Though, not many people know that many of the places they visit, the paintings and statues they admire, and the history of some families and religious orders they listen to are also the first example of responsible practices both for the community (society) and, extended meaning, for the environment (ecology). This paper presents a case study of a grassroots innovative business activity in tourism designed to promote a different perspective of history and art, and to make tourists conscious of the way people lived and thought about their world when Humanism started in Florence, and to inspire potential future impacts. The case study, selected to be presented at EXPO2015 in Milan, is intended to be a living lab for an interdisciplinary and empirical approach to mix humanist and social studies and to promote a different way to do business in a responsible way.

Keywords Humanism · Civil economy · Grassroots innovation · Corporate shared value · Community · Sustainability · Sustainable business

1 Introduction

Sustainable business and corporate social responsibility (CSR). These two terms presents the qualifying dimensions for organizations that today are or plan to be different because different is or should be the orientation of their primary activity and related outcome, the profit. The new end should be the community or the society that becomes the recipient of direct actions and indirect consequences.

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If we focus on the development of the CSR has a new strategic function within a profit organization in the hands of managers to develop and deliver new value to the firm's stakeholders, it is right to say (Zamagni 2013) that this topic is not new in the history of management and organizations connected to the market or market economy. This phenomenon is not the outcome of globalization processes, and consequently, it is not something new in history or in modern history.

Rather, it is something we can find and relate to the Civil Humanism that developed in the fifteenth century in Italy and especially, in Tuscany where it emerged, and where the concept of the modern market economy emerged and diffused through all over Europe.

At that time, the concept we refer to as social responsibility had a different form. That form was developed by organizations aimed at developing and delivering an organized commitment to the local community. If we refer to the creation of value, today that process requires the commitment of the entire society, not just of a part of the entire system. This means that the value creation process cannot be based only on the economic system. It is this perspective, that it is one of the models of the market economy, the *shared capitalism* that has its roots in the Humanism of the fifteenth century. It needs and it is nurtured by relationships between people as human beings, and not just individuals or rational beings. (Zamagni 2006, 2010a, b, 2011, 2013, 2015, 2016; Zamagni et al. 2016).

As a concept, the term *shared capitalism* refers to both the multiple forms of employee ownership and ownership culture that accompany them. As a model, the shared capitalism is an organizational framework to align the multiple interests of an organization—those of the shareholders and stakeholders of the organization, and to make it communicate effectively with all the spheres of society.

The framework, which tries to explain new economic models at the macro level, finds in literature evidence of its effectiveness due to studies that show empirically the increase in performance indicators of those organizations (firms) that have adopted this model.

It follows that at the micro level, the level of organizations, it exists an increasing group of entrepreneurs who search for new economic paradigms and models, and apply to their organizations the related principles, values, and frameworks in order to create more value and wealth not just for them, but for all the society. They welcome as principles the *reciprocity* principle and add a meaning to their strategy and action, or try to orient their actions towards an (ethical) end.

This evidence underlines the diffusion of the (corporate) *shared value* concept (Porter and Kramer 2011) from a bunch of global pioneers (e.g., Unilever, Nestlé) to different branches of society and economy.

From our perspective, what is relevant from this approach and model is the fact that this typology of entrepreneurs have developed and based their actions on the third of the three main characteristics entrepreneurs should have: the *ars combinatoria* (Bruni and Zamagni 2016).

This characteristic requires entrepreneurs to be able to manage collaborators, but also, and that is essential for our analysis, to know the *genius loci* (Tortora et al. 2014) in order to organize the productive process (the management of the

given resources) in a harmonious way. In modern economies, because of the impact of communication technologies, in the actual division of labor, there is a problem of coordination between people with different functions and specializations. This coordination problem should be resolved on the base of its technological or strategic nature. Nowadays, the majority of these problems are strategic: the behavior of each agent of the organizations depends on the expectations regarding the intentions and motivations of other agents (stakeholders) working within or outside the organization. It follows that the success of a firm depends on the capability to know the motivations of people and link them for and towards a common end.

Those researches and empirical fields that refer to *humanistic management* (Melé 2003) pursue this strategic goal. These firms or organizations present different purposes, other than just profit. These purposes are an expression of the motivations of the single agents working for the firm and on their freedom to choose the right purposes.

The *civil responsibility of firm* is the new strategic function that shows the intentions and purposes of the agents of an organization when these are oriented towards the civilization of the market. It follows that this function owns and shows a value both instrumental and expressive.

The goal of shared value relies in the act of co-creation promoted by different organizations and people, and redistributed along the value chain in fair terms. The shared value needs the development of the civilian responsibility of firm as an innovative strategic function. The realization and distribution of shared value through this innovative function (innovative in comparison to the corporate social responsibility) will be then instrumental to the promotion and development of a (new) civil market economy as it developed at its beginning in the fifteenth century in Tuscany and Italy.

In this context, the paper aims to present a case study of an innovative responsible walking seminar designed, developed, and commercialized to offer a different business model for the creation of shared value within a community. What makes this case interesting is the fact that it was designed according to those principles and values proper of the civil economy and market that developed for first in the same city where the tourist tour is offered. In this sense, there is an extension of the sustainability (sustainable development) concept. It refers to present and future generations but it also refers to, because it is rooted in and nurtured by, its heritage. Here, the heritage, embedded in the historical places of Florence and the arts and crafts from the twelfth–fifteenth centuries and from today's businesses, becomes the main capital to build upon new responsible opportunities for the future. The path that the paper follows to reach this goal starts with the literature analysis on the civil economy that is at the cultural background of the case study. Then, it proceeds with the introduction of the three main axes—corporate shared value, community, and grassroots innovation—followed to design the innovative tourist service (the walking seminar). This innovative service or tourist experience has in fact been developed through participation and stakeholder engagement from the bottom (grassroots innovation processes and community engagement) to create shared value for the benefits of all the territory. Then the case study—the walking seminar Firenze is experience is presented in its main characteristics such as business idea, model, and service.

The final paragraph will discuss the limitations of the analysis and possible potential paths for future research.

2 Literature Review: *The Civil Economy*

The theoretical background of the case study that will be presented in next paragraphs is rooted in the ideas and concepts of Humanism and the Civil Economy as it is developed in the premodern and modern era in Italy, and then revamped in the sixteenth century and later in our days. In this context, the paper aims to introduce the historical economic and social background that has been inspiring the design and management of the case study. The innovative responsible walking seminar in fact has been designed, developed, and commercialized to offer a different business model for the creation of shared value within a community. What makes this case unique in the market is the fact that it has been designed according to the principles and values of the civil economy. This model and service is unique in the sense that, embracing the civil and civic heritage of its cultural, artistic, economic, and social traditions, it extends the concept of sustainable development. It reaches this goal since the heritage here is embedded in those historical places of Florence, and the arts and crafts from the twelfth–fifteenth centuries and from today’s businesses that become the ingredients of a different experience offered to tourists in a different way.

The civil economy is the institutional tool for the creation and distribution of wealth within what is called civil society. The civil society emerged in Italy in the period that goes from the Middle Ages (eleventh century) to the first part of Humanism or modernity. The invention of civil society was possible because of the establishment of markets and of the market economy. Monasteries and cities were the places where the civil society developed, and where people started executing a new public role, the one of a citizenship free from the religious and political powers. Civilization started in the Middle Ages in city-states similar to ancient Greek and Roman cities where the tradition and heritage of Roman *civitas* and Greek policies melted with Christianity (Bruni 2003; Bruni and Zamagni 2016; Tabarro 2010, 2012).

Thus, the Italian civil society has been the outcome of communitarian artisan and peasant cultures coming from Italian and European monasteries and abbeys. Cities and monasteries were the places where it developed a culture for work thanks to traditions established by the Benedictine, Cistercian and Franciscan orders. Zamagni (2017) has stated that the Catholic thought and especially the Franciscan economic thought and school from the thirteenth to the fifteenth centuries determined the definition, shape, and elements of the market economy, of capital and of the entrepreneur. The definition of the market economy and capitalism were, especially for the latter, different from modern definitions since profit was not a determining element of the market economy, being instead the *common good*. Market activities have to be oriented towards the common good, their main end, and purpose. The common good is the end of every action in society and then in the economy. It orients the behaviors of individuals and society: the good for a few has to be reached together with the good

for all (the community); otherwise, society risks destroying itself because of the rise of conflicts. An economic action oriented towards the common good ensures peace in society, and its legitimacy comes from the market exchange guided by the *reciprocity principle*. It happened that the medieval Catholic culture, developing the market concept into the corpus of the Scholastic theology through the notion of the common good, produced for first the modern notion of market economy, entrepreneur, and the category of profit. In fact, the Franciscan order and its economic thought considered necessary activities for the common good of a community (the city) those developed by the entrepreneurs (the innovators), the market (the exchange act and place), and the crafts (production processes). In fact, as Bernardino da Siena stated, it is the utility of crafts and the goods exchanged in the market that contributes to the common good (Braudel 1979; Garin 1994; Guidi 1998; Todeschini 2004, 2007a, b; Canfora 2005; Bazzichi 2005; Bruni 2003).

On these bases, the Catholic thought and especially, the Franciscan school and economic thought from the thirteenth to the fifteenth centuries that developed the formulation of most of the analytical structure of capitalism (Carbajo Nuñez 2014; Evangelisti 2016; Zamagni 2017). The Catholic ethics is causally linked to the birth and establishment of the civil market economy, the economy that was a harbinger of the advent of capitalism. The modern world was born in the socioeconomic form of capitalism for which the end of the economic action is the *total good*—the sum of individual “goods”—whereas, for the Catholic Ethics is the common good. The market economy that acts as the genus for the Catholic species of capitalism is the civil market economy. The latter contrasts the idea of capitalist market economy as it is intended and defined nowadays. In other words, the spirit of Christianity in society and its productive aspects (economy) has been substituted by the spirit of capitalism (Tabarro 2010, 2012).

At the beginning of the thirteenth century, the civil market economy started assuming a clear shape. It began in Italy, and especially, in Tuscany and Umbria. In this mercantile and technological era, a new social order was developed and established. It was named *urban civilization*, and was determined by the development in the economy. The civic evolution and related cultural revolution brought to the development of an urban civilization whose main feature was the market economy. This institution was a structure for governing economic transactions. The Franciscan thought introduced two major innovations to the intellectual horizon, these being (a) the idea that if the use of goods and wealth is necessary, but their ownership is superfluous, poverty could make it easier to use and circulate wealth; (b) if monks were able to constantly exercise the virtue of poverty, poverty had to be sustainable, to endure in time.

The impact of the Franciscan order and rule on the organization of society and the economy melted with the principle that reality is organized on three interconnected degrees: the economic, the governmental (*civitas*), and the evangelical spheres. When an integration between the three occurs, it produces benefits for all. This integration obtained through the specific role of the market and of entrepreneurs working for the common good is the innovation brought in the economic thought of that time by the Franciscan order. The integration can only be obtained through a dedicated institution, the market that is founded upon three governing principles: the division

of labor, the notion of development, and accumulation of wealth, and freedom of enterprise (having an active and industrious life). This definition of market economy brings to the one of civil market when a fourth element is added: the specific end of the entrepreneurs' actions—the *common* good.

3 Methodology

How is it possible to develop in a capitalist system a business model that could refer to, take inspiration from, and represent in some of its organizational aspects the principles of the civil economy? The aim of this paragraph is to delineate the three main theoretical areas and concepts and operational axes that have been referred to develop strategically and operationally the following case study. It starts with the analysis of the community in sociological terms. Then, it passes the definition, role, and process of innovation from the developed at the bottom of society (community) and oriented towards a common good in management and business terms (corporate shared value).

3.1 *The Growing of a Community*

In the previous paragraph, there is evidence that the concept of community is far from a simplistic reduction, and that it had within itself the seeds of future modern concepts and ideas (Smelser 1991; Nisbet 1996; Wallace and Wolf 1999; Toennis 2001). In fact, today the concept of community is growing back in its importance because of many factors, first, some important globalization drivers (Giddens 1990) like modernity and the rise of digital communities (Rheingold 2000). During this wave of modernity, known as post-modernity (Beck et al. 1994) or liquid modernity (Bauman 2000, 2001, 2007), it has widely proved the error of the deterministic idea of an evolution from community to society. The first dichotomist definition of community falls apart to leave room to the return of the community idea and concept as a traditional form of human aggregation capable of answering to the fears of always growing forces of globalization and coping with the failures of traditional welfare systems established by modern democracies. For instance, the idea of imagined community formulated by Benedict Anderson (1983) insists on the link between community and national identities as a constructed ideological structure (Tortora and Corsinim 2012).

Furthermore, by the very same definition of globalization provided by Giddens (1991), it is possible to recognize that the amount of interactivity between individuals, institutions, and organizations has increased dramatically. This fact has also brought to the constitution of new forms of community (with new actors and stakeholders) that are able to integrate in a holistic perspective the individual need as well as the collective ones. Thus, the community provides a “new” social concept and organization able to take on and deal with those complex problems (relational, eco-

logical, economic and financial, and political) that civil society seems to be unable to manage. Paradoxically, facing challenges that are increasingly global and complex requires a different strategic human response that is able to conceive and compute community as a complex emerging space. This space allows individuals, institutions, and organizations to interact successfully on a local and global level at the same time (Tortora and Corsinim 2012).

3.2 The Path of a Community Towards the Common Good (or the Shared Value Model)

Nowadays, one way for businesses to change their business strategy and model is to start adopting a shared value paradigm, vision, and strategy. Porter and Kramer (2006, 2011) have introduced the concept of shared value referring to a group of policies and practices developed in order to enhance the competitiveness of a company or organization while simultaneously advancing the local community's economic and social conditions. It follows that the shared value concept defines a value creation process that expands the connections between societal and economic progress. This new and innovative perspective should lead firms to change and open their business model to embrace their stakeholders in co-creating value in a way that, from a local or community perspective, should be defined as a process of "re-territorialisation" or "re-localization" of value. This means that value is co-created from the bottom through innovative frameworks, and brought to market through both (hopefully) new channels and (also) typical channels. The final purpose is the creation of value for the community living in that territory. A fair and just percentage of that value should be distributed among localized stakeholders.

The creation of shared value requires a threefold competitive strategy to be effective. This is especially, true for those firms that position themselves in niche segments, but struggle to operate and grow because of conventional mass-market operators (e.g., tourism). This threefold strategy requires (1) a redefinition of products and markets (value chain); (2) a redefinition of supply chains; (3) the construction of a supportive industry cluster at the local level.

3.3 Reaching the Common Good Through Innovation (or the Role of Grassroots Innovation for Change)

In literature, there has been a growing interest in innovation from the bottom-up or from civil society. This species of innovation is named grassroots innovation (GRI). It is a special form of social innovation, where the latter is a new field that studies the emergence and diffusion of innovative projects within civil society. The starting theoretical context for GRI is in innovation studies and resilience theory, but also in

the socioeconomic and political context in which the interest in GRI has developed. In fact, there is a growing institutional interest for a social inclusive innovation, and that has led to various notions, concepts, and models of intervention around inclusive innovation, growth, and development (de Mello and Dutz 2012; OECD 2012a, b; Fressoli et al. 2014; Utz and Dahلمان 2007; UNDP 2010, 2013). The studies on grassroots innovations are part of the wider literature on Sustainability Transition Studies. From the work of Seyfang and Smith (2007), who defined grassroots innovation as networks of people and organizations generating novel responsible bottom-up solutions to respond to local communities' situations, interests, and values, studies on grassroots innovations propose an *analytical framework* that shows how contextualized knowledges can deliver sustainability outcomes. In this context, grassroots are site for innovative niches and practices from localized networks of actors belonging to the same community.

Gupta (2008, 2012, 2013) defined grassroots innovation as a combination of factors (blend of science and technology, design, and risk) that local communities and individuals should individuate to convert their ideas into goods and services for development. It follows this innovation and is generally a result of a bottom-up process emanating from communities and users, thus resulting in a strict definition of grassroots (Fressoli et al. 2014). In practice, it can also include actions from other bodies or organizations such as governments, R&D institutions, aid agencies, etc. (Cozzens and Sutz 2012; Fressoli et al. 2014). It follows that, in opposition to mainstream innovative solutions and practices, grassroots innovation initiatives operate in or emerge from the civil society or third sector and involve committed actors experimenting with social innovation in new and developing frameworks and models (Tortora 2018). It is relevant to say that there is a *qualitative difference* between bottom-up community innovative solutions and similar industrial products or services offered and delivered through consolidated business models (mainstream) (Seyfang and Smith 2007). Opposite to top-down solutions, innovative or novel solutions respond to local and proximity needs of communities. Thus, there is no just one typical kind of grassroots innovation because *grassroots actions for sustainable development take different forms* since that different and multiple are the needs of different communities (e.g., from organic food to cooperative housing; from social services for the holder to community production and composting schemes). While the scale of grassroots initiatives is the local and the direction of the action is bottom-up, the place where it operates is the community and the territory, and the space is the civil society.

Next paragraph will explore how an innovative (grassroots innovation) project from the bottom (community) can create shared value (common good) for all the stakeholders. Through the case study, this paper aims at illustrating how a local community network built on a shared vision and values, as those of the civil economy and society, emerges as a grassroots innovative intermediary organizational form, which aims to responsibly and sustainably compete against bigger and consolidated local firms in the capitalist market.

4 The “Firenze Is Experience” Case Study

The Walking Seminar Firenze is Experience is an experiential learning event that provides travelers with a unique and exclusive opportunity to explore, discover, and experience Florence in a different way. The goal is to lead tourists to explore inspiring places rich of heritage and identity to promote through information and education a responsible behavior for the sustainability and future of the destination. The model takes inspiration from the cultural values and principles that date back to the beginning of the modern era and of the civil economy. The stakeholders involved through a participation process during the design (partners) are local Florentine artisans who produce products and services in the areas of food, fashion, cosmetics, carpentry, optics, restoration, personal wellness, and social services. Then, there are the managers and representative of many institutions and organizations that have been involved at various levels and with different ways of engagement. These are the Municipality of Florence, local associations with a global network, national association specialized in responsible tourism, local and national business associations, national federations specialized in tourism, culture and the arts, and the management of local museums, churches, and so on.

4.1 *Idea and Challenges for Innovation*

The main idea is to promote Florence and its artistic and related or connected productive young entrepreneurial excellences through a new and diverse experiential journey that propels the culture of knowing how to make a responsible and sustainable investment in the quality of crafts and arts in the local territory for the common good. Investing in sustainability—economic, ecological, and sociocultural—is the essential step towards addressing the ongoing transformations and reviving Florence on the path to responsible innovation in complex and risky future scenarios. EXPO2015 Milan has been a key showcase and a starting point for this new sustainable development strategy to be launched. The project’s idea was selected to be presented to the press and other stakeholders in Milan on October 2015 at the EXPOMilan Fair.

The idea is rooted in the civil economy and starts from the idea of involving partners and tourists in the development process. The participation of tourists refers to the consumer–voter principle, the idea that the project and then the service (the walking seminar) has to involve the tourist-actor directly in the attempt to let them have a different experience in contact with the historical, cultural and productive beauties of the territory that date back to the civil economy era; promote emerging and sustainable local business excellences through; develop innovations capable of accommodating the needs of new tourism respectful of the common good.

The innovative value of this design proposal lies in the centrality of people and their values and principles of the civil economy that are connected to the paradigm

of sustainability. The challenges (limitations and problems) that the project has and still encounters are stated in the next paragraph.

4.2 The Design Phase for an Innovative Organization

The activities were carried out on a *participatory path* for the design and the implementation of the business model was organized in the following phases: (a) *Diagnosis and networking*; (b) *Elaboration of the business model canvas and the business plan*; (c) *Communication activities and stakeholder engagements*.

The format is the one of a Walking Seminar and Touristic Itinerary that refers to the principles and values of the civil economy and responds to a choice in design and organization that is respectful of the principles and criteria of sustainable and responsible business for the creation of shared value from the bottom in an innovative way.

The experience is designed in order for the tourist to learn and experience sustainability by contacting productive realities through experiences designed for the purpose and needs of participating companies. The participating companies have been selected on the base of policy responsiveness and sustainability policies, process and products. All the companies are located in the same territory and belong to the same community. The goal of the project is to create a new and innovative network of people and organizations—a local community for responsible tourism—to promote the sustainable value of the territory by realizing a repeatable event that is open to the local community and tourists. Positive impacts are co-created by all the participants.

The designer and promoter is a local nonprofit association based in Florence. Its mission is to promote a responsible business culture in order to empower young people, especially students and entrepreneurs, to change the world. The commercial partner of the association is an innovative start-up established to make positive social impacts. It promotes social change through also research-based actions on sustainability and responsible business.

Among the main managers involved in the network, there are those representing and coming from five main organizations that act as strategic partners and that have been involved in advance in the construction of the project through meetings and presentations. These are the main local association for the Florentine Civic Museums; the Italian Alumni of the International Cultural Exchange Programs promoted by the Bureau of Educational and Cultural Affairs (USA); the main business associations for artisans and micro and small enterprises in the Florentine metropolitan area with more than 9000 associates, of which 2700 young entrepreneurs; the leading Tuscan business association for cooperatives; and the leading Italian nonprofit association for responsible tourism.

4.3 Focus on the Arts and the Humanities: The Strategic Choice of Places and People

The motto “*Discover and Live a Responsible and Unconventional Florence*” has accompanied the project and from its beginning till the moment, it was selected to be presented at the EXPO2015 in Milan in the area of CSR and Social Innovation, which is represented at Cascina Triulza, an old building restructured as a modern and sustainable pavilion. The goal of the project is to show the deep conscious soul of Florence in special places with responsible leaders. The innovative and responsible walking seminar has been designed according to the civil economy principles and values. Tourists have the choice to visit paradigmatic places that represent the best expression of this vision and actions for a responsible and sustainable Florence. Travelers will be in company with responsible and conscious young entrepreneurs, Ph.D. scholars, professionals, and managers who are affecting Florence everyday. The educational motivations in supporting this design are in trying to get the tourist’s attention, to stimulate his/her creativity and critical point of view in order to make a positive impact through conscious choices.

The innovative offer presents a responsible approach and business model in the form of an innovative format that develops through a participatory and engaging process of network excellences: paradigmatic places and responsible leaders. Walking and talking slowly, passing by historical places and sites, and focusing on the excellences of the past as inspiration for a better future. The basic tour is designed to visit at least three paradigmatic places: the Church of Santa Maria Novella and the connected Museum of the Dominican order, an artisan laboratory close to the Church, and the Ferragamo Museum.

These are three inspirational places that give tourists an ideal responsible path to follow through centuries. From the analysis of the Order of Dominicans (the organization, their story) and the role of the Church, and its artworks to a modern global company investing in sustainable actions for the local community and the territory, passing through an artisan laboratory of restoration as the ideal link between the inspiring past and the present and future of the city. In the lab, tourists can have a hands-on experience in developing sustainable and responsible techniques in restoration from a couple of young women who adopt classical techniques with modern and green chemical or natural elements to preserve historical paintings and wooden artworks. The places to visit are the *Santa Maria Novella Church and the related Museum*, the Salvatore Ferragamo Museum, and two young artisan women’s lab. These two young women were chosen as inspirational leaders. In fact, their business choices ideally, philosophically and commercially link the heritage of the civil economy expressed by the Church of SM Novella with the global company projected towards the future but rooted in the Florentine history and traditions.

5 The Developed Model: Proposal for Discussions and Future Researches

The model intends to act for the promotion and preservation of the tourist heritage through an innovative tourist experience—a “responsible tourist experience”—based on the ideas of shared value, grassroots innovation, and open community in the context of the sustainability paradigm and the related strategic, 17 SDGs adopted by the United Nations with the relative Development Agenda 2030.

Promoting a responsible “tourist experience” in the dynamic and complex context of the current economic, environmental, and economic crisis means to design, develop, promote, and defend a different social and business model in contrast to the conventional tourist system’s offer and its limits. This model should face wide market spaces offered from a growing demand for local, sustainable, and real experiences both from local and foreign tourists. The preservation and valuing of local heritage and capitals is the key point to build upon different, innovative, and responsible tourist systems where consumers are likely to be considered as individuals who are free, open and committed to learn and be educated and informed about the real value of the local heritage in order to make conscious choices for the common good of all.

The model here presented has been designed according to the principle of shared value and grassroots innovation developed on the needs of a local community of committed actors who share vision, principles and operations. The proposed model here generalized as a tourist community network (TCN) framework overcomes the conventional limits of tourist systems, and local tourist offers trying to put into action a transformative potential of the right local tourist system to guarantee long-term sustainability for all the actors and capitals involved at the community level. If the political long-term goal should be the one of assuring a transition towards sustainability, guaranteeing the heritage and tourist security can be achieved mainly starting from the bottom through the reconstruction of responsible local tourist systems in innovative ways.

In the face of this persistent crisis and with the disruption occurred at the global level due to the launch of innovative startups and applications (e.g., Airbnb; Huber, etc.), several tourist business models have been developed. Especially in recent years, because of the use of the new communication technologies, and on the base of the new competitions of the highest innovators, many new or differently new business models have reconfigured trying to focus on short value chains based on a reconnection strategy and more direct communication between sellers and consumers.

Future research and empirical analysis should try to analyze possible pathways to overcome limitations and solve or avoid potential problems. Among these, from the case presentation, it is worth to mention

- The still limited impact of innovative and responsible experiences on the dynamics of production and consumption both online and offline (e.g., tourist office) still dominated by conventional channels (main tourist channels such as Bookings, Expedia, etc.).

- The management constraints that micro or small firms present since they do not have enough resources such as capitals (human and organizational resources) to manage complementary activities at the same time and on multiple channels.
- Transparency, which cannot always be guaranteed by communication alone.
- The *Trap of the local*, according to which these initiatives are attributed by having only positive impacts, and the following *Elitism* for which the short chain involves almost exclusively “Conscious consumers”, generally included in high class or income clusters.
- The inability to meet the demand for local and sustainable products from part of an increasing number of “traditional consumers”.

6 Conclusions

The redefinition of the concept of value is the basis of the entrepreneurial idea the TCN and its character of disruptive innovation. The services and products offered are “shared” tourist products: respectful of the environment, of quality, fair, and local.

In order for the TCN to position in the market as a responsible business activity, to primary functions and services, TCN managers should add additional activity for reaching on one side a diversification of services and a consolidation of the network, and on the other side, a development of unique strategic services that determine the positioning of the TCN in the market of the base of shared values and principles. These strategic services have to be added and activated from the beginning since they refer to the vision and mission of the network. Examples of services that can be developed in this area, there are educational tours, business visits, urban gardens, education programs involving local schools, families, and artisans; health education programs through tasting activities in local pubs, restaurants or cafes or at farms as in the case of wine and food tourism; infotainment or education programs to reduce local footprint; engagement and education on sustainable business topics of schools and local businesses; stakeholder engagement projects to reduce the local footprint and create a virtuous circle (food waste reduction and donation programs to organizations; local food and craft purchase campaigns; support for local artists, foundations, small- or out-of-the-big-crowd market artistic and cultural spots such as small but historically relevant churches, museums, art exhibitions, etc.).

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Sustainability Values in the Legacy of St. George Preca: Society of Christian Doctrine Women's Experiences



Esther Farrugia and Paul Pace

Abstract This paper explores how Education for Sustainable Development (ESD) features with women non-formal educators who follow the spirituality inspired by St. George Preca within the Society of Christian Doctrine (SDC) he founded in Malta. Following a comparative literature review, semi-structured interviews were conducted with 17 participant educators to identify sustainability values reflected in their personal lives, and their involvement in the SDC and local communities. The results of the study showed that participants were unaware that these values form part of ESD principles; however, they were still transmitted primarily through their spirituality and values education, merging both aspects with their femininity as they reached out to the people they meet during their apostolate. Data analysis revealed that being a committed SDC member orients an individual towards sustainability values. Consequently, this influences the formation provided by the SDC members which was found to converge closely with the principles of ESD. The study indicates that spirituality supports ESD together with its main comprising pillars. Finally, recommendations are proposed to enhance ESD within the SDC educational programmes.

Keywords Education for sustainable development · Environmental education George Preca · Values education · Non-formal education · Spirituality

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1 Introduction

In their paper, Leal Filho, Manolas and Pace (2015) reflect that regardless of the huge efforts invested in Sustainable Development (SD) over these last decades, the turnout (in terms of improved quality of life) has been rather low. They further propose the need to think outside the traditional box—to approach SD from a perspective that is bold enough to question traditional paradigms and propose a different perspective to our problem-solving skills.

Three successive popes (Pope John Paul II, Pope Benedict XVI and Pope Francis I) have stressed that the current ecological crisis is the result of the ethical, cultural and spiritual crisis of our current culture. The proposed solution cannot be found in technological tweaks and political non-committal jargon, but in a radical change in personal attitudes and practices, before we can start changing communities, nations and the planet (IUCN et al. 1991). The need is for us to ‘look to the common good, embark(ing) on a path of dialogue which requires patience, self-discipline and generosity, always keeping in mind that realities are greater than ideas’ (Pope Francis 2015, 201). With spirituality steadily evolving as the missing pillar within sustainability discourse (Burford et al. 2013), the emphasis on the development of lifestyles based on intrinsic values and the perception of a possible link between the principles of sustainable development and Christian values instigated the authors to study this association specifically in the writings of St. George Preca and the Society of Christian Doctrine (SDC) he founded.

The research involved an initial systemic analysis of Preca’s writings to chart his perspective of education, social transformation and the interaction between them. This was considered as crucial to the study as it provided the backdrop to the Rule that determine the lifestyle of the people enrolled in the SDC. A series of in-depth semi-structured interviews were then conducted with a group of SDC women members. These personal narratives opened a window onto these women’s spirituality, their sustainability values reflected in their personal lives, and their involvement in the SDC and local communities.

SDC spirituality was explored to seek convergence with the tenets of SD and Education for Sustainable Development (ESD), especially since SDC’s *raison d’être* focuses on educating the public. The study evaluated whether the SDC provided its members with the opportunity to translate their personal religious beliefs in a good quality of life into concrete actions that promote sustainability.

2 General Background

2.1 Education for Sustainable Development: An Evolving Concept

Sustainable development is generally thought of as involving decisions that address three interrelated concerns: economic vitality, social cohesion and environmental protection with sustainability being the area of overlap among these three dimensions (McKeown 2002). The degree of overlap promotes the well-being of humanity. Yet, this is becoming more challenging due to the anxiety generated by the rapid and constant changes affecting humanity and the planet (Pope Francis 2015, 18).

The setting within which ESD developed, since its inception in Recommendation 96 of the first UN Conference on the Human Environment (UN 1972), is characterised by a need to increase the citizens' sensitivity and motivate them to action towards striking a balance between human development and environmental conservation through education. This need was reiterated, albeit under a host of different terms, by the several UN (and non-UN) backed conferences and their ensuing recommendations and declarations (Pace 2010). Moreover, the vision of ESD as a necessary tool to achieve a renewed global commitment to sustainable development has over the years been fine-tuned (JPOI 2003), culminating in the Decade of Education for Sustainable Development (UNESCO 2005). This commitment resulted in a paradigm shift from an emphasis on transmission of scientific information and awareness raising to promote a 'wiser' manipulation of the environment to satisfy our insatiable needs (CEE 2007) to an *'educational process that is contextually relevant, participatory, emancipatory and leading towards sustainable development'* (Pace 2010, 322).

In essence, ESD is now seen as a means of enabling citizens to understand the long-term effects of their daily choices and lifestyles and to question *'the "myths" of a modernity grounded in a utilitarian mindset (individualism, unlimited progress, competition, consumerism, the unregulated market)'* (Pope Francis 2015, 210). It invites individuals to a journey of participation and reflection (i.e. value clarification) enabling them to think before acting and avoid repeating the mistakes done by our ancestors (Scottish Executive 2006).

Placing the respect and care for the community of life and every person's well-being at the centre of all development (IUCN et al. 1991), ESD seeks to empower citizens with the skills of advocacy to give voice to the vulnerable and address issues of equity, power inequalities and social justice with policymakers (Scottish Executive 2006; CEE 2007). ESD is an attempt to restore the various levels of ecological equilibrium, establishing harmony within ourselves, with others, with the rest of creation, and with God (Pope Francis 2015, 210).

Intimately related to any discourse about ESD provision is the issue of building capacities of educators and trainers capable of engaging in learner-centred approaches (UNESCO 2014, 20, Priority Action Area 3). This is essential because evolving from the traditional delivery of monodisciplinary topics to an emancipatory

and participatory approach is slow to take root within any formal, non-formal and informal educational setting (Pace 2009), even though it is proven to be indispensable in tackling the complexity of societal dynamics.

2.2 *George Preca: His Socio-economic Context*

Born to Vincent Preca, a health inspector turned trader and Natalina Ceravolo, a teacher, George Preca (1880–1962) was the seventh child in a family of nine siblings. Educated at one of the top boys' schools on the island, Preca excelled in languages. In 1898, he commenced studies for the priesthood and was ordained 8 years later (Bonnici 1980). On 3 June 2007, he was canonised by Pope Benedict XVI.

At the time, Malta was a British colony and its industry and economy were largely undeveloped (Ganado 1975). The British occupied the higher positions of society and Maltese interests were not politically represented. Most earned their livelihood as farmers, fishermen and craftsmen (Frendo 2004). With the opening of the Suez Canal in 1869, Malta's infrastructure was upgraded to that of a naval base with the strengthening of the dockyards. Consequently, a large number of Maltese prospective breadwinners sat for apprenticeship exams and studied in the Dockyard School gaining, if successful, a living from the Maltese arsenals (Pollacco 2003) and from Malta's renewed strategic importance in the Mediterranean for the British Empire (Ganado 1975; Frendo 2004).

With approximately 75% of the population illiterate (Friggieri 1974; Sultana 1996), Malta's educational system was in dire straits as attested by the 1878 Keenan Report (Frendo 2004). Almost all citizens led a relatively simple life influenced by folklore and tradition (Ganado 1975). While men were the main breadwinners, women were expected to tend for the daily household chores, childcare and even help in the fields. After a day's work, men would perhaps socialise in the village inn, while women remained home sewing, lace making and embroidering to add to the family income. Women rarely ventured far from the village boundaries unaccompanied by a male relative. In the post-war period, women's emancipation created conflict in the country. It seemed more important to offer stability to unemployed men than to women (Sultana and Miceli, cited in Pollacco 2003) and it was only in 1947 that women voted for the first time.

Besides being a great communicator and a great coordinator (Sant 2007), Preca was able to reach out to the socially and economically marginalised becoming a significant educator who left a tangible impact on Maltese society (Sultana 1996). While fully aware of the harsh reality of society of his time, Preca refused to accept the status quo and consequently worked tirelessly on various fronts to maintain hope and work for a better world. While acknowledging the power of education, Preca defied the contemporary trend to view education as a means of moving up the pecking order of society. For Preca, being in authority meant a moral responsibility to be of service for people and providing them with an opportunity for growth. In his view, making persons aware of their limitations, namely that education is a lifelong process, was

enough to keep a humble and realistic attitude in any learner (Preca 1988a, nos. 296, 297). Additionally, Preca's insight enabled him to adopt controlled and channelled methods to implement his vision for society. He liberalised knowledge to rise above the political and philosophical contexts of the time. He empowered individuals to use both faith and reason *vis-à-vis* personal religious convictions and their social conditions.

3 SD, ESD and Preca: Areas of Overlap

3.1 Methodology

The researchers adopted lens comparisons to compare, contrast and critically analyse the main UN documents outlining the principles of ESD and Preca's writings and the way of life he recommended to his followers. With one researcher being a member of the SDC facilitated access to Preca's first writing editions and enabled a comprehensive understanding of his background and historical contexts. 'Lens comparisons are useful for illuminating, critiquing, or challenging the stability of a thing that, before the analysis, seemed perfectly understood' (Walk 1998, par 2). This exercise enabled the researchers to identify and filter out the underlying ESD principles Preca, probably unintentionally, put forward in his spirituality and pedagogy. Indeed, some aspects of ESD could only be inferred from Preca's writings upon scrutiny and reflection. Every instance where Preca referred to ESD principles, whether directly or remotely, was recorded and categorised in themes to facilitate retrieval during the comparative analysis process. Identifying these links was not a straightforward exercise as Preca's writing style tends to connect useful concepts in the same web of thought, pausing on any aspect that in his opinion needed elaboration and consequently developing arguments at a tangent. Besides valuing Preca's ingenuity, this strategy theoretically highlighted the potential for sustainability within the SDC.

3.2 Preca's Perceptions on Quality Education

Preca believed that faith educated and helped people succeed and prosper (Preca 1988b). For him, knowledge and wisdom also provided a healthier perspective to a person's lifestyle. Indeed, he helped democratise knowledge even though his ultimate objectives were spiritual (Buttigieg 2010). In his own words:

Nothing in this world is as precious as sound instruction, which is the source of all good deeds. Is one able to walk in darkness without hurting or offending himself? Sound instruction is the light which leads in the way of Peace for those who seek and practise it. A person can have no better fortune than finding someone who educates him/her: it is useless having abundant intelligence, unless it is cultivated in sound instruction (Preca 1920, p. 1).

Preca was aware of how easily inexperienced and uneducated people could be deceived (Preca 1920, p. 2). So he perceived teaching to be a person's mission and an act of charity in itself (Preca 1991, p. 42; Preca 1998, D.N. 25). Moreover, Preca provided concise detailed sentences on quality education for a better society (Preca 1988b, pp. 72–75; Preca 1982, pp. 49–53) because he believed that the learners' future depended on their teachers who should be exemplary, informed and well-prepared to shoulder their responsibilities (Preca 1988a, no. 613). This was of utmost importance because once youths were properly educated, they became knowledgeable and empowered citizens promoting the country's prosperity (M'Bow 1977).

Preca used spirituality to help people reflect on how their choices left an impact on their natural and social environment, thus facilitating the individual search for the common good. He empowered people to make the right decisions and adopt better attitudes, thus overcoming ignorance, pride, misery, folly, disorder and distress that are so common wherever education was lacking. In ESD terminology, this is tantamount to capacity building that helps individuals to gain responsibility over their choices and lifestyles and prompts them to seek corrective actions. Additionally, Preca stressed that teaching should be at the service of truth. *'One should really have reason enough to be anxious about one's own spiritual well-being, if one teaches false doctrine, if one lies, or if in any other way deceives others'* (Preca 1992, p. 38), thus complementing the Earth Charter's call for the sustainable practice of searching for truth and wisdom (Earth Charter Commission 2000).

Preca overcame obstacles to facilitate learning. He reached out to the public, supporting local collaboration within the non-formal context of village life. He focussed on the existing social linkages and potential environmental circumstances to sustain the growth and development of society through all its stages. His approach struck a chord in people who eventually accepted this education based on the enduring values and morals proposed by the Catholic faith (Bonnici 1989). Perhaps keeping a close contact with the people's lived experiences made Preca even more relevant, such that he could reinforce values, train in reflection and critical thinking skills whenever he taught in public or was personally sought for advice (Societas Doctrinae Christianae 1980; UNESCO-UNEP 1977). Therefore, Preca's ingenuity seems to embrace human development as recommended by ESD. Citizens who embrace responsibility will probably facilitate cooperation within their own country and possibly between nations (M'Bow 1977).

3.3 Preca's Pedagogy

Preca adopted a teaching style whose characteristics seem to contain traits of what today has been classified as a learner-centred pedagogy within ESD. The following are some principles posed by Preca (1930, 1988a, b, p. 72–75; 1998, D.N. 70):

- All teaching and learning activities should reflect the experiences of the audience.
- Frequent repetition and making good use of questioning techniques sustains learning. Recent studies show the value of inquiry-based learning (IBL) where learners'

experiences, observations and their natural curiosity set the ground for wanting to know and practise more. This inductive approach is reportedly effective with a wide range of abilities (Rocard et al. 2006).

- Experience is the master of all learning and therefore, reflecting on personal and others' mistakes are also valid sources of learning.

Preca's pedagogy captivated people's curiosity and interest. He inspired thought to help learners analyse situations, lifestyles and choices. One of the competences Pace (2010) argued was necessary for establishing ESD, and which Preca unassumingly seemed to develop, was the development of cognitive/metacognitive aptitudes. These included higher order thinking skills such as becoming critical in matters which concern personal situations, clarifying concepts, becoming aware of the intricacies of life, and making well-grounded assessments (Preca 2000).

3.4 Social Transformation from Within

Probably, Preca's action within society was his strongest commitment. After the unprecedented act of training working class men and sending them out to spread the Gospel, he did the same with women, which was even more unheard of at the time. Coming from humble backgrounds and experiencing the harsh socio-economic realities of their targeted audience, these community educators (the first of their kind in Malta) provided a strong and respected link to the various village communities where the SDC Centres were set up.

This 'closeness' to the community is such a treasured characteristic of the SDC members that it is enshrined in their Rule (*Societas Doctrinae Christianae* 2002). SDC members are still gainfully occupied in various fields of Maltese society and voluntarily run SDC Centres around Malta after a day's work on a daily basis. This means that they are well immersed in contemporary society and conscious of its needs and characteristics. Being educators, they are expected to lead by example and encourage others to find alternative ways of living based on Christian values. In the light of their responsibilities, Preca ascribes great importance to the formation of these community educators: a formation that provides knowledge, develops skills, internalises values and is visible through selfless action.

Preca seems to have unintentionally advocated ESD principles by promoting a search for wisdom, self-control, humility, ethical behaviour and responsible actions. Preca's Rule encouraged members to analyse situations, use prudence and have a positive outlook towards life while adopting a rather disciplined lifestyle based on altruistic values (*Societas Doctrinae Christianae* 2002). These qualities, also proposed by UNESCO-UNEP (1977), once integrated within a community, would initiate a change towards a better quality of life from within. Table 1 compares some of the SDC features with the five priority action areas outlined in the Global Action Programme (GAP) (UNESCO 2014).

Table 1 Relation between the priority action areas proposed by the GAP and the SDC Rule

GAP priority action areas (UNESCO 2014)	SDC (Societas Doctrinae Christianae 2002)
1. Advancing policy	The SDC Rule provides members with a policy for values education that nurtures an ethic promoting responsible citizenship
2. Transforming learning and training environments	While the SDC Rule ensures that all its Centres adhere to its fundamental policies, Centres still enjoy a degree of autonomy re participation within the culture and the particular needs of the host village/town community
3. Building capacities of educators and trainers	SDC ensures continued lifelong learning of its members with training sessions offered on a daily basis
4. Empowering and mobilising youth	SDC targets all ages; however, it particularly targets youth. Besides providing spiritual education aimed at developing the person, SDC offers quality education aimed at transforming youths into community educators
5. Accelerating sustainable solutions at local level	SDC Centres are present in practically every local village or town. Members interact with the public on a daily basis, thus having the opportunity to promote values and engage in the concerns of the community

4 Inside the SDC Women Community

4.1 *The Participants*

The study also focussed on SDC women members. Approval to access SDC members was sought and granted from the Society's women administration. Would be participants were given a 'Participant Information Sheet' and an 'Informed Consent Form' which contained all the relevant details about the research to ensure an informed approval. Issues regarding the whole data collection process were clarified prior to receiving the consent forms, to ensure clarity and voluntary participation. Subjects were free to opt out of the study if they wished to do so. A non-random quota sampling technique was adopted, through which 17 women participants were chosen: 15 members and 2 prospective members, to reflect the members' proportions and guarantee a wide representation of views. Participants' age ranged from 20 to 82, hailing from diverse occupations in society, roles in SDC, and representing different urban or rural areas around the Maltese islands. These women were invited and empowered to tell their stories, bringing in their own statements and meanings of the sustainability aspects discussed. Consequently, they shaped this study, potentially enabling both the researchers and readers to learn from their experiences (Creswell 2007).

4.2 *The Insider–Outsider Balance*

The lifestyle SDC members follow, can be classified as a co-culture in that although not mainstream (due to their vocation), they are not considered in any way less than the conventional one and are not demeaned in any way. To explore it, the study integrated ethnographic and phenomenological approaches (Creswell 2007). To ensure the gathering of rich ethnographic data, the research team included an ‘insider’ to the SDC, who attributes her life-changing decision to become a full SDC member to her close contact with Society members she considers her role models. Furthermore, at the time of the study she occupied a policymaking role in the Society. This ‘intimate’ experience of the SDC provided the study with a comprehensive picture and understanding of these people’s lifestyle, their daily interactions, knowledge, language and the relation within the SDC general structure so necessary for ethnographical research.

Although observational evidence enables immediate, significant experiences in ‘accurately described settings’ (Patton 1990), an ‘outsider’ would probably have serious difficulties not just in discovering the workings of these women within SDC, but particularly in linking the findings with the rationale behind their common lifestyle and impact on their personal and collective spirituality. On the other hand, while seeking connections, an ‘outsider’ might observe aspects and gain insights which an ‘insider’ might have missed and/or taken for granted. Moreover, participants might prefer or feel more comfortable sharing valuable information with an ‘outsider’ rather than with an ‘insider’. Considering this, Rabe (2003) maintains that there is much fluidity between the ‘insider’ and ‘outsider’ aspects of such research on issues of power knowledge, participants’ self-understanding, and the researcher’s analysis of them.

Furthermore, a phenomenological approach allowed the study to search for hidden meanings and awareness of the lived experiences of sustainability within the SDC. This phenomenon had to be explained because although not fully developed, some knowledge was required to enable the researchers to link ‘what was said’ with ‘how’ these members lived a sustainable life. Indeed, participants became aware of sustainability issues as they recounted their experiences. This could take place through the involvement of the ‘insider’ who still had to distinguish her role from that of the subjects. Although the personal experience of the ‘insider’ helped understand the participants’ viewpoint, it was important for her to ‘bracket’ personal perceptions to value participants’ original contributions. In the search for hidden meanings, Maggs-Rapport claims that both involvement and distinguishing oneself from the subject are crucial, as ‘...valid knowledge is a matter of relationship’ (Maggs-Rapport 2000, p. 221).

To reduce bias that could be generated by the ‘insider’, the research team included an ‘outsider’ whose expertise is in ESD and in faith-based sustainability initiatives. Moreover, advice from a critical friend who holds a Master degree in sustainability and is very active in ESD was sought. Besides being a woman and an educator, her role as a parent brought her in contact with the SDC. She willingly and critically

analysed the findings bringing an added ‘outsider’ perspective into the investigation. Collectively, these measures, while making use of the benefits of ‘insider’ involvement, reduced the risks of partiality which could negatively sway or taint the outcome of the investigation.

4.3 *Data Collection Methods*

Fieldwork within the Society’s premises was conducted by the ‘insider’ who unsystematically ‘observed’ or rather lived with the consenting participants, within their regular settings. Her passive participation enabled her to gain or confirm knowledge and a system of meanings about sustainability values embraced by the different participants. Being involved in the daily workings of the Society, the researcher’s presence did not threaten authentic behaviour and promoted natural discussion during routine activities, experiences in the public and other informal moments. This data complemented the other data collected during the interviews.

Interviewing was the other main data collecting strategy. SDC members were approached during one of their usual formal meetings. An appointment for a formal in-depth semi-structured interview was agreed with the complying participants. An interview schedule based on the main principles of sustainability and ESD was prepared to serve ‘as a basic checklist during the interview to make sure all relevant topics are covered’ (Patton 1990, p. 280). The interviews took place in an environment in which participants felt comfortable, such as their home, in their respective SDC Centre or during informal moments in a retreat house. The interviews focussed on

- the participant’s experience in SDC and in the local community;
- her level of participation in various activities;
- the religious beliefs and values she endorsed;
- what sustainability values she perceived in Preca’s teachings and their relevance for today’s realities;
- her perceptions on womanhood; and
- her perspective of lifelong education.

Although the interview questions gathered common information, they allowed enough flexibility to gain additional information through prompts addressed to individual participants. The interviews were held in Maltese to overcome any language barrier and ensure a smooth flow of discourse. Informants were audio recorded (with their permission) using a digital voice recorder to facilitate a full transcription of the approximate one-hour interview. Individual interviews were transcribed and field-notes added on the day to prevent data loss. Pseudonyms were used to ensure confidentiality and any information which could identify the participant was also deleted. Additionally, informants were able to review their own interview transcription at any stage of the study with the possibility of adding, clarifying and/or deleting data. Following approval of transcripts by the interviewees, the responses were classified into a set of main categories and sub-categories that emerged from the data (see Table 2).

Table 2 Main categories and sub-categories of sustainability values as perceived by SDC women members

Sub-categories	Main findings
<i>Main category: The importance of community building</i>	
Individualism undermines the communal spirit	<ul style="list-style-type: none"> • Showing initiative and having good communication skills overcome individualism
Community building in the SDC general structure	<ul style="list-style-type: none"> • General meetings, informal moments and support were factors considered important in sustaining a sense of community belonging • Interpersonal relationships, decision-making strategies and grassroots participation could be improved. Some participants proposed extending the SDC margins to include families and other educators who were not its members
Community building in the SDC Centres	<ul style="list-style-type: none"> • Teamwork, personal commitment, active participation, mutual respect, acceptance and flexibility were cited as factors sustaining participants' communal spirit • Participants also felt encouraged by benefactors who supported the SDC
Community building in classes and meetings	<ul style="list-style-type: none"> • Participants adapt themselves to the learners' needs by adopting innovative pedagogical techniques to enhance learning. Yet, there is room for improvement as some still adopt traditional teaching methods • Learners' relationships were developed from friendship, play, commitment and giving service, training in Gospel values, individual attention, celebrating achievement and discovering abilities. Some difficulties were also mentioned such as restricted premises and time restraints
<i>Main category: Focussing on the learner</i>	
A learner-centred pedagogy	<ul style="list-style-type: none"> • Learners' experiences are given importance • Most participants adapt their teaching style and seek themes relevant to the learners • Participants' resourcefulness stimulated learners' thinking skills. There is room for further learner empowerment • Participants' awareness of learners' behaviour and feedback implied that family background could not be ignored • Young members reported difficulties in concept application. However, adults had no issues related to this skill • 'Hands-on' activities were considered necessary
Interdisciplinarity and experiential learning	<ul style="list-style-type: none"> • Participants practised interdisciplinarity in their pedagogy by referring to varied experiences with potential learning outcomes from various sources
Constructivism	<ul style="list-style-type: none"> • Participants' pedagogy facilitated initiatives to construct knowledge with learners • They focussed on developing independent thinking skills and a positive and accepting learning atmosphere

(continued)

Table 2 (continued)

Sub-categories	Main findings
Holistic teaching	<ul style="list-style-type: none"> • Spirituality is a predominant feature in SDC Centres. Additionally, a culture of knowledge, development of sound attitudes, time management, diverse activities and informal moments support holistic growth
A sense of care	<ul style="list-style-type: none"> • This feature, within the limits of prudence, was given outstanding importance by the interviewees
Environmental awareness	<ul style="list-style-type: none"> • Participants are generally knowledgeable and respect the physical environment • They endorsed waste management and supported learners' formal education re-sustainable lifestyles • Education is considered instrumental to uphold values despite living in a consumerist society
Reflections on happenings	<ul style="list-style-type: none"> • Participants promoted reflection to aid people associate short-/long-term effects with their respective cause and vice-versa
Supporting the family unit	<ul style="list-style-type: none"> • Participants reinforced family ties, considered as fundamental to people's well-being and social stability • Various young couples sought advice from SDC members • Some participants proposed that the SDC adapt to current family demands such as considering the learners' family expectations when planning outings
<i>Main category: Sustainability values in Preca's spirituality</i>	
Members' perceptions about Preca's values of sustainability	<ul style="list-style-type: none"> • Preca's active presence, continued support and legacy were cherished by the members • The sustainable values he lived by and promoted were described
An education of values	<ul style="list-style-type: none"> • Values were highlighted together with participants' ways to concretize them
Members' lifestyle and personal choices	<ul style="list-style-type: none"> • Frugality, generosity, efficient resource use and awareness on poverty were pinpointed • Some participants proposed more effort in the SDC Centres to separate waste and promote healthy food
<i>Main category: Insights on womanhood</i>	
Members' impressions	<ul style="list-style-type: none"> • Participants were highly aware of women's potential, pinpointing women's capacities. Additionally, they were conscious of the disadvantages and the challenges they had to face as women
Gender issues	<ul style="list-style-type: none"> • Participants promoted gender equality • They perceived men and women as having complementary roles
Acting local ... creating a difference in society	<ul style="list-style-type: none"> • Participants used both their personal and their financial resources to promote Gospel values within the local community
Thinking global ... Outreach	<ul style="list-style-type: none"> • Participants expressed their wish to see the work done by SDC extending and adapting to other countries

(continued)

Table 2 (continued)

Sub-categories	Main findings
<i>Main category: Aspects of personal formation</i>	
Principal sources of education when younger	<ul style="list-style-type: none"> • Participants stated that their family was the principal source of education • The SDC and formal education also influenced their life
Attitudes towards lifelong education	<ul style="list-style-type: none"> • Participants considered education as a fundamental component of their vocation. Education was rigorously adhered to on a daily basis within the SDC Centres and regularly on an institutional level. Personal initiatives for ongoing formation were included

4.4 Trustworthiness of Data

A research's trustworthiness is dependent on a collection and analysis of information from various sources and people, as well as participants' thoughts to enlighten and sustain the researcher's opinions (Maggs-Rapport 2000). Trustworthiness of qualitative research data has the following facets: credibility, confirmability, dependability and transferability (Lincoln and Guba 1985):

(a) Credibility

The insider's broad experience in the field, both prior and during the investigation, enabled her to establish trust and guaranteed an understanding of the interactions within the SDC lifestyle. This enabled the researchers to focus on the relevant factors sourced by the observations and interviews as well as account for distortions which could have otherwise marred the investigation. The investigation was guided by a sensitivity to and respect for the participants' realities and contexts rather than being limited to methodological techniques (Altheide and Johnson 1994).

Although participants were asked to verify the transcriptions of their own interviews, little was actually changed, added or removed, thus reducing the threat to content validity (Morse et al. 2002). Furthermore, content validity was supported by the literature review on ESD and Preca's writings. Moreover, two SDC members who are scholars on Preca's writings were interviewed to ensure validity and clarify the researchers' interpretation of Preca's writings, especially since Preca wrote in a very different era. This additional data source corresponded with the available knowledge, thus enhancing the study's credibility through a degree of triangulation (Creswell 2007). Furthermore, the critical friend's insights on ESD supported and reviewed the field experiences.

(b) Confirmability

Directed by the research questions and keeping to the prepared guidelines helped to keep the interviews focussed, therefore facilitating data handling. This 'methodological coherence' served as a verification strategy for the study (Morse et al. 2002, p. 18). Admittedly, the phenomenological approach is susceptible to subjectivity.

Therefore, a reflexive attitude in all the steps of the knowledge construction process was maintained. During the interview and transcription process, the 'insider' continually reflected on and internally compared participants' contributions to her own experiences. Findings were supported with the participants' first-hand contributions to outweigh researchers' bias and ensure that findings were 'grounded in data' (Lincoln and Guba 1985, p. 323). Each interview was transcribed on the day, and events happening during the session were included to ensure that no raw data was ignored in the process. The researchers' interpretation of data was carefully reviewed by the critical friend.

(c) Dependability

The study's reliability depended on the researchers' consistency in procedure such that the method could be easily followed by others. Keeping a research journal did not merely enable the researchers to keep track of the evolving process to support an audit trail (Lincoln and Guba 1985), but it also provided the rationale behind the researchers' decisions, insights and reactions to the developing knowledge as the participants' consistency in statements, attitudes and actions was verified. Simultaneously, the insider's background theory served as reference against which she could continuously compare participants' feedback to expand more on and/or delve deeper in her inquiry, thus ensuring reliability and validity (Morse et al. 2002).

(d) Transferability

The study gave a detailed, thick description of the social dynamics and particular framework of the SDC lifestyle. Additionally, it included real-life experiences proven by the insider's closeness to the participants, thus accounting for a degree of accuracy in the study. Being qualitative in its nature, the findings of this study are significant to the SDC cohort. However, applying these findings to another context will depend on how much commonalities can be found between the SDC setting and the new context.

4.5 Ethical Considerations

Ethical approval from the University Research Ethics Committee (UREC) and the Faculty Research Ethics Committee (FREC) was obtained prior to the commencement of the investigations. Additionally, access into the SDC female sector was requested and obtained through a written permission. Since the insider knew the informants, the latter's involvement was probably based on respect and trust. Perhaps members might have had moments of uneasiness. There were moments when participants became emotional and the researcher could feel the intensity of their experiences. She could also feel their goodwill and the genuineness of their spirituality. Subsequently, the researcher was constantly aware that this situation called for reciprocal respect, justice and confidentiality of both the respondents' identity and

the data collected. The information gathered was used solely for the purpose of the study, and the recorded data was deleted once the dissertation was completed.

4.6 Results

Table 2 summarises the participants' perceptions, attitudes and choices in this study. The main findings are summarised to complement the emerging sub-categories on sustainability values in the legacy of Preca as outlined by SDC women's experiences. The findings of this study bring to the fore the participants' strengths and weaknesses in their efforts to improve their commitment for the building of a better tomorrow, given their proven dispositions and genuine attitudes. Embracing such a particular vocation nowadays could potentially help these SDC women to improve their flexibility in reaching out to those who wish to have a sustainable world, a guarantee for future generations.

4.7 Discussion

The SDC and sustainable development stem from two different disconnected realms, having their own history and separately promoting the common good from different perspectives, yet they strongly share a surprising commonality, specifically: educating the whole person.

As one attempts to decipher the strategies proposed by the GAP (UNESCO 2014) for ESD mirrored within the SDC structure, one cannot but note the value of spirituality within these participants' attitudes towards sustainability. SDC members prioritised spirituality, believing wholeheartedly that this aspect was the cornerstone of their whole being that gave value to their efforts. Spirituality is well integrated in a way that finely affects all other dimensions of their life. Preca maintained that whoever was imbibed with God's presence could not but reflect Him and consequently His love and care for the common home he created for His family (Pope Francis 2015). SDC members feel supported by prayer and a communal spirit stemming from faith in Jesus Christ who unified people from diverse backgrounds and intellectual abilities into a fraternity. The theological concept of the incarnated Jesus is the fulcrum around which the SDC developed, whereby the ecological theologian Sallie McFague (cited in Ress 2006) based her arguments on God's involvement in creation. As expected, their Rule (*Societas Doctrinae Christianae* 2002) emanated a spiritual closeness with God and others, such that a dynamic was created between discipleship and endeavour.

SDC spirituality, based on the Beatitudes (Mt. 5, 1–12), feeds the members' authenticity, seeking God as the sole witness to the motivations behind their decisions and actions. Literature indicated that values education was thought to be the missing pillar of ESD, bringing the religious–spiritual dimension into the picture.

Actually, values formed the backbone of the Earth Charter (2000), the UN Millennium Declaration (UN 2000), UN Decade of Education for Sustainable Development (UNESCO 2005) and the UN Sustainable Development Goals (UN, n.d.), but were omitted in the Rio + 20 document (UN 2012), causing great concern. Some sustained that their immeasurability made them futile, while others alleged that ethics and morality formed human values that in turn guided human behaviour and choices. This, according to several observers, was where ESD was failing (Pace 2009; Tucker 2012; Rockefeller 2010). The Spiritual Pillar of sustainability has been identified as the antidote required to counteract the negative impacts of the predominant economic paradigm that values profit more than life (Pope Francis 2015). The reason at the basis of the crises that humanity and the planet are facing is the lack of *any moral or spiritual guidelines* (Pope Francis 2015). Moreover, Rockefeller (2010) claims that this pillar, besides providing an opportunity for the internalisation of values that promote sustainable development, also prompts individuals to act on their beliefs and convictions.

Spirituality keeps the SDC members' awareness alive, reaching out to support others by building a good relationship with God and the surroundings; discovering potential; collaborating, even if in a small way, for a better environment as recommended by faith and ESD. Nash (1996) and Berry (1996) agree that spirituality can support sustainability principles. Moreover, a prophetic stance in Catholic spirituality urges individuals to leave their comfort zone and involve themselves in sharing and relieving suffering. Preca (1981) claimed that free will needed constant training to ensure cooperation with God's helping grace in moments of trial. Pope Francis (2014) claims that a personal conversion flourishing from the heart contrasts with the proposals of an artificial world that would have us exclude God from our horizon. This conversion invites us 'to embark upon a journey on which, by defying routine, we strive to open our eyes and ears, but especially to open our hearts, in order to go beyond our own "backyard"' (Pope Francis 2014).

Perhaps this clarifies Reinjtes's questions: whether embracing a spiritual lifestyle makes a difference in balancing the three pillars of sustainability (Reijntjes 2007). Does it lessen individualism and affluence, which are unaffordable? Will detaching spirituality from progress actually diminish the ethics of responsibility implied by Jonas (1984)? As Bauman (2013) explored the characteristics of European society and identified factors that seem to conflict with ESD, he seemed to imply the need to reinstate spirituality.

4.8 Limitations of the Study

The study was carried out at a particular point in time and reflects the realities of the time. Although the interview attempted to invite subjects to reflect on their journey in the SDC over the years, the data does not provide clear information about how attitudes evolved over time; nor will it audit changes in approach towards sustainability values in the SDC's future.

While delving deeper into the sustainability values of SDC women, the study lacks a comparative analysis of the same values of the male counterparts as well as those of other non/spiritual local non/formal educative settings where educators and learners assess sustainability values through ESD initiatives. This comparison could not be done essentially because such studies are still missing and because the time and resource constraints of the current study could not allow a wider sample. Nevertheless, this study provides a pioneering baseline study for future study in this field of research.

Having an ‘insider’ in the research provided access to the intimate lifestyles of the sample. Although care was taken to counteract bias, admittedly personal biased interpretations are impossible to eliminate. Nevertheless, one might accept that the benefits of opening a window on otherwise inaccessible realities outweigh the disadvantages in such a particular situation.

5 Conclusion

SDC women’s spirituality and self-discipline enabled responsible rather than impulsive action. Knowing their boundaries and seeking advice were the direct result of their prudence. Nevertheless, their willingness to participate intelligently and tactically permeating their working circles and neighbourhood could be interpreted as a light, potentially guiding others through a culture deprived of ethical consumption, community building, social justice and environmental care. These women help us discern whether our values are really sustaining our personal life and that of others.

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Sustainability and Religion: Past Trends and Future Perspectives



Walter Leal Filho, Lena Maria Dahms and Adriana Consorte-McCrea

Abstract This introductory paper offers some perspectives on sustainability and religion, and outlines some areas where further attention is needed.

Keywords Sustainability · Ecology · Faith · Religious values · Religious communities

1 Introduction

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

Academic research on sustainability and climate change mainly focus on economic, political, and technological solutions and innovations. In this way, they usually forget one potentially important factor—religion. Inarguably, religious communities are amongst the largest organized worldwide networks and institutions (Altmann et al. 2012, p. V; Casanova 1994; Habermas 2006). Their leaders generally enjoy a high level of trust from their communities. This raises the question if and how these networks can act as a powerful force to change the behaviour of their adherents towards more sustainable lifestyles. How does religious belief contribute to moving society towards sustainability? So far, there is a lack of research examining the potential roles and resources of religion. Until today, the study of the public involvement of religious actors has been mostly limited to the US, (Dewitt 2006; Djupe and Gwiasda

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2010; McCammack 2007; Nagle 2008; Wardekker et al. 2009). The following article gives a short overview of the researches about the influence of religion and faith on sustainable behaviours. Furthermore, religious communities and initiatives dedicated to sustainability will be presented. The main aim of the authors of this article is to develop an understanding of the relation between religion and sustainability.

2 The Meaning of Religions in the Contemporary World

Religions not only had a strong powerful influence in history, till today, but also are said to play a key role in fostering a change of behaviour and a transformation of societies (Palmer and Finlay 2003). Still, in the contemporary world, different beliefs help to explain human existence. In all cultures, there are those who have a set of beliefs in God's creation or an openness to a sense of transcendence and find support and answers relating to their inner questions from religions.

Besides their problematic dimensions such as intolerance, dogmatism, and fundamentalism, religions have always been a source of wisdom, moral inspiration and a preserver of rituals. And even in a more secular era, for many people around the world, religious beliefs are still central to their culture, providing moral guidance in life and a specific set of values in everyday lives. And especially, these values could render religions helpful in changing people's attitude and behaviour towards the environment and as a result helping to shape a sustainable future.

3 ... Towards a More Sustainable Future

The issue of sustainability concerns human values. The ecological crisis shows up in the ecological systems of the world, but it is not a crisis of these ecological systems as such. It is a crisis caused by human choices, by what we choose to value (c.f. Moltmann 1989, p. 53). Religion, then, has a contribution to make because it can inform and challenge our choice of values; at the very least, religion creates room for thought by providing alternative visions of life's meaning and purpose.

Many studies show values as a main motivation for specific behaviours, such as Sheth's shopping preference theory. Thus, it appears that a sustainable behaviour and life depends upon personal values. If we assume that religions influence value development, it suggests that a religious belief has the potential to lead to sustainable behaviour. Several studies have investigated if and to which degree religions significantly influence sustainable behaviours through their religious values. In their paper 'Religious Values as a Predictor of Sustainable Consumption Behaviours: A Cross-Cultural Comparison' Kahle et al. (2015) showed the important influence of religion in understanding determinants to sustainable consumption. Their study revealed that 'consumers adhering to any religious affiliation, as opposed to those that are Atheist,

are more likely to participate in sustainable consumption behaviours.’ (Kahle et al. 2015, p. 275)

Altmann et al. (2012) interviewed a number of religious leaders and surveyed the corresponding religious community. Indeed, their research proved that religious concepts such as stewardship and the Golden Rule (do to others as you would have them do to you) are principal motivations that can guide towards sustainability. However, both religious leaders and adherents, it seems, lack a broad understanding of sustainability (Altmann et al. 2012).

Further, Koehrsen discovered that the given socio-geographic context and religions’ general predisposition to adapt to its social environment have an impact on the extent to which a given religious group tends to enable a ‘Sustainable Transition’. A sustainable transition is defined as ‘long-term, multidimensional, and fundamental transformation processes through which established sociotechnical systems shift to more sustainable modes of production and consumption’ (Markard et al. 2012, p. 956). In some geographical spaces and social spheres, religions are marginalized to a degree where they are not involved in societal issues anymore, whereas in other social contexts religions are much more supported.

It is often argued that people adhering to Eastern religion’s beliefs (Buddhism, Hinduism, Confucianism and Taoism) participate significantly more in sustainable behaviours due to their more eco-friendly worldviews in contrast to adherents of Western religions (Christianity, Judaism and Islam). According to the Western religions’ perspective, God created nature and bestowed upon humanity a superior position to nature. In his famous essay ‘The historical roots of our ecological crisis’, Lynn White claimed 50 years ago that this Western religion’s belief caused an exploitation of the natural world and an ensuing destruction of its resources by giving room for a utilitarian attitude to the natural world. On the other side, Eastern religions (Buddhism, Hinduism, Confucianism and Taoism), perhaps, enable a more pantheistic perspective where God, or the ultimate, is in and through everything, including nature. This short introduction about the relation between religion and sustainability does not seek to solve this debate. What is certain, however, is that the environmental crisis presents a serious challenge to all the world’s religions. Mary Evelyn Tucker, co-founder of the ‘Forum on Religion and Ecology’ at Yale University, sees in the religions a key ally: ‘The environmental crisis calls the religions of the world to respond by finding their voice within the global community’ (Altmann et al. 2012, p. 8). Following Tucker and other various appeals from environmental groups and from scientists and parliamentarians, religious leaders such as the Ecumenical Patriarch, the Pope and the Dalai Lama (including leaders of indigenous traditions) have released statements encouraging the world’s religions to participate in worldwide commitments towards a more sustainable planetary future. In his recent Encyclical on the environment ‘Laudato Si’, Pope Francis calls ‘everyone living on the planet’ to care for nature and protect the planet (Libreria Editrice Vaticana 2015). In the same year, world Islamic leaders alerted people of all faiths to engage with the global climate crisis: ‘What will future generations say of us, who leave them a degraded planet as our legacy?’ (Islamic Declaration on Global Climate Change 2015, p. 1).

4 Religious Communities and Initiatives Dedicated to Sustainability

An increasing number of religious organizations and initiatives dedicate themselves to environmental issues. This ‘ecological awakening’ of religious communities can be seen by the emergence of coalitions and national religious organizations such as the ‘National Religious Partnership for the Environment’, the ‘Evangelical Climate Initiative’ in the US, and ‘Operation Noah’ in Great Britain that understands itself as the ‘Alliance of Religion and Conservation’ (NRPE 2017; ECI 2017; Operation Noah 2017; ARC 2017). These all rethink their theologies and promote campaigns that seek ecological awareness within and outside their churches and religious communities.

Critics accuse the religious communities of being too late in addressing environmental issues. They ask for more ‘religious commitment, moral imagination, and ethical engagement to transform the environmental crisis from an issue on paper to one of effective policy, from rhetoric in print to realism in action’.

The potential for religions contributing to moving society towards more sustainability is increasingly recognized by secular and even scientific organizations. In 2007 the ‘Society for Conservation Biology’ established a conservation and religion working group (SCB 2017). For a long time, this juxtaposition was seen as a contradiction; it is now understood that science and religion together can help to integrate humans and ecology. It is becoming more and more evident that the environmental crisis is also a social issue as Pope Francis stated in his ‘Laudate Si’:

It is essential to seek comprehensive solutions which consider the interactions within natural systems themselves and with social systems. We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental.

This complex crisis cannot be solved by science, technology, law, politics or economics alone; it requires the contribution of and cooperation with various community groups—including religious groups. Attempting to ‘heal’ the climate and environment only through technical innovations or legislation will prove insufficient. In the end, what is required, is the creation of communities where humans do not dominate nature, but rather recognize and accept their dependence on nature and on the larger community of life. In this respect, religious insight has the ability to act as a powerful corrective to the notion of abstract autonomy that colours contemporary western individualism. Rather, within a religious purview, mind can be reconnected to body, self to community, human community to the wider community of creation, and finally creation to the Creator.

5 The World Series of Conferences on Religion and Ecology [1996–1998]

In this spirit, a series of ten conferences on Religion and Ecology was initiated by the University Center for the Study of World Religions coordinated by Yale University professors Mary Evelyn Tucker and John Grim. The culminating conferences were held at Harvard University from 1996 to 1998. More than 800 international scholars, religious leaders, environmentalists and graduate students participated. The subordinated objective of the conferences was to establish a ground to facilitate partnerships between religion and other disciplines working on implementing sustainable policies and practices to enable long-term solutions to environmental problems. Papers from the conferences were published in a series of ten books between 1997 and 2004 (The Religions of the World and Ecology Book Series), one for each of the world's major religious and indigenous Traditions. The series started with 'Buddhism and Ecology: The Interconnection of Dharma and Deeds' published in 1997. A foreword to each of the volumes written by conference organizers Tucker and Grim entitled, 'The Challenge of the Environmental Crisis', provides an introduction to the topic of religion and ecology. The series shows how the diverse world religions with their attitudes, beliefs and rituals can contribute to a wide interdisciplinary dialogue on the environmental challenges affecting public policy and environmental ethics. The Conferences, as well as the remarkable successful 'Religions of the World and Ecology' publications series, emphasized the crucial role of religions in helping to solve the environmental problems. Moreover, it generated a new field of study in religion and in other disciplinary fields such as contemporary environmental ethics and public policy. Among others, the Conferences led the way to the Yale Forum on Religion and Ecology, also founded by Tucker and Grim. It turned out to be the largest international multireligious project of its kind. Its research, education, publications and more than hundred engaged projects are presented at its major international website <http://fore.yale.edu/>. Besides a growing number of universities in North America and around the world now offer courses on environment and religion.

The identified values from the Harvard conference series on World Religions and Ecology can be seen as convergent with the ethical principles of the Earth Charter: reverence; respect; restraint; redistribution; responsibility; and renewal. The Earth Charter is a result of a worldwide, cross-cultural dialogue on the transition to sustainable ways of living and sustainable human development. Once started as a United Nations initiative it was completed by a global civil society and launched as a people's charter on 29 June 2000 by the Earth Charter Commission. With ecological integrity as its main theme, it is a global ethical framework that seeks to guide the transition to a sustainable future.

6 Some Future Perspectives

Charting ‘possible paths towards mutually enhancing human–earth relations’, as proposed by Tucker and Grim (1997) is a pressing challenge to faith communities. Although research shows a wide affinity between faith and sustainability values, barriers such as a lack of a shared understanding of sustainability, may be curtailing a sense of urgency or limiting the potential of communities of faith to act (Altmann et al. 2012). There are also concerns about using a methodological approach tailored to ‘traditional philosophical and religious ideas for contemporary concerns’. These include: gaps between ideals and practice; concerns about the impact of religious beliefs in shaping socio-economic and environmental injustice in the past; the vast diversity and complexity of the many religious traditions, to cite a few (Tucker and Grim 1997). However, there are compelling reasons for overcoming these and other obstacles. Interfaith cooperation for the sake of finding common solutions for shared concerns has been addressed by ARC using the slogan ‘Come, proud of what you bring of your own, but humble enough to listen’ (Palmer and Finlay 2003:47).

As pointed out by DeWitt in his comment of Pope Francis’ *‘Laudate Si’*, the time is ‘not for mere dialogue, but dialogue that results in appropriate action that is at once swift and deliberative’ (2016:276). To this affect, *Laudate Si* refers to the need for an integrated ecology of humans and nature, reflected by cross-disciplinary research, supported by academic institutions that ‘ensure broad academic freedom’. The Pope recognizes that a change in culture is needed to face the sustainability crisis and achieve ‘a lifestyle and a spirituality which together generate resistance to the assault of the technocratic paradigm’.

In their thesis about the contribution of Christian belief to addressing the Framework for Strategic Sustainable Development (FSSD) Altmann et al. (2012) suggests that many actions are currently centred around sustainable use, or ‘reduce, reuse, recycle’ (2012:vii), but that further and wider reaching actions towards social change are required. They suggest that a move towards an explicit sustainable development strategy would be greatly beneficial to help religious communities achieve further behaviour change.

How best to develop learning for sustainability within faith communities is another question. Altmann et al. believe that the development of ‘a trusted ambassador of sustainability from within a religious community’ may help develop the necessary understanding about sustainability within the community while also creating faith representation within ‘the secular world of science’ (2012:48). Koehrsen (2017:16) believes that ‘religion can have a triggering, facilitating, or blocking effect’ on the sustainability debate, and suggests that ‘religious actors’ can engage in the sustainability debate through campaigning, adopting sustainable practices, and disseminate sustainability-related values and worldviews.

DeWitt holds that ‘action-forcing’ mechanisms are essential to integrate science and ethics with praxis, only so can ‘environmental stewardship and human well-being’ are incorporated into government decision-making (2016:279). He considers the CBD (Convention of Biological Diversity) is one such mechanism that centralizes

information and creates the means for implementing pro-environmental actions. The derived Millennium Development Goals (UN 2000) recognize the important role of a diversity of beliefs for sustainable development. The importance of working across governments, organizations and funding bodies, as solutions for the present crisis cannot be found in isolation, is a common theme (Palmer and Finlay 2003; DeWitt 2016).

Perhaps one of the greatest ways for faith communities to take the sustainability message forwards already lies at the heart of every religion: storytelling is a powerful tool to convey a message (Palmer and Finlay 2003; Altmann et al. 2012).

For it is by telling and remembering traditional stories that the religions are often most persuasive and positive in protecting the environment, both by reminding people of the right way of doing things and by promoting a greater sense of responsibility for natural resources. (Palmer and Finlay 2003:51)

On the matter of ‘wisdom’ the Rev. Jeremy Law (Dean of Chapel at Canterbury Christ Church University, personal note) comments: ‘Thus, for example, the Hebrew Bible speaks of a God who creates the world through wisdom. In Proverbs 8:22–31, wisdom is an aspect or activity of God metaphorically personified as God’s master worker who gives shape to the world. Thus, the world is not random, but ordered—it has structures and limits and so is meaningful. And what is wisdom’s goal in creation? It is that of a habitable world, the formation of a flourishing community of creation’.

Faith may also have a role to play in ‘fostering a more expansive appreciation for the complexity and beauty of the natural world’ (Tucker and Grim 1997). As the current environmental crises are not merely limited to social, economic and political aspects, it is perhaps generated and nurtured by a disconnect between ourselves and the natural world. Religious discourse and leadership may be a means to heal and restore connection and care. As remarked by De Witt:

Beyond our stewardship of biology and the biosphere, and of law and culture, it is vital in our current crisis juncture that we maintain our awe and wonder for the world in which we live and work. (DeWitt 2016:280)

7 Conclusions

This article emphasizes that neither an approach focusing only on the economy, politics or regulations, nor a separated religious, ethical or moral approach can solve the environmental challenges of today and tomorrow alone. All organizations and communities, included religious communities, have a role to play in moving society towards sustainability. Several researches have demonstrated that a religious belief can offer guidance for a more sustainable and respectful life. As presented in this article the world’s faiths are concerned and aware of their responsibility; in several official statements they highlight the importance and necessity of sustainability and combating climate change. Still, there is much research required to test how best to

bring sustainability to the world's religious communities. How do the world religions perceive a sustainable life and how could that be achieved according to them?

For many people, like Munjed Murad from the Center for the Study of World Religions, it is not only an environmental crisis but also a moral and spiritual one that requires us to understand ourselves as creatures of nature, who are embedded in life cycles and dependent on ecosystems. Munjed Murad favours a broad philosophical and religious understanding:

“A tree no longer symbolizes transcendence, the absoluteness in his trunk and the infinite in his branches, no longer being that but rather a source of paper [...] it becomes a commodity. [...] the problem is rooted in a denial [...] of sacredness. A solution must involve an integration of the sacred into our world view, into our understanding what nature is.

In the end, it does not matter if you live a sustainable life, respecting the life of a tree out of a faith in God's creation or out of a 'secular' ethical conviction that we have to preserve the earth for future generations. What matters is to reconnect with nature and lead a sustainable life.

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