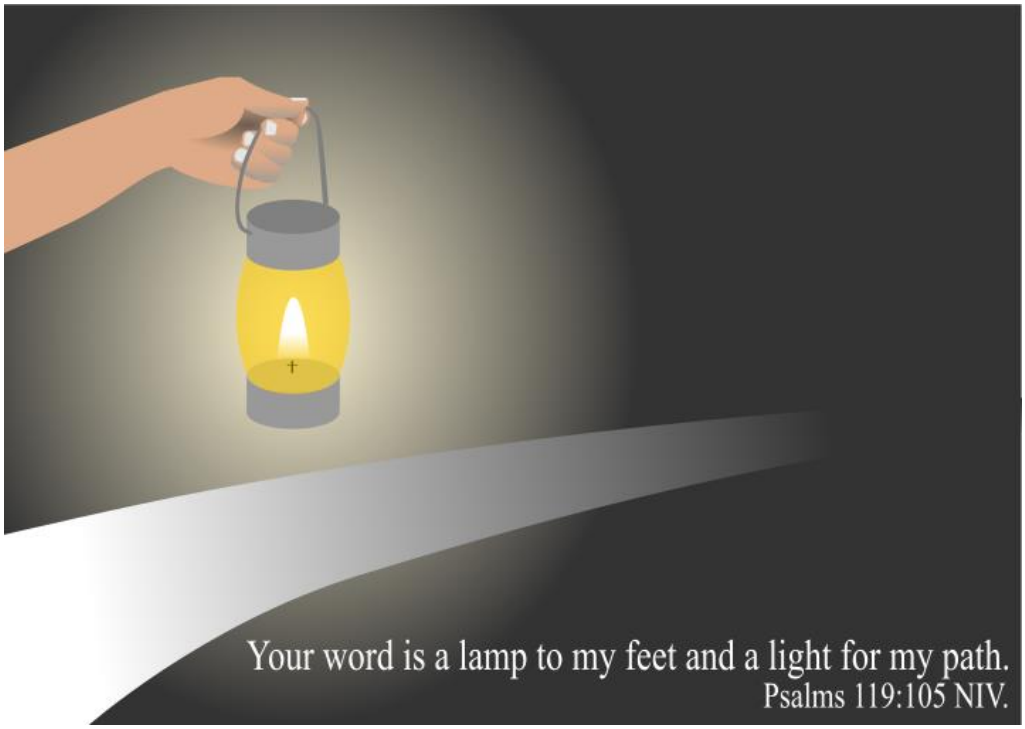
Nottingham University Business School
UNITED KINGDOM · CHINA · MALAYSIA

Michelle V. Stirk PhD Thesis

Using Strong Structuration Theory to Examine Sustainability in a University Setting.

May 2021 Student ID 4290184



To my parents.

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List of Abbreviations

AC	Academic Employee
AD	Administration and Support Employee
AiC	Agent-in-Context
AiF	Agent-in-Focus
BBC	British Broadcasting Corporation
CAC	Cotation Assitée en Continu
CBD	Convention on Biological diversity
CCA	Clean Cooking Alliance
CIMA	Chartered Institute of Management Accountants
COP	Conference of the Parties
CS	Control System
CSR	Corporate Social Responsibility
DCS	Diagnostic Control System
DEFRA	Department for Environment Food and Rural Affairs
EC	Ethics Committee
EMAF	Ellen MacArthur Foundation
EMAS	Eco-Management and Audit Scheme
EMS	Environmental Management System
EOD	Earth Overshoot Day
FAO	Food and Agriculture Organisation of the United Nations
FAWC	Farm Animal Welfare Council
FSC	Food Supply Chain
GRaFS	Global Review and Financial Statements
HE	Higher Education

HEFCE	Higher Education Funding Council for England
HEI	Higher Education Institution
ICS	Interactive Control System
IEA	The International Energy Agency
IRENA	The International Renewable Energy Agency
ISO	International Organisation for Standardisation
LOC	Levers of Control
MC	Management Control
MCS	Management Control System
MOD	Making of Documentary
NDPB	Non-Departmental Public Body
NPISH	Non-Profit Institutions serving households
NSC	National Salvage Campaign
NUBS	Nottingham University Business School
OfS	Office for Students
ONS	Office of National Statistics
PEB	Pro-Environmental Behaviour
PO	Policy Shaper Employee
PPE	Personal Protective Equipment
PRME	Principle for Responsible Management Education
PSAT	Product Sustainability Assessment Tool
RQ	Research Question
RSPCA	The Royal Society for the Prevention of Cruelty to Animal
SC	Sustainability Committee

SCS	Sustainability Control System
SDG	Sustainable Development Goal
SERG	Social and Environmental Responsibility Group
SET/SEM	Student Evaluation of Teaching/Student Evaluation of Module
SST	Strong Structuration Theory
ST	Structuration Theory
TF	Theoretical Framework
TITO	Theory In Theory Out
TPB	Theory of Planned Behaviour
UEB	University Executive Board
UK	United Kingdom
UKRI	UK Research and Innovation
UN	United Nations
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNSD	United Nations Statistics Division
UoN	University of Nottingham
VC	Vice-Chancellor
VHEM	Voluntary Human Extinction Movement
WCED	World Commission on Environment and Development
WED	World Environment Day

WHO	The World Health Organisation
WRAP	Waste and Resources Action Programme
WWF	World Wildlife Fund
WWII	Second World War

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Abstract

Given the increasing importance of the sustainability agenda, organisations are coming under pressure to demonstrate how they are contributing to improving sustainability. Organisations by themselves do not deliver outcomes; rather it is an organisation's employees working as a collective who ultimately meet objectives and targets.

The purpose of this research is to gain insights into how employees engage with sustainability in their daily activities and how they interact with control systems, either formal or informal, that are responsible for the delivery of sustainability in a Higher Education organisation. This study has collected and analysed interview data from employees to reveal the micro, meso and macro level forces that cause or prevent sustainability engagement.

By understanding how, where, by whom and the extent to which users are influenced, this signposts potential tensions that exist. Addressing these tensions may result in better organisational sustainability engagement and therefore, better delivery of organisational sustainability goals, via the control systems. The research also illuminates the positive enablers of and influences on employee sustainability practices and action. Strong Structuration Theory (Stones, 2005) is used as a framework, to inform both the research design and assist in unpacking the empirical findings.

The findings indicate that individuals are complex, and many contextual and disparate structures are considered when choosing to decide how to behave. The breadth and depth of the discussions support both the inter- and intra-disciplinary nature of sustainability. Combining the multi-dimensional characteristics of individuals and sustainability has meant the incorporation of several themes within this research, such as theology, adult learning and the significant influence of the media. This research has uncovered commonalities and patterns of thinking amongst employees' interpretations of their own unique reality.

For organisations that are pursuing sustainability focused goals and strategies, if suitably mobilised, this new knowledge has significant practical applications. The contribution of this research can assist in the development of

better attuned organisational sustainability controls, and the delivery of increased sustainability-centred employee conduct.

Chapter 1 Introduction

1.1 Introduction

This chapter seeks to introduce the rationale for and the key themes of the research. Section 1.2 outlines aspects that have influenced the choice of area to research. In particular, it provides an extended motivation and background to the thesis. The chapter then introduces the theoretical framework to be adopted over the course of the research, in section 1.3. The final section in the chapter (section 1.4) summarises the structure of the thesis.

1.2 Motivation and background to the research

The motivation for the thesis stems not from only the anthropogenic impact on the environment that I have witnessed in my life time, but also, from my personal concern for intra- and inter-generational equity and fairness. This thesis seeks to investigate the forces, pressures and other structures that act upon individuals to influence them to behave, or not, in a sustainable way. By understanding how forces interact and coalesce within an individual, that is, the intersection of structures and individuals to produce sustainability action, better control systems could be designed in organisations to support sustainability. Institutions, organisations, and businesses have an obligation to do 'their part' in supporting sustainability, because they are some of the fundamental building blocks of society.

Several prior studies have considered the question of why organisations are involved in sustainability. Some of the reasons cited in the literature are stakeholder management (Freeman, 1984; Hörish et al., 2014); institutional and resource pressures (Bansal, 2005); media, competition and organisational Corporate Social Responsibility (CSR) visibility pressures (Nikolaeva and Bicho, 2011); and sustainability innovation (Hansen et al., 2009). There have also been attempts at exploring and suggesting management tools for sustainability (Bonacchi and Rinaldi, 2007; Johnson and Schaltegger, 2015; Schaltegger and Wagner, 2006); and investigations into the reporting and accounting of sustainability (Baker and Schaltegger, 2015; Bebbington et al., 2014; Burritt and Schaltegger, 2010). Deegan (2002) notes that external social

and environmental disclosures are motivated by organisations seeking to legitimise their behaviour. There have also been many studies focusing on the relationship between management control and sustainability strategies, either the process of the establishment of the strategy or the controls adopted for management of the sustainability strategy once established (see the literature review by Ghosh et al., 2019).

Much of the literature referred to above, however, has not considered the question of 'how' sustainability is embedded within an organisation. This research aims to address the call in the literature for investigations into the inner workings of an organisation's progress towards sustainability (Maas et al., 2016). In part, it aims to further the understanding about the issue of "how companies can and do integrate sustainability assessment, management accounting, management control, and reporting" (Maas et al., 2016, p. 237). Organisations themselves can do very little regarding sustainability aims, as it is the employees within them who execute any aims of the organisation. Despite this, employees and their engagement with sustainability control have received little attention within the management accounting/control/reporting literature (Ghosh et al., 2019).

Though organisations employ their staff typically on a paid basis, the contract between the employer (organisation) and employee (social actor) can be expressed in other ways and does not have to be solely a monetary exchange. Gouldner (1960) and Blau (1964) conceptualised the relationship as being both an economic and social exchange. Deckop et al. (2003, p. 103) define the social exchange dimension as "unspecified obligations over an unspecified time frame. A social exchange relationship may, but does not have to, develop among employees, or between employee and employer". Forms of the social exchange may be easier to observe in an organisation that has fewer commercial objectives than a 'for-profit' organisation, because it may consider other objectives than profit maximisation.

Part of the way in which organisations can influence and shape employee behaviour is through the use of control systems. Berry et al. (2009) and Nixon and Burns (2012) have suggested that more research needs to be done to investigate how management control systems (MCSs) are used in practice.

Ghosh et al. (2019) note that there is a very limited number of studies within the management control literature that considers sustainability control from an employee's perspective, for example, those by Epstein et al. (2015) and Slack et al. (2015). These latter two studies, though examining managers and employees, are both based in profit-seeking organisations. This highlights a gap for research to consider non-profit seeking or charitable organisations as there may be different perspectives or practices that are unique to these organisations. MCSs within Higher Education Institutions (HEIs) have been under-investigated (Heinicke and Guenther, 2020), which is also supported by a call in the literature to examine management accounting practices in a 'hybrid' organisation, as Vaivio (2008, p. 80) notes:

> [W]e have to examine the workings of management accounting in conditions that mix traditional and new elements such as the local and the global, rivalry and partnership. How is management accounting used by organizations that combine, for example, the private and the public, as happens in educational institutions?

In summary the above section has highlighted the overall research gaps that currently exist. Furthermore, the discussions have provided the positioning for the research in this thesis. Consequently, this thesis responds to the call for sustainability research that is focused on the internal sustainability workings of an organisation (Maas et al., 2016), is based in a hybrid educational organisation (Vaivio, 2008) that considers MCSs in practice (Berry et al., 2009; Nixon and Burns, 2012) and is focused on an under-researched sustainability perspective, that of employees (Ghosh et al., 2019). According to Amaral et al. (2015, p. 156) HEIs have a social duty to assist in the development of society, in particular "the education of future leaders and on the proliferation of public awareness about sustainability" to "lead by example" in supporting the protection of the environment and upholding intra- and inter-generational sustainability principles (see sections 2.2.4.1 and 2.2.4.2 below).

The 'golden thread' that runs through this research is to investigate and understand the relationship between the organisation (structure) and the employee (agent) within the context of sustainability, and how sustainability practices/actions arise (or not) thereafter. This research is supported by the

chosen theoretical framework (see Chapter 3) and the theoretical framework chapter should be read as a complement to the literature review (Chapter 2).

1.3 Theoretical framework

To understand how structures and individuals relate to one another and the resulting outcome, this research adopts Stones' (2005) Strong Structuration Theory as a lens to examine the interface of these two dimensions. If the forces that act on an individual can be understood and the degree to which the forces influence an employee's sustainability behaviour, then better control systems could be designed in organisations to encourage and support employee sustainability practices. The issues of sustainability and enabling the world to keep flourishing for future generations are key issues facing mankind and wildlife. Social justice, equal access to food, water and energy for all global citizens are concerns that humanity should collectively address. The relationship between humans and non-human life needs to be readjusted, if humans want to thrive as opposed to just survive.

This research has shown that an individual is complicated and is affected by different things to different degrees. It has contributed to understanding the relationship between structures and social actors and the point at which they meet. The researcher has been allowed accessed to the thought processes of individuals and how they prioritise and evaluate their concerns that may or may not lead to sustainability outcomes. The highlighting of the connectivity of individuals to, and following on from, macro phenomena such as climate change can awaken a consciousness previously dormant in terms of sustainability.

If the powers of these forces are harnessed within the control systems of organisations, then significantly improved sustainability practices could be unlocked. For organisations that are strongly committed to developing and exhibiting a sustainability consciousness in both their external and internal environment, this research may signal areas where positive improvements can be made. We are living in a new epoch defined as the Anthropocene (the time period during which humans have significantly influenced the environment and

climate), so our lives need to change to meet the challenges that this new era brings, one of the most pressing being sustainability.

1.4 Structure of the thesis

The remainder of the thesis contains the following chapters:

Chapter 2 examines relevant literature and provides the rationale for how the four research questions (below) have emerged from the examination of the literature.

Research Questions:

1. How do employees implement sustainability engagement?
2. What are the forces that generate employee engagement?
3. What are the barriers to and enablers of sustainability engagement and why do they affect sustainability engagement?
4. How effective is the measurement of sustainability at an organisational level?

Chapter 3 discusses the role of theory in this research. It examines what theory is and the theoretical framework that is used in this research. The theoretical framework acts as a lens to assist in viewing the phenomenon under investigation.

Chapter 4 details the research methodology that is mobilised in this research to answer the research questions. This chapter considers the researcher's assumptions about reality and how knowledge about that reality can be developed. These assumptions provide the underpinning for the research methods that are used to gather data about the phenomenon under review.

Chapter 5 sets the context for the research and provides some background on the case study organisation. In addition, it introduces the central themes and sub-themes that emerged from the data, setting the scene for the five results' chapters that follow.

Chapter 6 considers how employees implement their sustainability engagement within the context of waste reduction, particularly with reference to food, plastic and paper. The chapter also discusses related aspects of resource stewardship.

Chapter 7 considers three aspects of the central theme of the environment. This includes the expectations that society and employees have of universities in relation to their contribution to the sustainability discourse. The way that nature and wildlife is implicated in an employee's understanding of sustainability is also considered. In addition, this chapter considers the wider dimensions of environmental stewardship.

Chapter 8 examines the origins of an employee's sustainability knowledge. This chapter investigates the personal motivations of individuals with regard to sustainability. Their own scholarship activities are considered, as is the particular influence of the media.

Chapter 9 investigates the research organisation's control systems in respect of sustainability and its employees. Additionally, the chapter highlights employee perceptions regarding the prevailing culture of the organisation as well as other organisational dimensions such as communications.

Chapter 10 discusses aspects of media that have impacted on the research participants. It examines the macro aspects of the media that pervade the daily lives of employees and how these structures shape employee behaviour.

Chapter 11 draws together the key findings of the research and provides conclusions. It highlights the contribution that this research has made to the existing body of research within this field of study. It also incorporates the limitations of the research. In addition, it discusses how this research may be built upon in the future and suggest areas/issues that future researchers may possibly examine.

Chapter 2 Literature Review

2.1 Introduction

The first chapter of this thesis highlighted calls for research by scholars based in the not-for-profit and charity sectors, with a particular focus on the internal operations of an organisation in relation to sustainability (see section 1.2).

This chapter extends the Chapter 1 discussions by providing detailed investigation of the relevant literature. It also highlights the specific rationale behind the emergence of the research questions (RQs). In particular it focuses on how the RQs align with relevant literature.

The chapter begins with an examination of how an employee may exhibit sustainability engagement through the stewardship of resources (section 2.2). Thereafter section 2.3 examines the prevailing structures (at micro, meso and macro levels) that apply pressure on employees, to behave and act in a particular way in relation to sustainability. This is an essential element of the discussion because it is an organisation's employees who fulfil any organisation's sustainability objectives. Knowing the pressures that act on employees could/may inform organisational controls. This then leads on to section 2.4 that examines management controls (MCs) and management control systems (MCSs). This chapter concludes with a summary (section 2.5) that brings together the key points of the chapter.

This literature review has been revised several times, to ensure it is up to date and aligned with the theoretical framework (TF see Chapter 3), the research methodology and the results. Though this iterative and abductive process (see Chapter 4) was utilised throughout the research, it is difficult to demonstrate its capture in a thesis as it is largely an invisible journey by which the thesis is completed. Given this, however, part of the abductive process is demonstrated in the results' chapters (Chapters 6 to 10), where the results are framed in light of the prior literature and the chosen TF.

2.2 Stewardship of resources

According to Brinkhurst et al. (2011) if real, long-term changes in sustainability need to be made, then HEIs must look to their employees to deliver them.

Brinkhurst et al. (2011, p. 351) discuss the best strategies to adopt to bring about sustainability change. They consider both top-down and bottom-up methods, but conclude that the "greatest potential for long-term change comes from active intrapreneurship[1] by faculty and staff", because "faculty and staff are the most important and yet unrecognized champions of campus sustainability".

Within the literature, the study of people's behaviour in respect of sustainability is often referred to as the study of pro-environmental behaviours (PEBs). Kollmuss and Agyeman (2002, p. 240) define PEB as behaviour that "seeks to minimize the negative impact of one's actions on the natural and built world (e.g., minimize resource and energy consumption, use of non-toxic substances, reduce waste production)". A particular study about this – and in a university setting – is Blok et al.'s (2015) work, which focused on the factors that could predict PEBs in the workplace. Through the completion of questionnaires distributed via email, they investigated the behaviours of a diverse range of university employees. They used Ajzen's (1991) Theory of Planned Behaviour (TPB) as the lens to study the phenomenon. Nye and Hargreaves (2010) observe that the TPB (Ajzen, 1985; 1987; 1991) is one of the most common used frameworks in PEB research (see, amongst others, Abrahamse et al., 2009; Bamberg and Schmidt, 2016; Cordano et al., 2010; Heath and Gifford, 2002; Rioux, 2011; Wall et al., 2007). Using the TPB (Ajzen, 1991) would not be a good fit for this research because it seeks to understand the structures and influences that cause employees to act/or not rather than 'predict' employee behaviour. PEBs have been researched extensively using the TPB but have yet to be explored fully using SST (Stones, 2005) as a lens. Using Strong Structuration Theory (SST) (Stones, 2005) may reveal other insights to help understand the forces that generate the phenomenon of PEBs (see Chapter 3 for discussions on SST). PEBs can be exhibited in the conduct of an employee in relation to waste in this study. The next section considers matters of waste from both an organisational and an employee dimension.

[1] Intrapreneurship defined as "entrepreneurship within existing organizations … [being] viewed as being beneficial for [the] revitalization and performance of corporations" (Antoncic and Hisrich, 2001, p. 495).

One of the key aspects of management accounting is to maximise resource utilisation and minimise waste. An example of this is found when considering the three "effs" (efficiency, effectiveness and efficacy) as suggested by Bull (Bull, n.d.) or when considering the activity of budgeting in an organisation (see Preston, 1991). Being wasteful is expensive for organisations, therefore reducing waste has a bearing on overall cost structure, and better control over any inefficiency can potentially lead to more keenly priced products and services for organisations and thus support competitive advantage. Not only is the economic aspect of waste important but waste has an impact on the environment, as is noted in the quote below in the United Nations Environment Programme (UNEP) *Assessing the Environmental Impacts of Consumption and Production, Priority Products and Materials* report (Hertwich et al., 2010, p. 9): "All economic activity occurs in the natural, physical world. It requires resources such as energy, materials and land. In addition, economic activity invariably generates material residuals, which enter the environment as waste or polluting emissions".

The issue of how waste is produced and society's moves to reduce the amount through reuse and recycling initiatives are further exacerbated by the finite nature of resources found on planet Earth (Almond et al., 2020). For example, burning fossil fuels to generate energy has contributed to climate change. Climate change, if allowed to continue through burning fossil fuels, could have irreversible consequences for human life on planet Earth. Therefore, there has been a global initiative to supplement fossil fuel energy with other 'cleaner' and/or renewable sources of energy generation (e.g., wind or water power) because, in addition to being pollutants, the Earth's fossil fuel reserves are limited (see UN, n.d.a). This global initiative is evidenced in the Sustainable Development Goal (SDG) 13: Climate Action, and is further complemented by various agreements and summits, for example, the Paris Agreement in 2015 and the global Climate Action Summit in 2019 (UN, n.d.a). These mechanisms aim to mobilise global support and planning, so as to manage and reduce greenhouse gas emissions that cause climatic changes.

The issues surrounding waste can be considered from several aspects, some of the most topical being considered below. The overall aspect of

resources also comprises their stewardship as well as the speed of consumption. These related issues of waste and waste reduction can be found in daily life at individual (micro), organisational (meso) and societal (macro) levels. These different levels also form part of the discussions below, which consider waste from the particular aspects of food, plastic, paper and resources more generally.

2.2.1 Food

The issues surrounding waste have become more prevalent over recent years, and one particular aspect of waste is food waste (the issues of global food distribution, famine and hunger are considered later on in section 2.3.4.2). Minimisation of food waste can be difficult for people to understand in the United Kingdom (UK) and much of the developed and industrialised world, as people are used to going to a shop and buying unrestrictedly what they want. However, in recent times, owing to Covid-19, some shelves have been empty of particular food products, such as pasta or tinned foods, because of panic buying, and supermarkets introduced rationing on certain product lines (BBC, 2020a). Overall, though, wasting food for many people is not a significant consideration as food is in plentiful supply, so if some is wasted, it is usually easy to buy more. While the issues surrounding food waste may surprise many people, nonetheless, waste is a problem.

The problem has two key components, the first being the inefficiency of food production and transportation processes, and the second in the disposal of food itself after it reaches its intended recipient/s. A report entitled *Global Food Losses and Food Waste. Extent, Causes and Prevention*, published by the Food and Agriculture Organization of the United Nations (FAO) in 2011 estimated that approximately:

> … one-third of the edible parts of food produced for human consumption, gets lost or wasted globally, which is about 1.3 billion ton[nes] per year. Food is wasted throughout the FSC [Food Supply Chain], from initial agricultural production down to final household consumption. In medium- and high-income countries food is to a great extent wasted, meaning that it is thrown away even if it is still suitable for human consumption. Significant food loss and waste do, however, also occur early in the food supply chain. (FAO, 2011, p. 4)

What is very revealing about wasteful behaviour and the figures above is how waste occurs within the FSC. These stark figures refer to both industrialised and developing countries, as the report makes clear:

> … food losses in industrialized countries are as high as in developing countries, but in developing countries more than 40% of the food losses occur at post-harvest and processing levels, while in industrialized countries, more than 40% of the food losses occur at retail and consumer levels. Food waste at consumer level in industrialized countries (222 million ton[nes]) is almost as high as the total net food production in sub-Saharan Africa (230 million ton). (FAO, 2011, p. 5)

In addition to FSC waste, the type of food we consume and waste also has sustainability implications. Diets including meat and dairy products have, according to Hertwich et al.'s (2010) UNEP report (referred to above), significant implications for the environment. The report (p. 79) notes that:

> … [a]nimal products, both meat and dairy, in general require more resources and cause higher emissions than plant-based alternatives. In addition, non-seasonal fruits and vegetables cause substantial emissions when grown in greenhouses, preserved in a frozen state, or transported by air. As total food consumption and the share of animal calories increase with wealth, nutrition for rich countries tends to cause higher environmental impacts than for poor countries.

The figures above are global estimations. However, the waste figures at national levels are equally concerning and support the global figures. In the UK, it is estimated that households spend £15 billion annually on food that could be eaten but is discarded. This on average is £500 per household (UK Government, 2019). According to the Department for Environment, Food and Rural Affairs' (DEFRA) 2018 report, *National Statistics, Family Food 2016/17*, the average food and drink expenditure of a person per week is £43.18 (UK Government, 2018). This means that, on average, a household wastes 11.5 weeks' worth of a person's individual food expenditure – almost 20% of a person's entire year's food cost. Waste food from households can have implications for landfill but also for more positive behaviours in terms of recycling. The recycling literature is considered in the section below. There has also been a 'push' for food retailers

to ‘do their bit’ when it comes to the reducing food waste. Some of the biggest supermarkets and food retailers in the UK have recently signed up to a government pledge aiming to reduce food waste by half by 2030 (UK Government, 2019).

The messages about the resource intensity and emission release from meat and dairy production seem to have filtered through to individual levels, evidenced in people’s dietary choices. An illustration of this is in the increased number of people choosing a vegan (see below for definition) or a vegetarian lifestyle. According to the Vegetarian Society, a vegetarian is someone who does not eat fish, meat or chicken (The Vegetarian Society, 2021), while veganism is:

> … [a] philosophy and way of living which seeks to exclude – as far as is possible and practicable – all forms of exploitation of, and cruelty to, animals for food, clothing or any other purpose; and by extension, promotes the development and use of animal-free alternatives for the benefit of animals, humans and the environment. In dietary terms it denotes the practice of dispensing with all products derived wholly or partly from animals. (The Vegan Society, 2020a)

According to The Vegan Society, the number of vegans between 2014 and 2019 increased by four times in Great Britain (The Vegan Society, 2020b). Some reasons why anyone becomes a vegan/vegetarian have been noted in the apparently modest literature. The primary reason that McDonald (2000) suggests in a small in-depth study of 12 vegans is cruelty to animals for food production. The basis of their conversion to a vegan lifestyle for the individuals studied was, according to McDonald (2000, p. 6), a “catalytic experience”. Whilst sustainability is not the overriding reason in this study for the change, there is a consequent impact on the reduction of meat and dairy sales. Veganism can be seen as an extreme choice, so many people opt for vegetarianism. Fox and Ward’s (2008) qualitative study of vegetarians also found that cruelty to animals was one of the main motivators of vegetarianism, as well as health considerations. In addition, the interviewees indicated that they were influenced by environmental and ecological concerns. Though health and cruelty to animals are often cited as the main motivators for choosing a vegetarian/vegan

diet, this is not always so. Kalof et al.'s (1999) study found that environmental concerns were the strongest predictor of a vegetarian dietary choice.

Of interest for future food policy makers and producers is Fox and Ward's (2008, p. 422) observation that "vegetarians may follow a trajectory, in which initial motivations are augmented over time by other reasons for sustaining or further restricting their diet". This indicates that dietary choices are not 'fixed' and can change with time.

The traction gained by the vegetarian and vegan movements can be seen in the food products available for purchase in established food retailers. Take, for example, the humble sausage roll often eaten as a tasty meat treat 'on the move'. Greggs, the UK bakery chain, launched its vegan sausage roll in January 2019 to coincide with Veganuary[2] in the month of January (BBC, 2019a). Whilst health is cited as the reason for introducing the new sausage roll, the literature above indicates that this is not the only reason for a vegan/vegetarian lifestyle choice.

2.2.2 Plastic

As humans we rely heavily on using plastics, as they have made human life easier and more comfortable in many ways: disposable nappies for children, food and drink packaging, cleaning products such as hand/face wipes, or even tea bags, are some of the products regularly using plastic/s. The International Resource Panel (IRP), *Global Resources Outlook 2019, Natural Resources For the Future We Want* report (Oberle et al., 2019, p. 86) notes that "[d]ue to their low weight, durability and low cost, plastics have become one of the most used human-made materials". Human beings have been so adept at exploiting these properties of plastic that they have, perhaps, neglected to manage appropriately how plastic is stewarded and ultimately disposed of. First, the durability of most plastic means that it does not biodegrade, but rather over time, fragments into smaller and smaller pieces called micro plastics (see later in the section). Second, the low-cost nature of plastic may contribute to how it is discarded, often without a second thought.

[2] Veganuary is during the month of January, when people challenge themselves to only eating a plant based diet for a month.

According to the report, *The State of Plastics, World Environment Day Outlook 2018* by World Environment Day (WED, 2018, p. 4), "[o]nly nine percent of the nine billion tonnes of plastic the world has ever produced has been recycled", meaning that 91% of global plastic is, as yet, unrecycled. The World Wildlife Fund (WWF) (2019, p. 3) report, *Stop the Flood of Plastic, How Mediterranean Countries Can Save Their Sea*, suggests that "0.57 million tonnes of plastic enters Mediterranean waters every year … This is equivalent to dumping 33,800 plastic bottles into the sea every minute". Again, as with food waste (above), these are troubling figures. The issues surrounding plastic are complex and many parties are needed to help solve the problems. In the WWF (2019) report cited above, there is a call to action aimed at Mediterranean governments, industry and members of the public. This appeal illustrates that the solution to plastic waste, or indeed progress towards a more sustainable society, involves all levels of society: micro, meso and macro.

The issue of plastics has been further highlighted, but this time visually, by the media through the BBC's *Blue Planet II* series (see Chapter 10, section 10.4) and the images therein, of, for example, a plastic bag floating in the ocean and marine life either being ensnared in plastic or eating bits of plastic as a food source (BBC, 2017). A plastic waste issue that has been given much attention is that of 'single-use' plastics. Single-use plastics are defined as "products that … have been made to use just once, only to be thrown away after, rendering them unsustainable and harmful to the planet" (Petter, 2018). *The Independent* newspaper reported in November 2018 that the *Collins Dictionary* had named "single-use" as its word of 2018 (Petter, 2018). Single-use was chosen because its use had increased by four times over five years, and the *Collins Dictionary* lexicographers noted that "news stories and the BBC's *Blue Planet II* have raised awareness of the issue of one-time use plastic" (BBC, 2018a). According to the WED (2018, p. 4), single-use plastics most commonly found in the environment are cigarette butts, drinking bottles, bottle caps, food wrappers, grocery bags, lids, straws and stirrers, various types of bags, and foam takeaway food containers. There are, however, some instances where single-use plastics products may serve a particular purpose, such as in medicine, and as part of the personal protection equipment (PPE) worn by medical staff, especially in the

recent Covid-19 pandemic. Although PPE serves as valuable, and in some instances, life-saving protection, its appropriate disposal (and recycling) is of paramount importance. For instance, the BBC (2020b) reported that a gull had its legs caught in the elastic of a face mask for several days and was struggling to walk. The irresponsible disposal of this kind of single-use plastic will have implications for other wildlife and animals in terms of becoming entangled.

The issue of plastics is also on the minds of children, as illustrated by the entries to the joint BBC2 and Oxford University Press short story competition in 2018. In the 134,790 stories submitted, plastic appeared 3,359 times, thus leading to plastic being deemed the "word of the year" (BBC, 2018b). The BBC article goes on to cite Sir David Attenborough's *Blue Planet II* series as the major influence on the children's subject choice. This evidences that children are aware of the plastic issue and how it will impact on their future lives.

Sustainability can often be seen as something practised for the benefit of the generation to come. The current school age generation is being taught the importance of plastic and plastic issues through many stages of the school curriculum, as this learning may be helpful to them in their adult lives. However, there is evidence to suggest that there is an inter-generational learning relationship between children and their parents. According to Maddox et al. (2011), children of primary school age can provide the mechanism for their parents' education, as co-learners. Maddox et al.'s (2011) study provides evidence to support the positive impact on sustainability education, in reference to recycling rates within households, by children in this age group. The two and a half year study focused on the message of "reduce, reuse and recycle" (p. 2590) and led to marked increases in overall household rates of recycling and a decrease in landfill waste. This has implications for how other sustainability messages can be communicated to adults. Thus not only do children learn about waste and recycling in order to become more responsible global citizens and develop their habitus[3] (which potentially they may draw upon as adults), but parents are also taught by proxy. Other dimensions of environmental education are explored in the knowledge chapter (Chapter 8). The habit of recycling, as

[3] See Chapter 3, section 3.5.2, Internal Structures.

noted by Timlett and Williams's (2009) research, is a difficult one to break once established. Therefore, following the Maddox et al. (2011) study, the habit of recycling is likely to remain with both parents and children.

Plastics are found in unlikely places, such as in clothing. Some aspects of clothing, such as 'fast fashion' (where clothing is discarded after very little use), contributes almost immediately to plastic waste. An example of this fast fashion mind set, according to the charity, Hubbub (BBC, 2019b), is evident in the form of Christmas jumpers. The charity estimates that 40% of Christmas jumpers are only worn once. For clothing that is kept for a longer period of time, but is still made from synthetic fibres, Napper and Thompson (2016) found that washing 6kg of acrylic fabric in a domestic washing machine could release over 700,000 fibres as micro plastics. This study is not alone in finding micro plastics being released from laundering apparel (see Browne et al., 2011; and Dris et al., 2015). Micro plastics are very small pieces of plastic commonly categorised as less than 5 millimeters (5mm) in length (National Geographic, 2020). These micro particles travel easily via waste water to sewage treatment plants and pass out as effluent from the treatment plants (Dris et al., 2015; Leslie et al., 2013), potentially impacting on natural environment and habitats (see Chapter 7 for more detail). In particular, plastic debris in marine environments can be ingested by marine creatures, such as fish, which can then introduce micro plastics into the human food chain (Rochman et al., 2015), as noted in the *UNEP Frontiers 2016 Report, Emerging Issues of Environmental Concern* (Sarasas et al., 2016). Studies have also found evidence of micro plastics, in particular synthetic fibres, in other foods such as beer, honey, sugar and table salt (see Liebezeit and Liebezeit, 2013, 2014; Yang et al., 2015).

Plastic, although prized for its characteristics of durability and cost, has been treated as a disposable commodity. It is not recognised per se as a valuable resource, and this has led to it being potentially mismanaged. Barnes et al. (2009, p. 1985) note that "[l]ike many anthropogenic impacts on natural systems, it is one that, despite widespread recognition of the problem [plastic debris], is still growing and even if stopped immediately will persist for centuries". What also needs to be considered is the interconnectedness of the issues of waste. For example, Harford (2019) reported that cucumbers wrapped

in plastic “stay fresh for 14 days rather than three”, thus extending the usable life of a cucumber and reducing food waste. Therefore, looking at sustainability issues in isolation is unhelpful as many issues are interconnected and are multi-dimensional.

2.2.3 Paper

There has been an explosion in technology and software and many things have moved ‘online’, such as reading books on *Kindle*, the daily news headlines on phones or computer screens and even playing the National Lottery. Whilst technology provides a good replacement medium for communication of information, there are some activities that potentially still require the use of paper, such as making notes, drawing, learning how to write, buying a ‘take out’ portion of fish and chips, and some organisational activities too.

The move to online modes of reading have been, in part, prompted by the use of trees for manufacturing of paper as well as technological developments. The more paper that is required for printing, writing and other uses, then the higher the number of trees (virgin wood) and the amount of energy required to make paper to meet the demand. Paper is recyclable and processes and initiatives have been established at a national level in order to ensure that households and organisations have the facilities to recycle their unwanted paper, though paper cannot be recycled indefinitely (see McKinney et al., 2007). According to Cooper (2008), recycling has had a chequered history in Britain, and although many of us now recycle paper as a matter of course, recycling has not always been the default position. Britain’s interest has waxed and waned between 1900 and 1950.

During World War II (WWII) recycling existed under a different label, as explained by Riley (2008), and was referred to as the National Salvage Campaign (NSC). The NSC was advertised using the then current media of cinema and radio, to cultivate a “moral geography” (p. 83) in audiences. The messages within the NSC campaigns forged “intricate links between external, structural factors and intrinsic motivations” (p. 87), such as what a housewife at home could do to support the soldiers on the front line who were fighting for her and her country. Riley (2008) suggests that the ideas surrounding recycling, waste and the war effort centred around the concept of “connection and

reconnection" (p. 87), how micro actions were connected to macro events and concerns and vice versa. In addition, he highlights the recalibration that took place between individuals' perceptions of value and how value could be extracted from items that were initially deemed to be waste. Furthermore, Barr et al. (2005) suggest that individuals from the WWII generation are more likely to exhibit recycling behaviours, because during the war, materials that could contribute to the war effort were salvaged and recycled, and owing to the limited availability of resources a "make do and mend culture" (p. 188) characterised those years. This outlook may have continued for a few generations thereafter, since the WWII generation may have imbued their children and grandchildren with a similar attitude. However, this would militate against the mainstream ideas after the war of the 'boom times' and the current culture of consumerism, waste and excess.

After the 1950s, Cooper (2008, p. 731) suggests that the traction gained by recycling is due to "the emergence of environmentalist criticisms of capitalism and the consumer society, and, subsequently, a new sense of crisis [that has] eventually reviv[ed] the impulse to recycle". The recycling of paper is one aspect of trying to deal with the situation in which human beings find themselves. In terms of behaviour, the household recycling that has been introduced nationally is a way in which individuals can feel that they are contributing to the overall objective of minimising waste, the diligent stewardship of resources and ultimately helping to save the planet.

Despite the move to additional technology and computer based solutions for the storage of information and documentation, organisations still require paper. For the teaching sector, paper is an essential material, first for pre-school children to learn how to write and second in the use of exercise books for learning. Of particular relevance to the issue of paper in the HE sector is that of printing handouts and lecture notes for students, as not all students attend lectures with their own personal laptops. A study of students in Qatar revealed that students preferred to read course materials in print versus digital formats and felt they learned better this way (Johnston et al., 2016).

Another aspect to consider is the student as a consumer and the implications of recognising the student as such. With the advent of fees and the

reduction in university government funding (see Chapter 5), the student has become much more important as regards university funding. Therefore students and the funders of students (parents and guardians) want value for their investment. This change in relationship is examined by Woodall et al. (2012, p. 48) who suggest that students are exhibiting more "customer-like behaviour and are now demanding even more 'value' from institutions". The paper given to students, as lecture notes and handouts, could be perceived by students as a possible tangible return for their investment in university fees and costs, and a proxy for value. It also means that the cost of printing materials is borne by the university and not by the students themselves, a concern that was raised by students in Woodall et al.'s. (2012) study of what students perceive as value. This has an implication for academic staff who must comply with the new modus operandi of servicing customers (students) rather than spending time innovating and researching within their disciplinary specialisms. There is a bigger picture here, in that HEIs have evolved from centres of learning and knowledge to organisations that are subject to market forces and consumer behaviours. This could potentially drive some of the sustainability focus of HEIs' activities. Naidoo and Jamieson (2007) explore how student consumerism could promote inadvertent changes that "deter innovation, promote passive and instrumental attitudes to learning, threaten academic standards and further entrench academic privilege" (p. 267) through augmenting the prevailing pedagogic cultures to align with consumer demands.

Even if the students themselves use laptops for notes, etc., the organisation/university may still have the need to use paper for other purposes, such as printing for administration and reporting protocols and there is also the issue of universities providing the means to power/re-charge laptops.

2.2.4 Resources

The resources on planet Earth are finite and the rate at which humankind is consuming them is more than the Earth's rate of replenishment (Almond et al., 2020). "Once a resource is recognized, it does not take our species long to exploit it to the full", notes Lovelock and Lovelock (2000, p. 112). We have seen this repeatedly throughout history, whether the resources are land, water, animals or even our fellow humans. So, the classification of humans as homo

sapiens, meaning 'wise man', seems to be an appropriate description in light of our capabilities, if not in regard to the implications of such capabilities. According to the *Living Planet Report 2020, Bending the Curve of Biodiversity Loss* (Almond et al., 2020), humans are living as if they had resources from "1.56 Earths" (p. 56) to consume. This speed of resource consumption by humans, compared with the Earth's ability to replenish the resources, makes our 'wise' labelling seem somewhat inappropriate. It raises two questions, the first being about how finite resources are currently consumed and the implications for the generations to come, that is, inter-generational equity. If natural resource reserves are depleted, what kind of lives will future generations be living? The second question concerns how current resources are distributed amongst global citizens and whether there is a fair distribution, that is, intra-generational equity. Both aspects of equity (inter- and intra-generational) are considered below.

2.2.4.1 Inter-generational equity

The common resources of the Earth are the idea underlying the term the 'Global Commons'. Blowfield (2013, p. 332) defines the Global Commons as "[n]atural assets important to human well-being that are outside national jurisdiction", and the examples given as to what constitute them are: "the oceans; outer space, the atmosphere". Perhaps then, because there is no formal (human) ownership of these natural assets, humans have largely neglected their responsibility towards the well-being of the assets but have been happy to avail themselves of the well-being the assets provide.

The ease today with which we consume, for example, fossil fuels (a finite natural resource), has implications for how much is left for future generations. There have been calls for the reduction in fossil fuel usage and investment, one such example being from Mark Carney, the Governor of the Bank of England, who stepped down in 2020. He warned that firms and industry have been slow to change their behaviour and more needs to be done (BBC, 2019c). According to Almond et al. (2020, p. 7) the world of economics and business is a long way from contributing to protecting our "natural capital". Their report makes the following statement:

> … [t]oo few of our economic and financial decision-makers know how to interpret what we are hearing, or, even worse, they choose not to tune in at all. A key problem is the mismatch between the artificial 'economic grammar' which drives public and private policy and 'nature's syntax' which determines how the real world operates. (Almond et al., 2020, p. 7)

The above quote implies that the policies established by governments and societies are out of balance with the systems of the natural world. This sense of inter-generational equity can also apply to the species of wildlife with which current and past generations have been familiar. Depending on current consumption activities, the diversity of flora and fauna may not be present for future generations to enjoy and appreciate (Almond et al., 2020).

2.2.4.2 Intra-generational equity

The second aspect of equity applies to equity across current global citizens and the distribution of resources, such as basic food, water and energy. The United Nations Development Programme (UNDP) reports that, though the number of countries experiencing extreme hunger and under nourishment has decreased owing to economic development and better agricultural productivity, 821 million people as of 2017 remain severely malnourished. The reasons for this, it notes, are "often as a direct consequence of environmental degradation, drought and biodiversity loss" (UNDP, 2020). Examining the food waste statistics (above), and considering that the second of the United Nation's (UN's) 17 Sustainable Development Goals (SDGs) is concerned with eradicating hunger, there seems to be something seriously wrong at a global level. How can food as a resource be wasted in the quantities it is, when there are global citizens who do not have enough to eat? This issue is not just limited to food but also relates to the supply of another basic requirement for human life, namely water. Chamberlain (2009) (in an article in *The Guardian*) reported that in the city of Bhopal, India, where approximately 100,000 people depend on water delivered by tankers moving across the city, neighbours have turned against neighbours (including killing each other) owing to water shortages. The shortages were caused by the usual monsoon being late and one of the driest spells in the region's history. The article reports that a family had been murdered because

neighbours felt they were “stealing water” from a communal water pipe that had been dry for days. The family had drilled holes into the communal pipe to siphon water from the pipe when the water was eventually available. This, in contrast to the UK – as well as much of the developed and industrialised world – is very unusual, as people are used to turning on a tap from which clean (and for many, drinkable) water flows unrestrictedly.

The 2020 edition of the report *Tracking SDG7: The Energy Progress Report* (IEA et al., 2020) evaluates the progress made towards equity in terms of access to energy and degrees of fuel poverty around the world. There is currently unequal access to energy and part of the imbalance is illustrated by looking at methods used for cooking. The Clean Cooking Alliance (CCA) estimates that three billion people use harmful cooking methods and fuels with which to cook food (CCA, 2020). This, in a global population of approximately more than seven and a half billion citizens (UNDESA, 2019, p. 1), represents 40% of the global population. The use of cleaner cooking methods and fuels, according to the CCA, would prevent harm done to “health, the climate and the environment” (CCA, 2020). The findings of the IEA et al.’s (2020, p. 1) report indicate that, although progress has been made towards “universal access to affordable, reliable, sustainable, and modern energy”, it has fallen short of the levels required to achieve a worldwide reach by 2030. The SDGs were adopted by the UN’s member states in 2015 with a view to achieving all 17 SDGs by 2030 (UN n.d.b).

The issue of resource consumption facing humans has been marked each year by an ‘Earth Overshoot Day (EOD)’ since 2006 (EOD, 2020a), according to the EOD website. EOD represents “the date when humanity’s demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year” (EOD, 2020b). As noted in a press release by the EOD and the Global Footprint network, the EOD between 1970 and 2020 is moving on average earlier each year. In 1970 the EOD was in December, but in 2020 was estimated to be in August (EOD, 2020c). This suggests that the human rate of consumption of Earth’s resources overall is accelerating.

There is a wide and varied literature concerning waste and as illustrated above, it is interdisciplinary. The bounded nature of this thesis limits the breadth

of the issues that can be commented upon and explored. However, the specifically selected literature referred to in this chapter highlights in detail the intertwined relationship of sustainability and the issues of waste.

Looking to the future and to deal with the reduced availability of finite resources, a circular economy model has been suggested. One of the organisations promoting the benefits of a circular economy is the Ellen MacArthur Foundation (EMAF). The circular economy model is based on three principles: "design out waste and pollution; keep products and materials in use; regenerate natural systems". This foundation would counter that of the current industrial model to "take-make-waste" (EMAF, 2017). The possibilities of the circular model are espoused by other prominent personalities, such as Sir David Attenborough (see Attenborough, 2020, p. 204) and other organisations, such as the Waste and Resources Action Programme (WRAP, 2020). There are also discussions in the academic community as to the circular economy (see Geissdoerfer et al., 2017; Stahel, 2016).

The above literature review has considered one aspect of sustainability, namely waste. The way employees respond to the issues of waste arising during their work activities will assist in addressing RQ1. Employee action/inaction (conduct) when dealing with issues of waste will need to be negotiated within the prevailing structures of the MCSs (see Figure 2.1). Revealing the waste practices of employees will enable understanding of what the employee actually does, and how the employees negotiate their own different personalities, behaviours and limitations (Merchant, 1985) and the MCSs to influence employees "to do what is best for the organisation" (Merchant and Van der Stede, 2007, p. 8).

The resulting conduct of an employee will be based on internal and external forces. These forces, in addition to barriers and enablers of sustainability engagement are considered below.

2.3 Forces, barriers and enablers of sustainability engagement

Structural forces, barriers and enablers can arise at various levels of abstraction. The three elements can also be closely linked to each other, and separating them due to their close relationship, can potentially, be difficult. In order to make the prevailing forces, barriers and enablers more visible and isolate them, they are

considered using three lenses, or rather, three levels of abstraction, the micro, meso and macro levels. Sustainability engagement by an employee must originate from somewhere and consideration of micro, meso and macro level influences on an employee assists in the identification of several forces that act in isolation or simultaneously on an employee. The relationship of the social actor/employee to the three levels is represented in Figure 2.1 below.

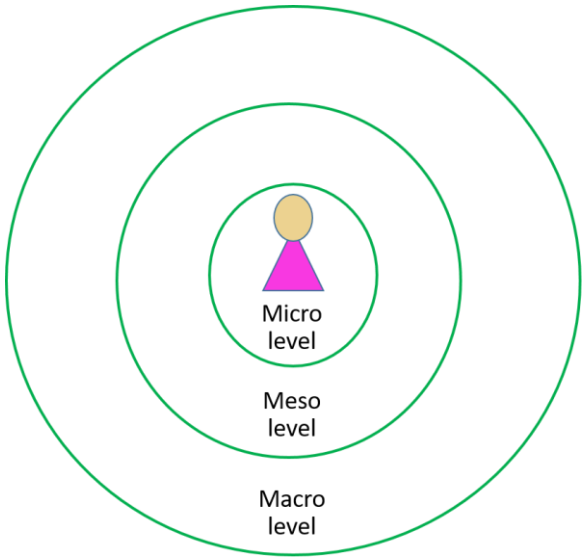


Figure 2.1: An overview of the relationship of an employee and the three levels of abstraction.

The first part (section 2.3.1) considers individual and personal aspects that may influence an employee to act in a particular way, such as faith and religion (section 2.3.1.1), connection to nature (section 2.3.1.2), and cultural background (section 2.3.1.3). The next part considers these three elements from a meso level (section 2.3.2), examining societal factors such as the role of universities in society (2.3.2.1) and the ability and motivation of an adult to learn once formal and mandatory education has ended (2.3.2.2). The last part (section 2.3.3) considers the ways in which employees' sustainability engagement could be generated and enabled through the influence of media from a macro level. The media forces that permeate the everyday lives of individuals, such as Images (section 2.3.3.1), *Blue Planet II* (2.3.3.2) and Sir David Attenborough (2.3.3.3), are considered as part of this section.

2.3.1 The micro level factors

The sustainability actions of individuals are potentially dependant on several factors. Relevant literature incorporating some of these personal (micro level) factors is examined below.

2.3.1.1 Faith and religion

Bathurst (2017) notes that there has been little investigation of sustainability within the discipline of theology, though sustainability is examined in multiple other disciplines. Bathurst (2017, p. 87) suggests that theology can offer a fresh perspective from which to challenge global capitalism that has influenced "the human condition". Clugston (2012, p. 4) supports this reorientation of perspective and notes that faith communities can assist in generating a "focus on being more, not having more, after basic needs are met".

Das et al. (2014) considered faith based environmentalism and pro-sustainability behaviours from a Hindu perspective. Their research focused on a number of case studies that investigated the sensitivity of the Hindu diaspora in the UK in reference to lifestyle changes with respect to sustainability and Hinduism. For example, one of the case studies investigated the impact on an individual after learning about how milk was produced and the cruelty to/slaughter of cows within the process. The Royal Society for the Prevention of Cruelty to Animals (RSPCA) in its information sheet *The Welfare of Dairy Cows* (RSPCA, 2017) highlighted some specific welfare concerns, such as lameness caused by poor nutrition and inappropriate walking surfaces, mastitis (inflammation of a cow's udder usually caused by a bacterial infection) caught via other cows in the herd or from unhygienic farm environments, and lastly poor lying down conditions. Another aspect of dairy farming is the killing of male calves within days of being born. Male calves will not produce milk and are expensive to rear and accommodate on a farm, therefore slaughtering them instead is more cost effective (Levitt, 2018). These practices have been challenged over the last few years, in part by retailers, which has led to the Red Tractor food assurance standards banning this practice on farms by the end of 2021 (Levitt, 2020). The final point is related to the lifespan of the dairy cow. A report by the Farm Animal Welfare Council (FAWC), *Opinion on the Welfare*

of the Dairy Cow (2009), reported an increase in average lifespan of six months (five and a half years to six years of age) for a dairy cow between 1997 and the publication of the report in 2009. Though this is a positive increase, the FAWC report notes that a non-dairy cow can live for "12 years" or more (FAWC, 2009, p. 2), so a dairy cow, on average, is only living for half of its potential lifetime.

Within Hinduism cows are respected and revered and should not be ill-treated. Rosen (2012, p. 47) observes:

> [h]ow we treat cows and how we treat the Earth – and thus ourselves – are inextricably related. Indeed, the Greek word *Gaia* and the Sanskrit *Gau* refer both to the Earth and to cows, interchangeably, and the words are used as such in common parlance. Western culture and Indian culture thus speak of Mother Gaia and Mother Cow in much the same way.

The participants in the Das et al. (2014) case studies, after having attended the milk production workshops, did indicate that they were persuaded to buy organically produced milk, as the price for slaughter free milk was something that they were, prior to the workshops, unwilling to pay. Other elements within the various case studies conducted by Das et al. (2014) also highlighted changes to behaviours via making religious vows. The findings of the studies also reveal, however, that there were some behaviours and activities that would not be altered, such as long-haul travel to see family and travel for pilgrimage. Though there are some elements that people are reluctant to change, this does suggest that people are open to changing their behaviour and consider how their decisions impact on the environment around them, once they have understood and embraced linkages between their faith and matters of sustainability.

Grønvold (2013) presents a case for changing current theological practices from an anthropocentric theology (meaning humankind at the centre of all creation), to a biocentric theology (where all creation is considered equally important and humankind does not have primacy). The inequity between humankind and the rest of creation has already been illustrated by Lovelock and Lovelock (2000) and Sir David Attenborough (2020). Lovelock and Lovelock (2000) noted mankind's full exploitation of resources, in that man takes whatever he feels he needs and wants. Sir David Attenborough also points out,

through his reflections on his early career, that what he deemed then as the wild, was actually an "illusion" (p. 100), though he did not realise it then. He (Attenborough, 2020, p. 100) sums up mankind's relationship to the planet as follows "[w]e regard the Earth as *our* [emphasis in original] planet, run by humankind for humankind. There is little left for the rest of the living world. The truly wild world – that non-human world – has gone. We have overrun the Earth". This personal realisation by Sir David has taken (almost) his entire career to realise: it has been a 'slow burn'. One of the potential reasons for this is because what we, as humans, can understand is limited; our brains are not limitless, and the patterns of the Earth's natural systems and processes are not all known, as the Earth is yet to give up all her secrets. There is, however, a 'silver lining' in Sir David sharing this revelation, as he is a force for change via his public platform (see section 2.4.3.3).

There is also another faith related dimension, whereby humans die out and become extinct. Les Knight, founder of the Voluntary Human Extinction Movement (VHEM) campaigns for humans to stop reproducing so that the human race will eventually die out, and the planet can re-establish itself (Pratty, 2020). This would mean that the remaining humans (though on a decreasing population trajectory), would have more resources as there will be fewer to draw on finite resources. This is an extreme position and turns both anthropocentrism and biocentrism on its head. The extinction of the human race on Earth would mean greater potential for other life on the planet to flourish.

Another related view is to consider whether technological advances and innovation will be able to save the planet in the future and help undo some of the problems that we have created for ourselves. The WWF–Australia has published a paper inviting members of the public to collaborate with the WWF to harness emerging technologies as a "solution enabler" (Proudfoot and Kelley, 2017, p. 7). Though there have been advances in the way people live, including the innovation of electric cars and renewable energy, there is more that needs to change. Bill Gates, one of the most recognisable names in terms of technology, observes that human society needs a fundamental rethink. He observes that we (humans) face "grand challenges … [and] we need breakthroughs in how we make things, grow food, and move people and goods – not just how we power

our homes and cars" (Gates, 2018). Though there may be a chance that technology and human ingenuity combined will develop a universal panacea for the impending sustainability challenges, until then, Gates suggests a radical change in how we exist as a global society.

Grønvold (2013, pp. 271–272) suggests that "[a]lthough humanity might never fully embrace biocentrism, the global economic crisis at hand necessitates a turn toward a biocentric world view – toward a greater understanding of the value of non-human components of our planet". To assist a more biocentric world view, the suggestions of Habgood (2002) perhaps provide some guidance. A pertinent aspect raised by Habgood (2002, p. 71) is the way that 'value' is ascribed to certain things as opposed to 'worth'. He describes value as:

> impl[ying] somebody doing the valuing, whereas worth inheres in the thing itself. In the light of its own nature … every form of life pursues its own good in its own way, and its worth lies precisely in this individual pursuit.

Employees can have different beliefs and faiths that inform their behaviours. These structures of belief and faith can have varying degrees of 'connection' with the Earth. The strength of those connections may provide forces (or not) that influence sustainability behaviour, and indeed, a greater or lesser sense of biocentrism (Grønvold, 2013) – and worth (Habgood, 2002), encapsulated in an employee's beliefs, could act as a barrier to or an enabler of employee sustainability engagement.

2.3.1.2 A connection to nature

The *State of Nature* report for the UK in 2019 (Hayhow et al., 2019, p. 7) notes that "the UK has a long history of love for, and fascination with, its natural heritage. Thanks to this, tens of thousands of volunteers collect data on wild life every year. Without their dedication this report would not be possible". This demonstrates a connection with nature, which, according to Miller (2005), is very important in restoring the natural world.

Since 1970, however, there has been an overall trend of biodiversity loss in the UK (Hayhow et al., 2019). Interestingly, the *State of Nature* report begins by noting comments about nature from young conservationists (Hayhow et al.,

2019, pp. 2–3). Potentially, the rationale for this is because it is the young people today who will most likely live in a world "impoverished of nature" tomorrow (Hayhow et al., 2019, p. 2). There are various reasons for biodiversity loss noted in the report: the rise in climate temperature, the urbanisation of land, the intensification of agricultural productivity and emissions from harmful pollutants (Hayhow et al., 2019, pp. 6–7). This perspective also links back to the ideas about inter-generational equity (see section 2.3.4.1) and with the findings of Almond et al. (2020), who suggest that current consumption activities will lead to loss of flora and fauna diversity on a global scale. Miller (2005) suggests that the biodiversity loss the world is currently encountering is largely due to urbanisation and consequently a separation of humans from nature. In other words the proximity (or not) to nature could be a force that generates sustainability engagement. Several dimensions of the relationships of humans with nature, that is, biophilia, (defined as "the passionate love of life and of all that is alive", Fromm, 1973, p. 858) are explored below.

Aspects of adult interaction with wildlife and nature can take various forms and there is research to suggest that hobbies that are located in the natural environment (wildlife recreation), such as bird watching and hunting, seem to support PEBs (Cooper et al., 2015). In fact, Cooper et al.'s (2015, p. 456) study found that individuals (wildlife recreationists) who took part in bird watching activities and hunting demonstrated "actions that contribute directly to natural resource conservation" as opposed to individuals who did not pursue such recreation activities. Though Cooper et al.'s (2015) study was based in the United States (US) – and hunting is a less common hobby in England – employees who take part in bird watching activities may exhibit a greater degree of environmental stewardship because they spend much of their free time located in nature and the natural world. According to Schultz (2000) and Williams and Cary (2002), individuals who have personal relationships with a natural environment (or perceive themselves as part of it), are more likely to be motivated to protect it.

A connection with nature need not be established in adult life: it is commonly formed in childhood. The experiences of children with nature can play an important part in influencing adult PEBs (Chawla and Derr, 2012;

Collado et al., 2015; Evans et al., 2018; Otto and Pensini, 2017). However, Kahn (2002) suggests that the estrangement from nature begins in childhood and therefore the remedy should also be positioned there. Nature and nurture are not the only tools for child development, but there is a third possibility: "the active mental constructions of children and the ways in which children organize and act on their knowledge and values" (Kahn, 2002, p. 4). This comment highlights a child's personal cycle of structuration and how the child negotiates "mental constructions" (structures) and organisation of action (agency). This has implications for how curricula are designed and adapted in the education systems for childhood and young adult learning. Potentially, sustainability informed curricula at all tiers of child education could have positive impacts on how sustainability is implemented when the child becomes an adult. As the internal structures of children develop, some areas crystallise to form the foundation of an adult's internal structures, that is, they form an adult's "phenomenological and hermeneutic inheritance" (Stones, 2005, p. 4). The adult then draws upon the 'inheritance' constructed from his/her childhood to make decisions in his/her present adult life.

Given the degree and speed of urbanisation, the opportunities to experience biodiversity/nature for children in urban spaces can be few (Hayhow et al., 2019). Miller (2005, p. 431) observes that within urban areas "… most people encounter biological uniformity in their day-to-day lives. This serves as a constant reminder of the presumed unimportance of biodiversity". Hinds and Sparks (2008) found that children who had grown up in rural areas had a greater affinity with the natural environment than those children who grew up in urban areas. The exposure to nature for children, however, does not have to be direct: it can also be a vicarious/indirect experience (Kellert, 2002). In a study of almost 400 elementary school children in Japan, Soga et al. (2016) used questionnaires to investigate the direct and vicarious experiences of children with nature. Their findings suggest two important points. First, they agree with Miller (2005) that a separation from nature, especially in neighbourhood environments for children, supports a disconnect between nature and the child. The second, more positive finding indicates that both direct and vicarious experiences (such as television or the internet) support a positive relationship with nature. In addition

to adult and child relationships with nature, different cultures embrace nature and biodiversity in various ways (see below).

2.3.1.3 Cultural background

Different cultural traditions are observable in the distinctions between western and eastern world cultures. These could potentially influence an employee to act in a particular way depending on his/her cultural background. The wisdom of indigenous and ancient traditions can sometimes be dismissed in favour of a more 'scientific' perspective. For example, this is evident in recently discovered medicinal properties of the spice, turmeric, by 'western' scientists and researchers. In particular, curcumin, "the active constituent" of turmeric (Deogade and Ghate, 2015, p. 282) has been shown to have several applications in the field of medicine (see Deogade and Ghate, 2015). Turmeric has a long history in Ayurvedic (Indian) medicine, especially for inflammatory conditions (Jurenka, 2009). Certain people think non-conventional treatments are 'mumbo-jumbo', although some have survived the test of generations, and have been used for centuries in Asian countries, particularly in traditional Ayurvedic and Chinese medicine (Deogade and Ghate, 2015; Gupta et al., 2013). This feedforward of cultural inherited practices not only traverses the child to adult timeline but has links back to very ancient traditions and know-how. For newer cultures and civilisations that have not inherited such ancient wisdom, an opportunity for learning may be overlooked if this inheritance is entirely dismissed.

The discussions now examine the next level up from an individual perspective and consider meso level forces, barriers and enablers that may (or may not) lead to an employee's engagement with sustainability.

2.3.2 The meso level factors

There are societal expectations that potentially impact on an employee's decision to behave in a sustainable way, one of which could be the perceived role of the organisation that employs them, that is, a university. The discussions below highlight reasons for the existence of a university, obviously with regard to student education but also, to the education and scholarship of employees and academic staff, which are less often considered. Linked together with the

education of adults is a suggested adult learning framework that could signal ways in which adults could be best supported and encouraged to learn about new things.

2.3.2.1 The role of universities

Universities can be viewed as the apotheosis of an education-seeking society and the source from which new thinking and innovation often emerge. Students currently attending universities will probably become the 'captains of industry' in the future and leaders in their chosen disciplines. It is logical to assume that if sustainability is incorporated into the university curricula studied, when students eventually leave university and enter the world of work and industry, they will be more likely to consider the sustainability impacts of the decisions they make than if sustainability were absent from the curricula. In addition, university organisations comprise not only students, but also faculty staff and employees. These latter individuals also need an appreciation and knowledge of sustainability if a university wishes to pursue sustainability engagement.

Scholars such as Palmer and Finlay (2003) suggest that, to achieve significant progress with reference to sustainability, changes are needed in thinking and the development of minds. Palmer and Finlay (2003, xiv–xv) note that:

> For more than 30 years the world's major institutions, scientists, and governments, and some of the largest nongovernmental organizations (NGOs), have compiled and analyzed details of how we are abusing the planet ... Yet the crises are still with us. The simple fact is that knowledge on its own is not enough … Ultimately, the environmental crisis is a crisis of the mind. And likewise, appropriate development is ultimately an appropriate development of the mind. We see, do, and are what we think, and what we think is shaped by our cultures, faiths, and beliefs.

Universities should be places that develop the minds of both staff and students in terms of sustainability. The activities of teaching, research and innovation are all needed when it comes to sustainability. According to Engwall (2020, p. 205), a university has two key tasks, namely, "the distribution of

established knowledge (teaching students as well as the dissemination to the wider society) and the creation of new knowledge (research)".

Bear and Skorton (2019) argue that current curricula are too narrow in their focus, often overlooking real world applicability of knowledge. They suggest that the oversight funnels a student into thinking about problems from one direction, that of his/her discipline, thereby missing out on any enrichment other disciplines may bring. This ultimately impacts on the student who may not be as well prepared as he/she could be for life after university, depending on his/her chosen discipline. The teaching received at university can, potentially, entrench a student within one paradigm, possibly leading to a misunderstanding of what is 'truth'. Brocchi (2010, p. 151) observes that "humans are not able to reach universal truths, but unfortunately they are able to universalize the[ir] (own) relative truths". Depending on what a student studies and is taught, it can, as Bear and Skorton (2019) note, obscure other probable 'truths'. Therefore, what is researched and taught by faculty and staff when it comes to sustainability is very important, as teaching and research employees are conduits of sustainability knowledge.

The other task of universities is that of innovation and creating knowledge. This may, for sustainability, warrant a multidisciplinary approach. The discussions below draw out the interdisciplinary nature of sustainability. For example, links to theology, culture and nature provide many ways of viewing and interpreting sustainability. Brett-Crowther (2009) asserts that what is 'truth' cannot be expressed via one discipline or paradigm. He makes these comments in relation to those who have dismissed James Lovelock's Gaia Theory (see Lovelock, 1979) and are unable to reconcile the science element of the theory with their personal faith and beliefs. In brief, the Gaia theory/hypothesis suggests that the Earth itself is one super organism made of a set of systems within systems that cooperate and compete with one another, forming the ultimate "system of systems" (Boulding, 1956, p. 202). Stead and Stead (2014, p. 30) refer to the Gaia theory as an "elegant metaphor that emphasizes a key principle of ecology: that all living things operate together". This view is very different from a theological perspective, for example, that is predicated on supernatural master architects of the world and deities.

James Lovelock in his book, *The Vanishing Face of Gaia: A Final Warning* (2010), posits that we are heading towards an unescapable fate and neither changes in behaviour nor better politics or advances in science will be able to halt or reverse our trajectory. Though Lovelock's views are contested, Brett-Crowther (2009, p. 523) nonetheless comments:

> [o]ne must hope that those who admire him – and who really cannot? – will seek to unite his [Lovelock's] science with their faith. Not because his prediction of an over-heated world is probable (though it is), but because neither politics nor science should be allowed on its own to assert what is the truth.

The point he makes amplifies the interconnected nature of truth and of sustainability. Sustainability could be taught in an interdisciplinary way, but this would require teaching and research staff to accept sustainability as being connected to their own particular discipline. In the long term, this type of framing for Higher Education (HE) courses may provide the broadening of student horizons. This resonates with the UN's Principles for Responsible Management Education (PRME) initiative that seeks the incorporation of sustainability into Business School curricula and of which the University of Nottingham (UoN) is deemed a 'champion' (see Chapter 5, section 5.4).

There are several key perspectives offered by contributors in Arthur and Bohlin's (2005) collection of discussions on the role of universities. An interesting one to develop further is that of 'virtue' in universities, as suggested by Bohlin (2005). Bohlin (2005, p. 74) challenges universities to re-orientate themselves by enabling people to flourish by "attend[ing] to those internal characteristics that define who they are themselves, rather than focusing on life's external trappings of success". This could potentially be taken to mean appraising one's internal structures, particularly the habitus of oneself (for a description of habitus see Chapter 3 section 3.5.2). This surely resonates in part with Palmer and Finlay's (2003) suggestion of developing one's mind because the mind is the place where an employee's internal structures relating to habitus form and are located (see above).

Bohlin (2005, pp. 74–75) notes that "[a] virtuous person is one who knows how to choose well in the variety of complex situations that life presents"

– surely something all universities want to develop in their students and staff. Perhaps a way to do this is for teaching, courses and programmes to have a relevance to societal challenges and issues that depend on the everyday choices that are made, such as buying a sandwich or choosing to walk rather than drive to a destination. As identified by Bear and Skorton (2019), students seemed to respond in a positive way to courses that examined societal concerns. This then provides an impetus for staff to research societal challenges such as sustainability and create new knowledge. Bohlin (2005, p. 78) observes that "a university can aspire to provide the rich array of questions, challenges and experiences that will prompt young adults to develop those habits of mind and character that will enable them to desire and pursue worthy goals" – but should not this also apply to university employees? This links into ideas that Shapiro (2005) suggests about universities serving a wider purpose.

Shapiro (2005, p. 13) posits that universities should "serve interests that include but move beyond narrow self-serving concerns". Surely this would incorporate the societal and global challenges that the world faces today, such as sustainability and the world populace living within its means, and, as a wider issue, the development of employees and staff. This sense of service, however, is challenging to mobilise and as Shapiro (2005) further observes that:

> [t]o my regret, this is one of those ideas that, while applauded in principle, is easily lost in the challenge of meeting one's day-to-day responsibilities. This makes it even more important to pause once in a while to adjust our sails and correct our course.

The daily duties of employees in complex organisations, such as the UoN, to satisfy key stakeholders, for example, students and regulators, may cause some tension in serving macro concerns, and as Shapiro points out (above) may ultimately be "lost".

Sustainability knowledge exchange occurs not only at the meso organisational level but also at the micro, individual level. Brinkhurst et al. (2011) have highlighted the importance of employees in HEIs if changes in sustainability need to be delivered. As Daily et al. (2009, p. 245) also note, "little research has focused on proactive social/environmental behaviors at the individual level within organizations. We believe that this is a serious omission

due to the fact that social performance at the corporate level cannot occur without contributions by individuals". This concurs with Wood's (1991) position that individuals execute the social responsibility of an organisation, hence understanding what prompts a sustainability contribution from the individual, an employee, is a fundamental insight.

Daily et al. (2009, p. 245) significantly note also that "the success of important environmental programs may hinge on employee behaviour that is beyond the scope of formal reward and performance evaluation systems". They define this as "discretionary acts by employees within the organization not rewarded or required that are directed toward environmental improvement" (p. 246). The "individual and discretionary behaviours" (Boiral and Paillé, 2012, p. 431), if promoted throughout the organisation, can have a marked impact on environmental performance (Boiral, 2005; Ramus, 2001; Ramus and Killmer, 2007) and hence sustainability performance. The sharing of tacit environmental knowledge was investigated by Boiral (2002), using a case study approach of Canadian industrial companies. Boiral (2002) makes two significant observations, first, that formal environmental knowledge should not have primacy over less formal forms, the latter being termed 'tacit knowledge' that is "hidden, abstract and almost inaccessible" (Boiral, 2002, p. 292); and second, that an organisation should encourage a culture of recognising and sharing employee experiences, thus providing a space to exchange the tacit knowledge. Both aspects need to be embraced if environmental concerns are to be managed. Employees are able to share their opinions with their colleagues in the general 'water cooler chit-chat', and this informal sharing may impact on how employees engage with sustainability at the UoN. While previous studies have noted the importance of co-worker trust (Chattopadhyay and George, 2001; Cook and Wall, 1980; McAllister, 1995), few have examined the effect of co-worker relationships on sustainability engagement. DeJonghe et al. (2009) investigated two companies with an 'eco' focus to determine how employees engaged with improving the company's environmental performance. Using a survey method to gather data, they found that when employees engage in eco-initiatives, they seek out, and are motivated by, the recognition and approval they receive from their peers. This links back to the potential impact on an agent

of his/her networked others (see Chapter 3, section 3.6). Paillé et al. (2016) examined how peer relationships can impact on PEBs of employees at work. The study of over 400 employees within industry sector jobs lacking any sustainability focus found that supportive peers at work do promote sustainability behaviours. Though Paillé et al. (2016, p. 655) frame this behaviour as 'eco-helping', as opposed to 'sustainability' behaviour amongst co-workers, eco-helping is defined by Boiral and Paillé (2012, p. 439) in the literature as "voluntary and unrewarded behaviours aimed at helping colleagues to better integrate environmental concerns in the workplace". This links into aspects that form part of an agent's moral compass and are attached to his/her values and beliefs (see Chapter 8, section 8.2).

Collier and Esteban (2007, p. 29) found that the "tone from the top" was a significant factor in embedding a CSR culture in an organisation. To successfully incorporate CSR into employee commitment, there needs to be significant steering and guidance from senior managers. This can also be seen as related to the overall culture of an organisation and the idea of all employees having shared values. Duarte (2010) studied five CSR managers to ascertain whence their CSR values originated and how they perpetuated the CSR culture within their respective organisations. Their personal CSR values played a key role in maintaining and developing the CSR culture of the various organisations, primarily through their powers of discretion. Over time, such discretionary actions/practices can contribute to an organisation's overall culture.

2.3.2.2 Adult learning and education

If universities are serious about contributing to sustainability, then students need to be taught about sustainability, and faculty and staff need to know how they can contribute to sustainability. Brinkhurst et al. (2011) identify faculty and staff as important in developing innovative and creative ways to approach and deliver sustainability in universities. This may be because they work at less senior and strategic levels and can more easily evaluate what would and would not work at an operational level. A model that explores ways in which adults can be supported to learn is discussed below.

One of the prominent models of adult learning, the andragogic approach, was suggested by Knowles (1980, p. 43), though over time it has been contested

in the literature (see Cross, 1981; Davenport and Davenport, 1985; Grace, 1986; Hartree, 1984). Knowles (1980, p. 43) defined andragogy as "the art and science of helping adults learn", to distinguish it from pedagogy (the techniques and methods by which children are helped to learn). Though andragogy has been and remains contested in literature, "it has been the primary model of adult learning for over 40 years" (Merriam et al., 2007, p. 90). Indeed, some scholars have suggested that Knowles's conceptualisations revolutionised the discipline of adult learning (Brookfield, 1986; Feuer and Gerber, 1988).

Knowles's conceptualisation of androgogy has developed over the years, culminating in six central principles of adult learning (see Holton et al., 2001 for a comprehensive review of Knowles's writings and the emergence of his andragogy assumptions). These are: (i) learners' need to know the reasoning behind why they have to learn something; (ii) self-concept of the learner, which considers that a person becomes an independent person as he/she matures and learning becomes self-directed; (iii) prior experience of the learner, that is, the wealth of experience accumulated by an adult that serves as an abundant reserve for learning, though this can also crystallise routine ways of thinking and particular habits and biases; (iv) readiness to learn, which assumes that learners only engage in learning when they need the learning in order to meet challenges in everyday/real life situations; (v) orientation to learning, which assumes that there is a problem or a context to which the learning can be applied; and (vi) motivation to learn, which is assumed to emanate from within a learner (internal structures and forces) rather than through external conditions and could include the benefits to the learner him-/herself (Knowles et al., 2012, pp. 3, 63–67).

These six assumptions identify areas whereby adult learning can be supported, but the model, however, does not provide a universal solution to adult education. Moreover, the andragogy model, as noted by Merriam et al. (2007, p. 92), should be viewed as:

> an enduring model for understanding certain aspects of adult learning … [but i]t does not give us the total picture, nor is it a panacea for fixing adult learning practices. Rather, it constitutes one piece of the rich mosaic of adult learning.

Following a model (or not) of adult learning preferences and methods may enable optimisation of employee learning when it comes to sustainability for an organisation. Senior management teams in organisations may have established processes and protocols that enable staff development and learning with reference to sustainability. Though an organisation may not knowingly follow an adult model of learning per se, there may be elements of an organisation's processes that make is easy (or not) for an employee to learn about sustainability.

2.3.3 The macro level factors

The environment in which we live is an obvious consideration as regards sustainability. Many of human life-sustaining requirements come from the environment and global assets such as air, water and land. This common dependency of all humans on the environment, together with the concerns about not stewarding them appropriately, has led to many countries coming together to agree a way forward. Part of this global action is demonstrated via the establishment of the Convention on Biological Diversity (CBD). This was launched at the Rio Earth Summit in 1992 (CBD, 2020), and is affiliated to the UN. The Convention promotes "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources" (UN, 2020). The governing body of the CBD is the COP (Conference of the Parties), with the first COP meeting being held in 1995 in Berlin, Germany, and the most recent being COP 25 in Madrid, Spain, in December 2019 (UNFCCC, 2020). This global effort demonstrates that many nations realise the importance of better stewardship and the need for current behaviours to change to enable human existence to continue. These macro level efforts are supported by aspects of the media, specifically in how sustainability information is communicated to audiences around the world and by whom. Some of the possible channels whereby information is communicated are discussed below.

2.3.3.1 Images

Cox (2010, p. 20) describes environmental communication as "the pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world; it is the symbolic medium that we use in

constructing environmental problems and negotiating society's different responses to them". One form communication can take is through the use of images. Images distributed via various forms of media can be powerful and can affect the viewer.

There is limited research about images, visual communication and sustainability, though there is recognition of the "important gap" in this area, as noted by Anderson (2015, p. 381). This gap is surprising, because one very well-known environmental group (Greenpeace) relies predominantly on imagery as its central form of communications strategy (Doyle, 2007). One of the few studies in this area, however, is that of O'Neill et al. (2013), whose research examined the use of imagery for climate change engagement. The study (using content analysis) collected 1,603 images from five newspapers in Australia, five newspapers in the UK and three newspapers in the USA over the course of one year. Research participants in the study were invited to sort the images according to how the images made them feel about: (i) the importance of climate change (saliency); and (ii) what they could do about climate change (efficacy). The findings indicate that some images evoked feelings of saliency and others of efficacy but more significantly that almost no images did both. The study suggests that the type of image used should be carefully considered and predicated on the message the communicator would like to disseminate, or unintentional outcomes may arise. Although O' Neill et al.'s (2013) study investigates climate change engagement, it may have implications for this research and how employees engage with sustainability and the related feelings that are evoked through seeing or watching media images. Sustainability related imagery via media outlets may impact on public perception and may in turn affect how employees engage with sustainability. Furthermore, O'Neill et al. (2013, p. 414) note that "imagery has the power to engage at an affective, emotional level". This could be observed through an employee's responses if he/she experiences happiness, shock, pain and guilt amongst other emotions when referring to images they have seen. The use of an emotional response from imagery can be seen in the communication strategy of Greenpeace, as suggested by Doyle (2007): the non-violent, image-centred communications strategy of Greenpeace is well known. DeLuca (2009) interviewed one of Greenpeace's

senior media analysts to understand why this strategy was chosen and is still used. The interviewee commented that images remain fit for purpose because they are "very successful in conveying complex narratives" (p. 265), which goes back to the old adage that 'a picture is worth a thousand words'. Throughout the interview, the interviewee pointed to a managed relationship with the media, because the media was their distribution outlet. Significantly the Greenpeace interviewee suggested that the media often relies on other bodies similar to Greenpeace to produce "exciting" (p. 266) imagery because the media outlets cannot repeatedly use the same image. Images may need an element of excitement to sell newspapers and boost circulation volumes, but there are other characteristics that are often used to 'grab' attention.

O'Neill and Nicholson-Cole (2009) suggest that, to engage the public with climate change, communication strategies use fear evoking images, and the representations in their study included shocking, dramatic and sensational images. This study suggests that, though these images are initially attention grabbing, they are unlikely to motivate a person to take action as the image "[tends] to render them feeling helpless and overwhelmed when they try to comprehend their own relationship with the issue" (O'Neill and Nicholson-Cole, 2009, p. 375). Their findings may have implications for this study and how sustainability related images in the media have potentially impacted on employees. Alternatively, people may choose to be selective in the images they view. They may choose to see some and distance themselves from others because they cannot bear to look at or to think about what the images convey. This disengagement of the viewer would render the communication a failure. As yet the forces that generate sustainability engagement are unclear, although images may be one significant aspect to consider.

The power of imagery is immense and we can glean much information from what we see. This largely unconscious visual consumption of images begins as soon as we open our eyes in the morning. The way that a butterfly emerges from a chrysalis, or a lion sleeps on the plains of the Serengeti, or how colourful and diverse the coral of the Great Barrier Reef looks, are hardly images that we have all seen in person or on location. If we have seen these, it is probably through a still photographic image or a recording in a video, film or

television programme. As Gouyon (2019, p. 15) states "[w]ildlife film-making is the art of making nature visible", which implies that there can be some revelation or new insight delivered in the process of making visible what was once hidden. Additionally, it suggests that wildlife film making can be an art in itself and the film maker has some latitude in 'how' nature is seen (see also Burgess and Unwin, 1984).

There is some criticism of environmental messages conveyed in films and images that relate to the natural world. Scholars have suggested that environmental issues related to human activity have been sanitised out of viewing nature (Austin, 2007; Mabey, 2005; Macdonald, 2006). By doing this, a given programme then retains its sense of entertainment and reality without upsetting the audience. However, there are certain film makers who have not adopted this mode of reality transmission, as some documentaries relating to the natural world have made a point of ensuring that the audience has an understanding of how the documentary was made, as did for example, the makers of *Blue Planet II*. More significantly, they have shown what the consequences of human life have been on other life on the planet. This difference in ideology is seen in the making of documentary (MOD) snippets that form part of the last several minutes of documentary films (see section 2.4.3.2 below).

The power of spectacular imagery in relation to the natural world has been captured by films, paintings and photographs for many years. In the UK, television has played a big part in the transmission of information via images. Most recently, advances in technology have enabled programmes such as *Blue Planet II* to magnify "the use of spectacle to generate awe and wonder in viewers" (Louson, 2018, p. 17). The introduction of natural history programmes on television, such as *Blue Planet II*, is discussed in the next section.

2.3.3.2 *Blue Planet II*

One form media takes is television. Here in the UK, one of the foremost broadcasters is the British Broadcasting Corporation (BBC). According to its website, the BBC is "impartial and independent" and creates "distinctive, world-class programmes and content which inform, educate and entertain" (BBC, 2020c). One such programme was the 2017 *Blue Planet II* series, which

provided a hitherto unseen view of life within the oceans and of the effects of mankind on the diverse forms of ocean dwelling life.

Another form of media is radio. Edmond (2015, p. 1567) notes that radio had been experimenting "with ever more complex cross-media practices", and podcasting, as suggested by Berry (2016a), is its most recent incarnation. Berry (2016b, p. 668) defines podcasting as "a medium that has been experimented with over several years and is now moving into a period of credibility, stability and maturity". This format is further legitimised through the support of large institutions such as the BBC that choose to transmit programmes via podcasts. This form of media is convenient and transportable, and can be used for several purposes, such as entertainment, leisure, relaxation, and education. This type of platform works so well because it can be accessed online and follows the listener, that is, it is mobile.

The BBC's *Blue Planet II* programme was in 2017 the most watched television programme of the year (including repeats and recordings), with 14.1 million viewers for its first episode (Ruddick, 2017). This genre of wildlife programme can be deemed a 'blue chip' programme, which is defined by Bousé (2000, pp. 14–15) as a programme consisting of several dimensions, which are: the depiction of mega-fauna; visual splendour; dramatic storyline; and absence of science, politics, historical reference points and people. According to Gouyon (2011) and Louson (2018), wildlife documentaries try to demonstrate a spectacle or a display. This notion of spectacle within documentaries such as *Blue Planet II* and its degree of truth in reflecting reality are contested within the literature, and these dimensions are discussed further on in this section. For some film makers however, there seems to be little conflict in this matter. An interview with Sir David Attenborough in 1984 quotes him saying:

> … there is precious little that is natural, in that sense, in any film. You distort speed if you want to show things like plants growing, or look in detail at the way an animal moves. You distort light levels. You distort distribution, in the sense that you see dozens of different species in a jungle within a few minutes, so that the places seems to be teeming with life. You distort size by using close up lenses. And you can equally well distort sound. What the filmmaker is trying to do is to convey a

> particular experience in as vivid a way as he can. (Burgess and Unwin, 1984, p. 103).

As part of the interview, Sir David goes on to explain that the film maker is limited as to what can be done and must have autonomy and control to use the resources which the film maker *does* have in order to "convey the truth about a particular experience. The viewer has to trust in the good faith of the film maker" (ibid.).

The advent of colour television in the late 1960s meant that natural history programmes could also be broadcast in colour by the BBC. Coinciding with this moment was the series *Civilisation* that was in colour and was televised on BBC2 (Burgess and Unwin, 1984). According to the *History of the BBC* website (BBC, 2020d) the *Civilisation* series was a predecessor to "presenter-led factual series" such as Alistair Cooke's *America,* Simon Schama's *A History of Britain* and Sir David Attenborough's *Life on Earth*. Morgan (2013, p. 147) asserts that the BBC has embellished the 'blue chip' programmes using "scientific narratives", hence it is able to "justify its programming as inherently 'educational', satisfying the terms of its public service remit to UK audiences". This particular format of programme has worked in the BBC's favour for many years. *Civilisation* was, in fact, one of the first 'blue chip' programmes, which helped establish its epistemic credentials.

The *Civilisation* series was commissioned by the then Controller of BBC2, who was, surprisingly or unsurprisingly, Sir David Attenborough.[4] Sir David writing in *The Times* newspaper in 1967 in his capacity as BBC2 Controller, observes that colour television:

> … does more than make pictures pretty. It adds information. It tells you about distance and perspective in a landscape; it portrays more vividly than black-and-white the ferocity of a boxing match; it informs you more fully about the objects and the people that it portrays (Attenborough, 1967, p. III).

[4] David Attenborough was knighted in 1985, being appointed a Knight Grand Cross of the Order of St Michael and St George for services to television broadcasting and to conservation, in the Queen's Birthday Honours list. For consistency, he is referred to throughout this thesis, as 'Sir David', even if comments, etc., are cited prior to him being knighted.

This statement implies two things: first that colour can make things "pretty", but second, that colour is about information. It is about better information communication by the film makers to the audience and better information assimilation by the audience. Since Sir David made the statement above, technology has progressed, and Scott (2003, p. 31) makes the following observation:

> [o]ver the course of time, these new technologies have influenced what viewers are willing to accept as being authentic in the context of representations of the natural world. Time-lapse or slow-motion sequences, infrared or heat-sensitive imaging, the extreme close-ups of macrophotography – all of these have become accepted means of portraying the reality of the plant and animal kingdoms, even though they show aspects of nature that would not normally be visible to the naked eye.

Bousé (2000) suggests that wildlife and nature television documentary film making is a form of storytelling that has arisen against the backdrop of cinematic pressures and conventions. The pressure to attract large audiences and be commercially viable has influenced the production of documentary film making (for more information on this debate, see Nichols, 1991 and Winston, 1995), which has eroded some of the science and facts. In addition, there have been many other criticisms of this type of film making such as anthropomorphism, staging and fakery (for a fuller discussion, see Louson, 2018, p. 18). However, those such as Louson (2018) observe that entertainment and education can work in partnership and need not be mutually exclusive, and she argues that there is a co-constitutive relationship between the entertainment and education factors within a 'blue chip' documentary programme.

There are several types/modes of documentary series (for further information see Angelone et al., 2019; Bousé, 2000; Nichols, 2001). A feature of the 'blue chip' programme as identified by Bousé (2000, pp. 14–15) is the absence of people and any imprints of human civilization so that the images are unspoilt as if at the beginning of time, but they can and often do feature a human voice over narration. Weshchler (1995, p. 101) refers to narration as the "Voice of Institutional Authority". A characteristic of some of the popular wildlife

programmes (including *Blue Planet II*) has been the MOD segment at the end of the programme, which is for "revealing secrets about the shooting of iconic scenes in that episode" (Gouyon, 2019, p. 4). These elements can convey the expertise of the camera team and reinforce the collective nature of how the wildlife programmes have been filmed: after all these recordings are "not the outcome of encounters between the camera and nature but between camera-holders and nature" (Gouyon, 2019, p. 38). This ensures that recognition is given to all who have contributed to making the programme as well as the main presenter of the series. This behaviour implies a spirit of teamwork and collaboration in the making of the documentaries and there is a platform for all involved to share in any kudos that may arise from them. Furthermore, this can also be seen as a self-deprecating action by the 'expert' presenter that may possibly further endear the presenter to the audience. A significant observation made by Gouyon (2019, p. 5) is that the MOD disclosures contribute "to shaping our common understanding of what it means to study wild animals in the field, and what scientists' findings in the field mean to all of us". This comment supports the idea that natural history programmes have evolved over time and now tend to reinforce the 'scientific' foundations of the programme narratives (see section 2.3.3.3 below).

Blue Planet II can be deemed an expository documentary, that is, the type of documentary where film footage and narration are combined. This type is mostly used in wildlife documentaries, owing to the significant role the guiding voice-over plays (Mills, 2013). Angelone et al. (2019, p. 286) observe that these "voice of God" format expository documentaries, through their scripted essay style narratives, seek to educate their audiences. One such recognisable voice within this genre of film making is that of Sir David Attenborough. Dingwall and Aldridge (2006, p. 137) refer to Sir David's presence as "iconic", which contributes to the prestige of 'blue chip' programmes. Sir David's contribution to the discipline of natural history is examined in the next section.

2.3.3.3 Sir David Attenborough

Fry (2006, p. 1) described Sir David Attenborough as "the pin-up of the wildlife world". Whilst Sir David may not be too impressed with this description, many

people would understand the sentiment that Fry (2006) was trying to convey. Many people alive today have grown up alongside Sir David's style of presenting and see in him a beacon of excellence and a repository of knowledge of the natural world, and as Gouyon (2011, p. 41) observes, he is a "trusted television naturalist". We (the audience) have watched not only Sir David's many programmes, but have seen his career unfold as we have journeyed through time with him. As Sir David has grown in knowledge, so have we (the audience), as he has enabled the unseen natural world to become seen, in part, through his interpretations and experiences.

The evolution of natural history programmes, television as a new media format and the career of Sir David are in a close and overlapping relationship, which is illustrated within this section and section *Blue Planet II* (above). Before the advent of Sir David's well known presenting style and programme format, Gouyon (2019) proposed that there were two prevailing natural history cultures. The first focused on British wildlife and had an amateurish but informative perspective on natural history, while the second was based on hunting game and the visual spectacle of megafauna. This also relates back to the long-standing tension between learning and entertainment, in wildlife film making that was discussed in the section above. The introduction of television provided an opportunity to promote and establish a culture of professionalism within wildlife programmes and one that was anchored within science. This focus on science not only gave the programmes more credibility but also offered a way to ensure that the scientific community felt a part of the overall production. After the initial "amateur" and "television personalit[y]" (Gouyon, 20019, p, 37) natural historians, the baton has passed to Sir David, who has run with it ever since.

The rise of Sir David is not a happy accident: he is an organised person who plans and thinks about what is going to be said and done. As Morgan (2013, p. 148) notes, Sir David's "status as a public intellectual and science celebrity, evolved". In his interview with Burgess and Unwin (1984, p. 95), Sir David explains that he writes meticulous programme scripts that include:

> … not only precise species of animals, but precise turns of phrase in the narration and precise camera moves. It comes to about 30 pages of type. I don't do this because I propose to stick to that detail but because you

> have to have a basis that you know will work, before you start departing from it or embroidering it.

His time as Controller of BBC2 (see above) has given him an understanding of television programming – the formats that work well and how to develop a series for this mode of transmission. Again, in the same interview mentioned above, Sir David refers to the number of parts within a series, for example, how 12 or 13 are most suitable as they coincide with a quarter of a year. This makes it easier for television scheduling, but he also mentions that a series must take into account changes in seasons and times when the series can run to ensure consistency for audiences viewing them. This understanding may not have been developed had Sir David not been a Controller himself.

In his most recent book, the culmination of all his years of experience, travel and wisdom, cleverly entitled *A Life on Our Planet, My Witness Statement and a Vision for the Future* (Attenborough, 2020), he brings together his life's reflections. The book also contains, rather unsurprisingly, a call to action for humans to save an endangered species. However, what may come as a surprise is the endangered species in question: "we often talk of saving the planet, but the truth is that we must do these things to save ourselves" (p. 218). The book is an account of the stark changes in biodiversity occurring during his lifetime. These system changes largely result, as Sir David points out, from the actions and behaviour of humans that now threaten the very existence of human life on Earth. However, part of the book's message is how humans can address the rebalancing of the planet's natural systems and enable mankind to exit from this current crisis.

Though he is now in his nineties (Attenborough, 2020), he still champions protecting the natural environment through human behavioural change. He has innovated and developed mechanisms by which to convey his messages. One such example is networking with the British Royal Family to highlight sustainability issues. Most recently Prince William and Sir David have collaborated to launch the 'Earthshot Prize', something that they both envisage as becoming the "Nobel prize for Environmentalism" (BBC, 2020e). Another example is his recent arrival on Instagram. His Instagram account, according to the Guinness World Records, was one of the fastest ever to achieve a million

followers, taking just 4 hours and 44 minutes (BBC, 2020f). These are indications of a person trying to communicate in different ways to reach a wider audience.

His 'brand' is leveraged not only as a narrator/presenter, but as part of many organisations, either as a trustee, patron or ambassador (see Learning Through Landscapes, 2020; World Land Trust, n.d.; WWF, n.d.). He is popular with the young, middle-aged, and more senior individuals like himself. His career began with the discoveries of new species and communication of these experiences to audiences, who, through him, could be part of the discovery. As time and his career has progressed, his focus has changed from the discovery of non-human species and other life on Earth in his early career, to now, saving species and all life on Earth (Attenborough, 2020). Sir David has mobilised a significant change within the natural history discipline. What started as an amateurish offering on television has changed to encompass a professional scientific perspective, with a noticeable environmental focus (see Gouyon, 2019).

Dijkstra (2016, p. 172) comments that "[a]lthough the impact of humans on all other life is beyond apocalyptic, our consciousness of its diversity is medieval". Sir David has been and remains a force that has impacted on how the world of natural history is understood and perceived. How many of us, amongst other things, can say that we have had new species of animals named after us (Dijkstra, 2016), have over one million Instagram followers (BBC, 2020f), have been for meetings with the British Royal Family to discuss sustainability issues (BBC, 2020e) or are deemed to have a presence that is labelled as iconic (Dingwall and Aldridge, 2006)? The answer is 'not many'. Because of Sir David and his ability to communicate and engage with audiences via various formats, the public's understanding of 'other life' on the planet is a little less 'medieval', perhaps, than it may have been without one life on the planet: that of Sir David himself.

The next section considers how organisations effectively may or may not, measure the sustainability engagement of employees at an organisational level.

2.4 The effective measurement of sustainability engagement

If sustainability is important to an organisation, then it should apply control over employees through structures and processes to ensure expected outcomes are achieved. Section 2.4.1 discusses the mechanisms by which organisations can apply control within their organisations. This then leads on to considering how, for many large organisations, by using various approaches, the complex and multiple mix of control systems can be understood (section 2.4.2). This section also highlights limitations and advantages of the various approaches (section 2.4.2.1). There have been developments in the field of management control for sustainability, which are discussed in section 2.4.3. Section 2.4.4 considers existing research that has investigated the relationship between management control, sustainability and employees in organisations and the measurement of employee sustainability engagement.

2.4.1 Management controls (MCs) and management control systems (MCSs)

Given the importance of employees (see Brinkhurst et al., 2011), surprisingly few studies examine sustainability control from an employee's perspective (Ghosh et al., 2019). As has been discussed above (section 2.2.2), an employee can embody different characteristics and motivations (Merchant, 1985).

Because of these different characteristics/motivations, it falls to the organisation's control system to influence employee behaviour to ensure that it aligns with organisational goals and targets (Malmi and Brown, 2008). Control systems are usually developed, deployed and maintained by an organisation's senior managers and are usually referred to as management controls (MCs) or management control systems (MCSs). Heinicke and Guenther (2020) observe that MCs within HEIs have received little attention in the literature. This research will contribute to a better understanding of MCSs in an HEI, in particular, control systems that promote sustainability and illustrate how different groups of actors engage with the MCSs.

There are several definitions and descriptions of MCSs in the literature ranging in breadth, depth, similarities and differences. One group of authors who share similarities in their definition are Chenhall (2003) and Merchant and

Otley (2007). Chenhall (2003, p. 129) describes the MCS as "a broader term that encompasses MAS [Management Accounting Systems] and also includes other controls such as personal or clan controls", and Merchant and Otley (2007, p. 785) posit that "in broad terms, a management control system is designed to help an organisation to adapt to the environment in which it is set and to deliver the key results desired by stakeholder groups". Anthony et al. (2014, p. 4) suggest that typical MCSs are made up of the following elements: "strategic planning, budgeting, resource allocation, performance measurement, evaluation and reward, responsibility centre allocation and transfer pricing". It is these elements that, working together, deliver the desired performance outcomes of the organisation.

Whilst the above terms provide a broad definition, none of them assists in identifying an MCS with regard to employee conduct and action. A more focused description is provided by Merchant and Van der Stede (2007) who argue that the MCS is about employee behaviour, as it is the employees in the organisation who "make things happen" (p. 8). They go on to say that "[i]f all employees could always be relied on to do what is best for the organisation, there would be no need for an MCS" (p. 8). This description clearly recognises that MCSs apply controls over employees to elicit particular and desirable behaviours. Using this conceptualisation would help in recognising sustainability control systems in the research organisation that try to promote sustainability behaviours in organisational actors. Abernethy and Chua (1996, p. 573) share Merchant and Van der Stede's (2007) behavioural definition, but refer to an organisational control system as comprising "a combination of control mechanisms designed and implemented by management to increase the probability that organisational actors will behave in ways consistent with the objectives of the dominant organisational coalition". A behavioural definition of an MCS would be suitable when investigating how employees are encouraged to behave via the MCSs.

Epstein and Roy (2001, p. 600) develop the definition of an MCS to encompass social and environmental strategies. They argue that MCSs "should feedback information on potential environmental and social impacts,

sustainability performance (at all organisational levels), sustainability initiatives, stakeholder reactions and corporate financial performance".

2.4.2 Ways of understanding the MCS

There are three prominent approaches suggested in the literature to understand the phenomenon of MCSs, namely, the Malmi and Brown (2008) typology; the Mercant and Van der Stede (2007) object of control framework; and the Levers of Control (LOC) theory by Simons (1995).

Malmi and Brown (2008) perceive MCSs as a package or suite of control systems rather than as an individual system. Using this typology gives breadth when locating MCSs, that is, it provides a wider net to capture MCSs, rather than concentrating on one particular area of control, and so overcomes the piecemeal way that MCSs can sometimes be introduced into an organisation via different organisational groups. While a broad view also provides a way of grouping together the various control systems and assists with identification and labelling of the MCSs, it does not explain how particular MCSs operate, nor does it provide a means to understand them, their influence or their impact. Malmi and Brown (2008, p. 291) acknowledge this deficiency and admit that "many of the individual controls have significant research streams associated with them". The typology is summarised in Figure 2.2 below.

<table>
<tr><td colspan="7">Cultural Controls</td></tr>
<tr><td colspan="2">Clans</td><td colspan="3">Values</td><td colspan="2">Symbols</td></tr>
<tr><td colspan="2">Planning</td><td colspan="4">Cybernetic Controls</td><td rowspan="2">Reward and Compensation</td></tr>
<tr><td>Long range planning</td><td>Action planning</td><td>Budgets</td><td>Financial Measurement Systems</td><td>Non Financial Measurement Systems</td><td>Hybrid Measurement Systems</td></tr>
<tr><td colspan="7">Administrative Controls</td></tr>
<tr><td colspan="2">Governance Structure</td><td colspan="3">Organisation Structure</td><td colspan="2">Policies and Procedures</td></tr>
</table>

Figure 2.2: Management control systems' package (Malmi and Brown, 2008, p. 291).

The discussions below examine each of the five classifications of controls, that is, cultural, planning, cybernetic, reward and compensation and administrative controls as per Figure 2.2.

The influence of culture in shaping behaviour justifies it as a key element of the control system (Malmi and Brown, 2008) and the context in which the other controls operate. Therefore, cultural controls head the framework, because they are wide ranging, indirect and do not change quickly, and form the organisational environment. Flamholtz (1983, p. 158) defined organisational culture as "… the set of values, beliefs and social norms which tend to be shared by its members and, in turn, tend to influence their thoughts and actions". In Malmi and Brown's (2008) typology, cultural controls are divided into three areas: clans, values and symbols.

Ouchi (1979) developed the idea of clan control within organisations. This informal mechanism of control depends on socialisation processes to which the individual/s have been exposed, thereby embedding a set of values and/or beliefs in them. The control element of the mechanism is derived from "a deep level of common agreement between members on what constitutes proper behavior, and it requires a high level of commitment on the part of each individual to those socially prescribed behaviors" (Ouchi, 1979, p. 838). This common agreement eliminates any need for goal incongruence between individuals. For example, before qualifying, doctors have to demonstrate certain values and beliefs in addition to their practical skills.

Simons (1995) claims that an organisation's belief system controls its core values. The belief system is an "explicit set of beliefs that define basic values, purpose, and direction, including how value is created; level of desired performance; and human relationships" (Simons, 1995, p. 178). It exists to support and direct behaviours towards the pursuit of opportunities, for example, via the use of mission and vision statements.

Schein (1977) suggests that symbols can also be used as culture control mechanisms. For example, a company may introduce a uniform for staff so that they appear more professional. Such dress codes symbolise commonality between groups of people, and visually represent their shared aims and culture. Another example Schein (1977) provides is that of open plan seating

arrangements in offices, which can symbolise, and help reinforce, unrestricted communication channels for the organisation's employees. It provides an environment for easy association with colleagues, which may lead to increased partnership and team work. Next are the planning, cybernetic and reward and compensation controls: this tier is sandwiched in the middle of cultural and administrative controls.

Planning controls include two elements in the framework. First, long range planning relates to future decisions and strategic direction, usually more than 12 months ahead. Secondly, action planning covers the more tactical and operational planning, relating to the next 12 months. These controls are in place to ensure that there are planned targets, which inform employees about the type of behaviour and performance expected of them. Furthermore, they ensure that the goals of the organisation are underpinned by employee behaviour that is congruent with these objectives.

Cybernetic control is defined as "a process in which a feedback loop is represented by using standards of performance, measuring system performance, comparing that performance to standards, feeding back information about unwanted variances in the system, and modifying the system's comportment" (Green and Welsh, 1988, p. 289). The Malmi and Brown (2008) MCS framework considers four types of cybernetic control systems: budgets, financial measures, non-financial measures and hybrids that contain both financial and non-financial measures. Specifically, these controls hold employees to account for economic performance and the key drivers of organisational performance.

The final component of the middle tier of controls is that of reward and compensation. Malmi and Brown (2008) have given this control its own space in the framework. Whilst they note that reward and compensation controls are usually tied into cybernetic controls, they also point out that "organisations also provide rewards and compensation for other reasons" (p. 293). They use "retaining employees and encouraging cultural control, via group rewards" (p. 293) as examples, and suggest that there is a gap in research regarding different reward and compensation schemes.

Finally, the administrative controls are composed of three types of controls: governance structures, organisation structure and policies and

procedures. Governance structures provide employees with information about standards of acceptable behaviour and about persons to whom they are accountable. Organisation structure and design influence employee behaviour through the organising of individuals. Finally, policies and procedures provide employees with guidance on how particular processes and tasks should be completed. These controls are positioned at the bottom of the framework because they provide the context in which the middle three controls (planning, cybernetic, reward and compensation) operate. Without governance structures, organisation structure and policies and procedures, the middle level controls would not have a context in which to operate (Malmi and Brown, 2008).

The second approach is the 'object of control' framework suggested by Merchant and Van der Stede (2007) in response to employee control issues. They assert that there are three causes of management control problems. The first is a lack of direction that stems from employees not knowing or understanding their organisation's requirements of them. The second is motivational issues, caused when the employee and organisational objectives are not aligned. Even when employees know what is expected of them and are motivated to execute their tasks, a third problem arises, namely that of personal limitations. The natural abilities of employees can be limited by intellect or memory, possibly affecting how they perform (or not). They can also be a result of design faults of the job itself. Poorly designed jobs may lead to healthy individuals becoming stressed and either making sub-optimal decisions or being injured whilst carrying out a job.

Merchant and Van der Stede (2007) assert that managing these problems requires a quadripartite control approach. Their four control 'objects' consist of: results, actions, personnel and cultural controls. The results' control aspect tries to link results to rewards. These are not just financial rewards, but may include job security, promotions, recognition and autonomy (see Rynes et al., 2004). Results' controls are deemed to be an indirect method of control as they do not directly relate to an employee's actions. According to Merchant and Van der Stede (2007), they tend to constitute the largest MCS in most organisations. Actions' controls seek to influence employees directly, to ensure that they behave as the organisation intends. In contrast, personnel and cultural controls

are perceived as 'softer' controls. Personnel controls rely on employees controlling and motivating themselves. Merchant and Van der Stede (2007, p. 83) propose that "[s]elf-monitoring is the naturally present force that pushes most employees to want to do a good job, to be naturally committed to the organisation's goals". They continue by saying that the selection of employees, training, job design and providing appropriate resources are the ways to implement these controls. Cultural controls rely on the groups within organisations to self-regulate. They apply pressure to groups/individuals who deviate from the norms and accepted behaviour of the organisation.

The third MCS approach is Simons's (1995) Levers of Control (LOC) theory. The four levers of control are shown in Figure 2.3 below.

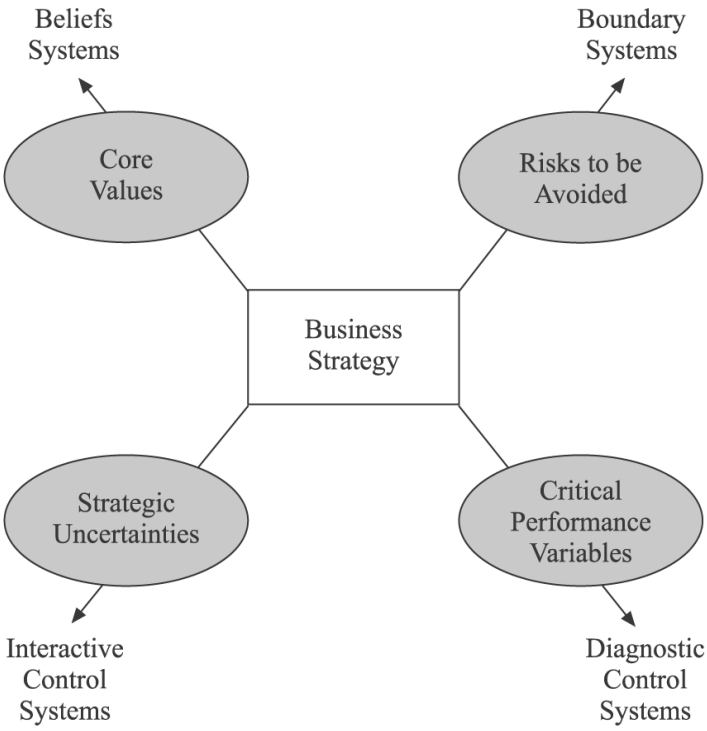


Figure 2.3: Controlling business strategy: key variables to be analysed (Simons, 1995, p. 7).

The basis of the LOC theory is a framework for controlling business strategy via the various MCSs, through the use of fewer "command and control" strategies, defined by Simons (1995, p. 3) as "phrases associated with traditional management control: top-down strategy setting, standardization and efficiency,

results according to plan, no surprises, [and] keeping things on track". Command and control strategies are, Simons (1995) suggests, no longer appropriate because, to operate in a competitive business environment requires ingenuity and employee innovation. The new strategy that emerges is underpinned by competitive advantage and is controlled through four constructs that are operated via levers.

The four constructs comprise core values, risks to be avoided, strategic uncertainties and critical performance variables. These four constructs are controlled and managed via the levers (belief systems, boundary systems, interactive control systems and diagnostic control systems) for successful strategy implementation. The levers are the mechanisms that control and direct the constructs by transmitting and processing information within the organisation.

Core values refer to the organisation's purpose and how it creates value, and this construct is controlled via the belief system lever. The belief system is there to guide and support employee behaviour in order to provide direction to employees when seeking out opportunities in areas such as value creation, performance and innovation.

Risks to be avoided highlight areas of unacceptable activity for the organisation's employees. The boundary system lever delineates the areas of freedom for the employee. Within boundaries, employees are encouraged to be creative and innovative.

Strategic uncertainties relate to how the organisation embraces new opportunities and deals with threats to the strategy. These are managed through the interactive control system (ICS) lever. Finally, critical performance variables summarise the key factors that must be implemented to deliver the strategies. The critical performance variables underpin the organisation's strategy. If the strategy is revised in response to different factors, then so too must the critical performance measures. The lever for this construct is the diagnostic control system (DCS) lever.

The levers for strategic uncertainties and critical performance variables are slightly different from the levers of the other two constructs (core values and risks to be avoided) as they use feedback and measurement systems to control

the constructs. The ICS lever is used by managers to focus on a particular strategic issue. Attention is focused on the strategic issue throughout the organisation's management hierarchy. Feedback and measurement via the ICS regarding the strategic issue enables managers and staff to innovate and learn about new opportunities or threats. The DCS lever is used to monitor organisational performance and ensure that performance is kept on track. The DCS can be used to correct deviations (via variances) from the intended performance, and ensure that standards are consistently met.

Whilst the intention of Simons (1995) is for the four constructs to be balanced when implementing strategy, Widener's (2007) study suggests that when the beliefs' construct is accentuated within a business, this accentuates the other three constructs, suggesting an unequal balance of influence within the four systems.

2.4.2.1 Limitations and advantages of the frameworks

The Malmi and Brown (2008) typology offers a wide-ranging method to capture many individual MCSs that have been introduced within an organisation at different times by different groups. However, the typology is not aligned to a theory that can account for MCS interdependencies within the control elements (Grabner and Moers, 2013).

Grabner and Moers (2013) advise caution when examining MCs. They argue that there is ambiguity between the two terms 'package' and 'system' in reference to MC practices. They separate the terms and explain that an MC package is the entire set of control practices existing within an organisation, which may or may not interact with other MC practices – so they may or may not be interdependent. However, they define MC in terms of a system when the MC practices exhibit interdependencies. The distinction between system and package has implications for this research, and the use of the Malmi and Brown (2008) typology. The typology could be used as a diagnostic tool to organise and identify the management practices that exist in an organisation. It is not suitable for analysing the interdependencies that may exist between the MC practices, because it identifies the MC package/system in existence within an organisation; it does not consider how the various systems interact with each other.

Grabner and Moers (2013, p. 409) also note that the list of management control practices is not exhaustive, but they do qualify their views regarding Malmi and Brown's (2008) framework, saying that "the aim is to provide a more holistic view of the MC practices in place, not interdependence among them". Furthermore, they agree with Malmi and Brown (2008) that they:

> propose to view the MC package of a given organisation as containing the complete set of MC practices in place, thus mirroring the organisation's control environment. This implies that the MC package can be composed of a set of MC systems and/or of a set of independent MC practices addressing unrelated control problems (Grabner and Moers, 2013, p. 410).

Another feature of the Malmi and Brown (2008) framework is that it can be opened up to other areas of performance management in addition to shareholder wealth maximisation. The holistic framework potentially allows for other stakeholders, such as environmental and social stakeholders, to be satisfied (Malmi and Brown, 2008). This particular aspect suits well sustainability practices, as they are outside the normal financial and economic performance measures. Further, different hierarchies (e.g., functional, divisional, matrix, flatarchy[5]) within the organisation, and many MCSs, can be captured using the typology.

According to Macintosh and Quattrone (2010) there are two types of control, narrow and broad. The narrow type considers the operational aspects of the business, such as departmental budgets. The broad type includes the culture of the organisation and the less formalised day-to-day rules and processes. Using Malmi and Brown's (2008) typology, both types of control (narrow and broad) can be considered.

2.4.3 MCSs and other sustainability control systems (SCSs)

A new dimension of control systems has recently evolved regarding MCSs, viz., Sustainability Control Systems (SCSs).

[5] When excess layers of management are removed to reduce the hierarchical structure, thus creating a flatter, hierarchical structure.

Gond et al. (2012) aim to theorise the relationship between an MCS and an SCS, culminating in the suggestion of eight organisational configurations of the MCS and SCS, these configurations identify the uses and the type of integration of both systems. The Chartered Institute of Management Accountants (CIMA) define SCSs as systems that "capture environmental and social issues in a more systematic and broader way than conventional MCSs do and are usually operated by groups other than the finance/accounting team within the organisation" (CIMA, 2011, p. 1). One such SCS identified by Gond et al. (2012) is eco-control.

According to Henri and Journault (2010, p. 63), eco-control is the "specific application of management control systems" and is "a means of driving an environmental strategy throughout the firm". Schaltegger and Burritt (2017, p. 383) offer another definition: "[m]anagement eco-control is the application of financial and strategic control methods to environmental management". Using the suggestions above assists with summarising, broadly, the role played by SCSs in an organisation. They can be described as MCSs that enable environmental and social management in an organisation. However, Durden (2008) and Herzig et al. (2012) suggest that there is a distinction between social responsibility and accounting being evaluated and measured by the in situ traditional MCS in an organisation. This de-coupling and lack of integration of the systems provides some of the basis for Gond et al.'s (2012) research.

Gond et al. (2012) explore how an MCS and a SCS are related using two ideas: first the uses, and second the integration, of MCSs and SCS. The uses are explored using two levers from Simons's (1995) LOC framework (a detailed summary of the LOC framework can be found in section 2.5.2 above), namely, the interactive control system lever and the diagnostic control system lever. The reason they give for the use of these two controls is "to identify configurations of control systems and, in so doing, theorize on an organisation's capacity to integrate sustainability into strategy" (p. 207). The second idea, integration, is defined as meaning the degree of common characteristics shared by both systems. They go on to clarify integration as a socio-technical process (Emery and Trist, 1969), referring to the interface of the two systems as encompassing "organisational, cognitive, and technical dimensions" (p. 209).

Organisational dimensions relate to the practices of groups in relation to both the systems within the organisation. Gond et al. (2012) suggest that sustainability management should be viewed as something that an organisation does as opposed to something that it has – in response to calls in the literature for more practice-based perspectives within both management control and strategy (Ahrens and Chapman, 2007; Heidmann et al., 2008; Johnson et al., 2007; Whittington, 1996; 2007).

Hoffman and Bazerman (2007) deem cognitive dimensions essential for the integration of sustainability within organisations. The cognition dimension suggested by Gond et al. (2012) involves creating a perception of a shared reality (Levine and Moreland, 1991) for all managers involved with the MCS and SCS. This shared vision and having complete overlaps between both the systems will potentially lead to better integration of both systems.

The technical dimension refers to the need for appropriate link mechanisms that can gather data for both systems. Adams and Frost (2008) suggest that, in practice, there is a range to the degree to which systems used for sustainability management are integrated into the main MCS. They contend that this is partly due to the establishment of SCSs as responses to "a business case rather than a moral stance" (Adams and Frost, 2008, p. 299). Burritt and Schaltegger's (2010) position suggests that, when SCSs are run alongside the main MCSs, decision making in the organisation will not be based on the full breadth of sustainability information the organisation has available to it.

Using the above concepts, Gond et al. (2012) suggest eight ideal configurations of sustainability integration within strategy, all using the dimensions described above to varying degrees. The theorisation suggested by Gond et al. (2012) contributes to an understanding of the nature of the relationship between an SCS and MCS, but does not provide any empirical evidence to support their claims.

Another significant limitation of Gond et al.'s (2012) study is that it focuses on the formal control systems in the organisation, but does not consider the informal controls/informal control systems that may exist. Informal systems may be harder to assess and measure because they are intangible and subtle, although still influencing behaviour. Falkenberg and Herremans (1995) claim

that the ethical behaviours and decision making of employees are predominantly influenced by the informal control system, which highlights a gap in the work of Gond et al. (2012). Durden (2008, p. 688) also notes that formal and informal controls are key requirements of an MCS if social responsibility aspects are to be realised, because they are "mutually reinforcing". Each of the separate control systems is required to support the other, as, on their own, neither system can satisfactorily meet social considerations.

Another dimension of management control that organisations can incorporate is related to environmental control, through an environmental management system (EMS). A global, recognised certification for organisational environmental standards and management has been developed by the International Organisation for Standardisation (ISO), namely its ISO 14000 suite of environmental guidelines and frameworks. The ISO 14000s provide practical guidance to organisations on how to manage their environmental responsibilities (ISO, n.d.). Another scheme offering certification was established by the European Commission and is called the Eco-Management and Audit Scheme (EMAS), which seeks to assist organisations in evaluating, reporting on and improving environmental performance (EMAS, n.d.). Organisations can claim verifiability against the ISO 14000s and EMAS, and therefore, claim formalised and standardised certification.

The research contained within this thesis has interpreted controlling for sustainability as including all the above control systems that is, MCSs, SCSs and EMSs.

2.4.4 Sustainability, employee and MCSs research to-date

Few studies have examined sustainability from an employee perspective, as noted by Ghosh et al. (2019). Two particular studies consider sustainability from an employee perspective, namely those of Epstein et al. (2015) and Slack et al. (2015), which are considered in turn below.

Epstein et al.'s (2015) study interviewed managers from four large, complex profit-seeking organisations, to see how managers negotiated managing performance from three different dimensions: social, environmental and financial. The study used two primary data sources – archival data and 48 semi-structured interviews (12 interviews in each of four organisations). The

findings indicated that informal systems strongly encouraged sustainability, but formal ones tended to focus solely on financial aspects of performance. Managers interviewed did not find this unusual or problematic, because they were aware of how the three dimensions (social, environmental and financial) were interconnected. Though some social and environmentally focused initiatives and activities may initially result in significant financial loss, the managers believed that the consequent benefit of stakeholder reactions to the activities ultimately negated the loss. In the longer term, the stakeholder reactions to the initiatives and activities would ultimately contribute to financial and economic gains. It is unclear in this study which stakeholder group takes priority. It is difficult to distinguish whether all stakeholder reactions have the same degree of impact on the four organisations in the study. However, the research in this thesis not only explores the views of managers/policy shapers at the UoN, but also considers employees in different job contexts, such as employees within the administrative support job family.

Slack et al. (2015) investigated the responses of employees to CSR in a UK energy company. The selected employees were not connected in any way to the company's CSR department, nor were they managers in the company. Though they do not explicitly mention that the energy company was profit-focused, responses from interviewee participants point to the company having shareholders and that maximising returns for shareholders was a key objective. This qualitative study highlighted four barriers that employees felt contributed to weak CSR engagement: communication by the organisation; organisational culture; the extent to which CSR was embedded in the organisation; and the relationship between the organisation's business strategy and CSR. These aspects could also constitute barriers impeding sustainability engagement. Possible barriers to sustainability engagement are explored in section 2.3 with reference to RQ3. Slack et al. (2015) suggest that future research could compare the perspectives of employees and managers to determine whether any differences in perspectives or engagement arise. The research in this thesis will contribute to this aspect, as it compares the responses of three employee groups in relation to sustainability.

The importance of employees does not always obviously appear within the literature. For example, Albeda Pérez et al.'s (2007) qualitative study began with examining the relationships between environmental management systems, accounting and strategy, but their findings highlight the pivotal role of internal stakeholders, namely employees – including managers – in delivering real environmental organisation change. Albeda Pérez et al. (2007, p. 404) conceptualise that six "intangible" assets are required to improve environmental performance and embed change, being "awareness of employees; environmental knowledge, skills and expertise of employees; the commitment of managers; cross-functional coordination; the integration of environmental issues in strategic planning process; [and] the use of management accounting practices". Three of the six assets are represented by employees and reinforce the important contribution that employees can make to the sustainability agenda. Additionally, the role of strategic planning and strategy (the fifth intangible asset) is illustrated in two other studies discussed below – those of Arjaliès and Mundy (2013) and Riccaboni and Leone (2010). The last intangible asset, management accounting and practices, has been explored throughout this section and in the earlier section 2.2.2.

The six assets are developed through four mechanisms or, as Albeda Pérez et al. (2007, p. 404) say, "catalysts for change", derived from the Eco-Management and Audit Scheme (EMAS), which is the European Community's version of an EMS (see section 2.5.3 above). The four catalysts are: training and awareness building; continuous environmental improvement; integrating stakeholder interests; organisational learning. Each catalyst is underpinned by one or more of the intangible assets. This study calls for more research on the engagement of internal stakeholders by interviewing other management functions.

Other studies considering employee behaviour in the context of sustainability have viewed employees from the perspective of senior management and the organisation in a 'top-down' approach, although they have tried to view MCSs in practice. Two studies particularly examine MCSs in practice within the context of sustainability, and although they make reference

to the employees within their respective research organisations, their respective focus relates to sustainability strategy implementation.

The first study is that of is that of Procter & Gamble (P&G), a large multinational organisation "producing a wide range of consumer goods" (Riccaboni and Leone, 2010, p. 134). Riccaboni and Leone (2010) examined the internal workings of P&G in relation to implementing sustainability strategies through P&G's MCSs, attempting to ascertain whether "sustainability principles were accepted and shared by managers and employees" (Riccaboni and Leone, 2010, p. 134). A significant limitation of this research was that there was no real answer to this objective. Riccaboni and Leone (2010) discussed all the mechanisms that the organisation used to apprise employees of the organisation's sustainability intentions and the behaviour it expected, but their research did not capture whether employees accepted any of the principles or modified their behaviours in line with the expectations of management and the prevailing MCSs. The mechanisms for sharing the sustainability strategy with employees were discussed as part of the top-down approach to disseminate good sustainability practices, yet any bottom-up understanding of sustainability from employees was overlooked. The researchers did not specify how many semi-structured interviews were carried out or with whom. They suggest that the managers of the business and corporate personnel were interviewed, but give no indication of how many respondents shared and accepted P&G's sustainability principles, or how sustainability was implemented by employees on a day-to-day basis in their work activities. Whilst Riccaboni and Leone (2010) suggest that there was improved sustainability awareness in the culture of the organisation via P&G's 'sustainability newsletter' and corporate recognition of 'Earth Day', the investigation has not clarified how it measured perception or the extent of its influence on culture.

Riccaboni and Leone's (2010) findings do, however, suggest that formal and informal controls, as aspects of the MCS, support the implementation of sustainability strategies. The two key formal mechanisms used by P&G to implement sustainability strategy were performance measurement and appraisal. As part of the cybernetic control system, these two formal mechanisms were described by Riccaboni and Leone (2010, p. 140) as "fundamental levers for the

integration of sustainability issues". As sustainability formed part of an employee's performance appraisal, most employees would have wanted to meet targets against which their performance would be benchmarked. This suggests that employees may exhibit this behaviour because they are being benchmarked, and not necessarily because they think it is the right thing to do. Not all organisations incorporate sustainability into employee performance measures.

The informal mechanisms are the ad hoc initiatives, for example, the aforementioned newsletters and 'Earth Day' used to embed sustainability into the organisation's culture: "the set of shared values, beliefs and traditions that guide the behaviour of employees" (Riccaboni and Leone, 2010, p. 140). Riccaboni and Leone's concluding discussions (p. 142) suggest that better embedding of sustainability is delivered by integrating current sustainability techniques into the established controls and structures, rather than replacing them. However, this suggestion needs to be considered alongside another point, namely, that sustainability practices (as related to internal operations) can be viewed as an "excuse" (p. 139) to generate more efficient business practices and deliver cost savings.

Whilst there is some similarity between this study and the ideas underlying this thesis, there are some marked differences. First, P&G is a publicly owned company with shareholders. Thus, the company's motivations for pursuing sustainability may differ from a university's (the research organisation here). Secondly, its statutory reporting obligations may also differ as it is a stock exchange listed company. Finally, P&G use a Product Sustainability Assessment Tool (PSAT) to aid decisions about new products, which enables employees to appraise a potential new product from three perspectives: social, environmental and financial. Appraisal of the environmental impact of the product is facilitated because any product is tangible, and can be appraised from "the provision of raw materials to the disposal" (Riccaboni and Leone, 2010, p. 138). A university provides a service, not a tangible product, per se, which is inherently more complex to appraise.

The second study that considers employees in relation to the MCS and CSR strategy is that of Arjaliès and Mundy (2013), who used Simons's (1995) levers of control (LOC) framework. They concluded that organisational change

may be delivered through CSR and related processes (p. 298), in addition to signposting how MCSs are used to drive CSR strategy. They did not examine, however, whether and how the behaviour of the employees was altered or influenced through the CSR strategy. Whilst they found evidence of the role of MCSs "in processes that aim to encourage innovative behaviours" (p. 297), evidence of employee behaviour change was not investigated. Arjaliès and Mundy (2013) did find that companies use MCSs to activate their belief systems and communicate to employees, though feedback from employees about the behavioural effects of the MCS and communications was not captured. Their results suggest that management of CSR strategy is especially influenced by external stakeholders, as is target setting (p. 295) – possibly in part because these companies were publicly owned and listed on France's CAC 40 stock market index, so would need to satisfy shareholders. The latter would generate different motivations/expectations from a public/charitable organisation, typically regarding maximising shareholder wealth and reporting a profit. The shareholders, as owners of the business, are likely to be the primary stakeholders whose needs should be addressed. Throughout the duration of their research, however, little is mentioned about how sustainability works within the organisation and how employees, as key internal stakeholders, are assisted or not by the MCSs to make better sustainability decisions whilst at work.

2.5 The emergence of the research gap

The four research questions (RQs) of this thesis have emerged from a review of the relevant literature (above). The schema that is presented in Figure 2.4 below gives a high-level overview of how the RQs were derived. Figure 2.4 complements the conceptualisation of the RQs using the existing literature and also supports the discussions that respond to the answering of the RQs via the results' chapters (see Chapters 6 to 10).

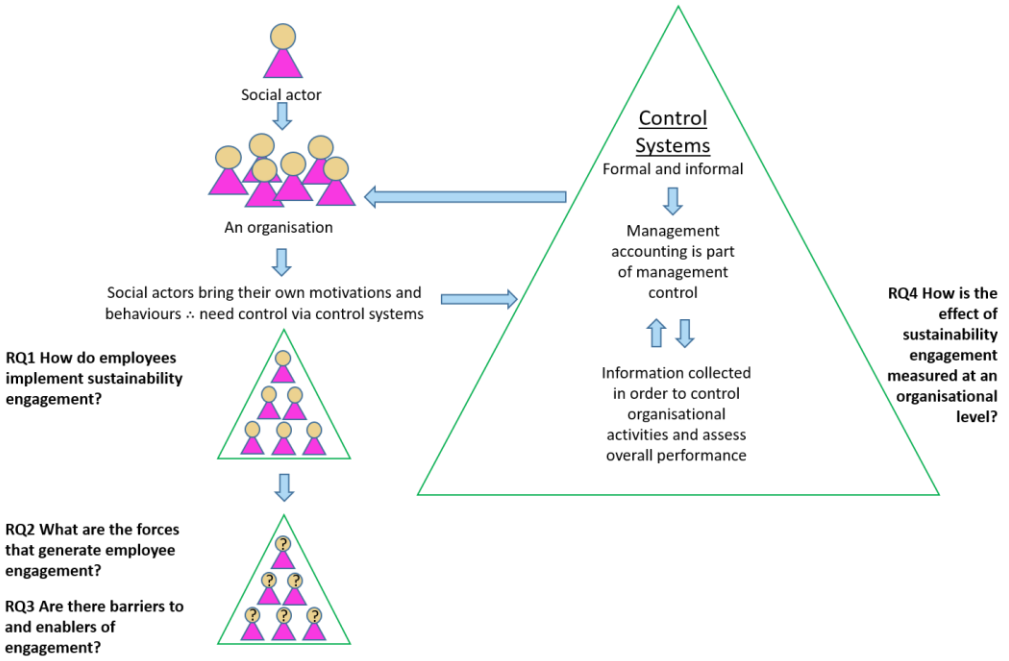


Figure 2.4: An overview of how the RQs have emerged from the literature.

As previously highlighted, organisations themselves cannot execute sustainability or exhibit sustainability practices: it is the employees of the organisation who mobilise activities and can exhibit sustainability engagement. Hence to understand how an organisation meets its sustainability objectives, we must understand the individual actors who comprise the organisation. As noted by Wood (1991, p. 699), "[a] company's social responsibilities are not met by some abstract organizational actor; they are met by individual human actors who constantly make decisions and choices, some big and some small, some minor and others of great consequence". In fact, Pugh's (1971) framing of an organisation highlights the fact that social actors are not only responsible for meeting the aim of the organisation but also affect the initial establishment of the organisation's aims. Pugh's (1971, p. 213) conceptualisation of an organisation is a "system of *interdependent* [emphasis added] human beings", who can "affect and are affected by, organizational processes".

All employees are unique and bring with them different personalities, behaviours and limitations (Merchant, 1985). However, their activities within organisations need direction and shaping in order, ultimately, to deliver the organisational objectives. The unification of activities in specific directions

requires control from organisational management and senior leaders. Macintosh and Quattrone (2010, p. 3) observe the following about control:

> Control might be the most contentious word of our time. Half of the world thinks of control as coercion and oppression and protests that we should have less of it; the rest believes that society is pretty much out of control and that we need more of it.

Given the above, control is indeed a debatable concept revealing opposing positions. However, there needs to be some management of organisational activities, because, as stated above, human actors have the ability to change what they do and how they behave. This organisation of activities is delivered through the establishment and mobilisation of organisational control systems, often referred to as management control systems (MCSs). The processes designed to control employees exert pressure to behave in a particular way and may or may not elicit the expected sustainability behaviours (see Figure 2.1 above). Therefore, this prompts the first RQ, to ask:

> How do employees implement sustainability engagement?

Some of the ways employees may exhibit and implement their engagement are discussed in section 2.2 above.

As Merchant (1985) above indicated, employees are unique and have varied motivations, desires and behaviours, meaning that they may, owing to their different characteristics, respond differently to control systems. This then gives rise to the second RQ:

> What are the forces that generate employee engagement?

This will establish what may assist in the establishment of control systems for sustainability. Literature that may assist in situating this research relating to this RQ is considered in section 2.3 above.

In addition to discovering the forces that act on the employees there may potentially be impediments or facilitators of their actions, so RQ3 is a natural corollary, viz:

What are the barriers to and enablers of sustainability engagement and why do they affect sustainability engagement?

This research could identify such barriers/enablers, which could inform the future design of MCSs.

The discussions in Chapter 1 and 2 have highlighted the need for humans to engage with sustainability, hence it is essential to understand why and how human engagement occurs. In this research, this human engagement, is understood with reference to the prevailing behavioural expectations that organisational management will want to stimulate via MCSs.

The fourth RQ considers how an organisation evaluates its own progress towards sustainability. Mechanisms to measure the engagement of its work force with sustainability are especially important if sustainability is one of the organisation's overall strategic objectives.

How effective is the measurement of sustainability engagement at an organisational level?

This measurement will involve the information processes and the control framework of the organisation. Emmanuel et al. (2004, p. 1) contend that "[m]anagement accounting is part of the process of organizational control". They go on to say that "[a]ccounting information serves a central role in organizational control where it provides a means of quantifying overall performance" (p. 4), but "overall performance" (ibid.) does not necessarily mean only financial and economic performance. Therefore, organisational control may, for senior management, incorporate many areas, one of them being sustainability. The organisational context in which an individual is embedded is also an important consideration, not only in terms of the individual but also when investigating aspects of management accounting. According to Ezzamel

and Hart (1987, p. 2), an interdependency exists between management accounting and its organisational context, as "it is impossible to divorce the study of management accounting from its organisational context. Management accounting is strongly implicated in organisational functioning, both influencing and being influenced by what goes on in the organisation". The organisational context of management accounting research is incorporated within this thesis through the use of Strong Structuration Theory (SST) (Stones, 2005) and methodological bracketing (for more information see Chapter 3 and Chapter 4).

The provision of appropriate information is essential when trying to apply control to any organisation and this is part of the remit of management accounting. Sizer (1979, p. 15) defines management accounting as "the application of accounting techniques to the provision of information designed to assist all levels of management in planning and controlling the activities of an organization". Emmanuel et al. (2004) expand on this, noting that, for organisations to make decisions regarding different aspects of their business (including sustainability), they must have information.

Traditionally, the role of information provision for decision making has fallen to the management accountant/s within an organisation. Current organisational activities may include sustainability decision making and the Chartered Institute of Management Accountants (CIMA) has published a report detailing how sustainability and the management accountant are linked (CIMA, 2011). One of the report's findings indicates that management accountants are willing to incorporate sustainability issues and aspects into their roles.

Schaltegger and Zvezdov (2015) also conceptualise a relationship between management accountants and sustainability, whereby management accountants play a 'gatekeeper' role when it comes to sustainability information, and they advocate for management accountants to bring their information expertise to the fore when it comes to organisational sustainability. Gond et al. (2012, p. 209) argue that management accountants should become "specialists of sustainability reporting and control" and that they could also "enhance the financial accounting skills of sustainability managers". The roles of management accounting, of management accountants and of organisational

information provision for control are all related and may need to be considered together with any sustainability engagement measurement in an organisation.

Control should be applied when actual performance is deviating from the intended outcomes, though this can only work if appropriate information is exchanged between the control systems of the organisation and the senior management team, to decide ultimately whether organisational objectives have been met or whether control needs to be applied. Bebbington (2007, p. 6) notes that "[i]f organisations are seeking to report on their contribution to sustainable development, one may expect … some internal mechanisms which guide activities towards this goal", with such mechanisms lying "within strategic and other planning process[es], in policy decisions, capital allocation routines and in performance evaluation". She also notes that these are processes internal to an organisation and not readily visible to the public. By adopting the chosen research methodology (see Chapter 4), this research will illuminate how some of these areas are addressed within the chosen research organisation (see Chapter 5).

The discussions above have given a brief overview of the RQs and the rationale behind their formation. The four research questions that are to be answered in this thesis are summarised below:

RQ1: how do employees implement sustainability engagement?
RQ2: what are the forces that generate employee engagement?
RQ3: what are the barriers to and enablers of sustainability engagement and why do they affect sustainability engagement?
RQ4: how effective is the measurement of sustainability engagement at an organisational level?

The sections above have discussed in detail how each particular RQ has been derived with reference to the appropriate literature. The literature that has been considered is selected from an extremely large body of available material, so as to be both up to date and representative of the main inherent themes. Furthermore, the organisational context of this research is a non-profit,

charitable status organisation, which has also provided some of the rationale for the selection of the literature.

The phenomenon under investigation, that is, sustainability, can mean "different things to different people" as noted by Leal Filho (2011, p. 427). This variety of meaning adds to the importance of a clearer understanding of sustainability, because sustainability can relate to many domains such as the environment, community service and relations, social responsibility and human rights, etc. The literature review above addresses perspectives on sustainability from many of these domains, though often, a variety of different terminology is used.

2.6 Summary

This chapter has examined relevant literature and supported the development of the RQs. Sustainability is an important consideration for HEIs as they play a major role in the development of society (Amaral et al., 2015). As noted by Maas et al. (2016), there is a gap in the literature to explain how organisations are moving towards sustainability. Given the pivotal role of social actors (employees) in executing sustainability responsibilities on behalf of the organisation (Wood, 1991), it becomes essential to understand how and why employees act. Given the unique motivations of an employee (Merchant, 1985), the MCS of an organisation is established to control employee behaviour so that organisational objectives are achieved (Merchant and Van der Stede, 2007). In particular, the research into MCS within HEIs has been under-investigated (Heinicke and Guenther, 2020). It is unclear from prior research how employees negotiate the pressure from prevailing organisational MCSs, either formal or informal, and what might be their own personal motivations to deliver sustainability outcomes. Currently the understanding of what makes an employee act in relation to sustainability is 'hidden', although there have been some attempts in the literature to understand sustainability control from an employee perspective (Epstein et al., 2015; Slack et al., 2015). Given the above discussions there is a rationale to investigate faculty and staff as agents for change in delivering sustainability in HEIs (Brinkhurst et al., 2011).

An employee is a complex amalgam of concerns, priorities and motivations, this chapter has identified several forces, barriers and enablers that

may cause an individual to engage with sustainability at micro, meso and macro levels. However, it is still unclear which of them actually do. Therefore aspects that could be used to inform MCSs are under-utilised. MCSs are important as mechanisms for influencing and shaping employee behaviour, but there has been a paucity of research focusing on the interaction of employees with MCSs within the context of sustainability. This is linked to the provision of information from control systems within an organisation and via management accountants, in order to evaluate sustainability engagement.

The next chapter, Chapter 3, discusses the rationale for the adoption of SST (Stones, 2005) as the selected theoretical framework (TF). Chapter 3 also highlights how the TF will enable the four RQs to be answered.

Chapter 3 Theoretical Framework

3.1 Introduction

The previous chapters have provided the context and background for this research. They have explained why the research is important and how the research questions have emerged thereafter.

This chapter explores the conceptualisation of the relationship between structures and agency. The theoretical framework (TF) that has been selected, supports the position that social structures and social actors (agents) are closely linked: both are equal partners and neither has primacy. Whilst this is a particular characteristic of the TF, the chosen theory's other unique characteristic is the way in which it conceptualises social structures and agents, that is, as a duality.

Section 3.2 discusses initially some of the ideas surrounding theory, and then moves on to introducing the TF that has been chosen for this research and the rationale for its adoption (sections 3.3 and 3.4). The next two sections (3.5 and 3.6) detail the elements of the framework and how these will be implemented. Section 3.7 explains how the chosen TF has been used in previous accounting research studies. The chapter concludes with a summary, section 3.8.

3.2 Theory and qualitative management accounting research

Before discussing the TF and foundations of this research it seems appropriate to examine what is meant by theory. Saunders et al. (2016, p. 729) provide a general and relatively straightforward place to start for the meaning of theory. They define theory as "[f]ormulation regarding the cause and effect relationships between two or more variables, which may or may not have been tested". This definition does not differentiate between quantitative or qualitative research and is a 'catch all' for both approaches. What is interesting about it, though, is that the choice of these particular words such as 'cause', 'effect', 'variables' and 'tested' is rooted in positivistic and quantitative research language. This supports claims made by Llewelyn (2003, p. 664) over 15 years ago that what is meant by theory in the social sciences has developed in the "shadow" of the

natural sciences. Hence, what is meant by theory in a qualitative management accounting research sense is yet to be clearly formulated and understood, as it is currently limited by the use of definitions rooted in the natural sciences.

Theory in qualitative management accounting research can be thought of as a 'way of seeing' (Ahrens and Chapman, 2006; Llewelyn, 2003; Taylor, 2018; Vaivio, 2008), that is, an aid to viewing the world around us and "an orientating set of explanatory concepts" (Ahrens and Chapman, 2006, p. 823). Theories are especially useful when some information may be missing or unobtainable, as it is very rare that we are able to know anything with absolute certainty. For example, if we see dark and grey clouds outside when we are due to go out, we theorise that it may rain, so we may choose to take an umbrella or a raincoat with us. Hence theories help us to cope with the unknown, so that "whenever 'life' is ambiguous (which is most of the time!) people will work at confronting this ambiguity through 'theorizing'" (Llewelyn, 2003, p. 665).

Not only can life be ambiguous and unpredictable, but at times social actors too can be and are unpredictable. Social actors can follow rules and regulations or they can exercise their own agency "to do otherwise" (Stones, 2005, p. 109). A social actor negotiates his/her action (behaviour) dependent on the pressure that he/she feels. This pressure is a combination (duality) of internal subjective forces and external objective structures such as rules and regulations (see Feeney and Pierce, 2016; Warren and Jack, 2018 and section 3.6 below). Therefore, the theory chosen for this research must be able to recognise and embrace this unique objective–subjective duality characteristic of the social actor and his/her context.

The role of theory in this research has two dimensions, which both require a degree of flexibility. The first is to act as a scaffold that provides a framework to initiate the research. Within abductive research (used here – see later) it can also "provide inspiration for the discovery of patterns" Taylor (2018, p. 522) (also see Ahrens and Dent, 1998; Scapens, 2004). Refinement of theory supported by empirical evidence can support an abductive approach to theory development (see Chapter 4). Second, theories in themselves must be viewed as "provisional and incomplete" (Vaivio, 2008, p. 77; and see also Ahrens and Chapman, 2006; Ahrens and Dent, 1998; Covaleski and Dirsmith, 1990;

Humphrey, 2014; Humphrey and Scapens, 1996; Parker, 2014) so as to avoid the cessation of theorisation and theory development. The danger of holding steadfast to one established theory may result in any potential theoretical progress and new insight being lost (see Berry and Otley, 2004; Humphrey and Scapens, 1996; Marginson, 2004; Scapens, 2004; Taylor, 2018). One of the 'traps' when it comes to theory development is highlighted by Berry and Otley (2004). They assert (p. 244) that a case of TITO (theory in, theory out) may arise whereby the researcher starts with an initial theory and looks only for aspects that fit with the theory, so unsurprisingly, at the end of the research journey, he/she has discovered that the initial theory explains the phenomenon under investigation. This "selective plausibility" is also cautioned against by Scapens (2004, p. 274) who refers to evidence being selected "because it fits the researcher's own theory", with other evidence being overlooked "because it does not fit that theory".

This research, as indicated, follows an abductive approach (see Chapter 4), hence a TF that is open to refinement and augmentation would not only provide a lens through which to 'see' the phenomenon, but would allow the power of the lens itself to be refined. This would promote the emergence of further theorisations and conceptual frames. Hence a theory that has flexibility to allow for development within its boundaries is paramount.

The TF adopted needs to be able to accommodate how the spectrum of daily sustainability choices is objectively–subjectively negotiated by employees. The framework should also have sufficient residual capacity to allow for further theorisations and conceptual framing opportunities. How these two points are addressed by using Stones's (2005) Strong Structuration Theory (SST) as the TF for this research is discussed below. However, before SST can be discussed, its 'parent' Structuration Theory (ST), suggested by Giddens (1976, 1979, 1981, 1984), is first examined.

3.3 The beginning of Structuration Theory (ST)

ST began its life within the accounting literature as a sensitising tool: see Macintosh and Scapens, 1990), but originated as a theory from within the

discipline of the social sciences. Giddens (1984, p. xvii) describes the role of social theory as:

> …providing conceptions of the nature of human social activity and of the human agent which can be placed in the service of empirical work. The main concern of social theory is the same as that of the social sciences in general: the illumination of concrete processes of social life.

ST is a form of social theory, as the essence of ST seeks to express how society as a structural construct and a human at an individual level are related and interact.

Since ST's introduction in 1984 by Anthony Giddens, it has obtained much traction in the accounting domain (see section 3.7 below). One of its key attributes, and one that remains within SST, is that it is perceived as being somewhere in the middle of the objective (positivist) and subjective (interpretivist) continuum (see Chapter 4). This theory assumes that reality is neither completely objective nor entirely subjective because there is a relationship, in fact a duality (see below), between the structures in society and an agent's agency. Stones (2005) notes that Giddens wanted to develop a social theory that would be free of these two 'misconceptions' of reality.

This mid-position is a good fit with this research, because employee behaviour too is somewhere in between positions of subjectivity and objectivity. The organisational structures and systems that seek to control human behaviour do not completely control the employees, but they are not free agents to do whatever they want. Employee behaviour is a consequence of both these influences, as the University of Nottingham (UoN) employees in some activities have a degree of autonomy to decide their actions.

ST's two central tenets are the 'duality of structure' and 'structuration'. The duality of structure is defined by Giddens (1984, p. 377) as "the medium and outcome of the conduct it recursively organizes; the structural properties of social systems do not exist outside of action but are chronically implicated in its production and reproduction". The duality of structure can be thought of as a symbiotic relationship between structure and agency. Structures are set up by an organisation (e.g., the UoN) to influence human action, but action can also influence and affect those very same structures. Agents can comply with the

structure and in so doing maintain and/or reinforce the structures, or they can, using their agency, transform the structure. There is an interdependence of both elements, and neither element is more prominent than the other. This essential characteristic of duality within ST makes it a very suitable starting point to begin understanding how employees interact with the structures present within the case study organisation, and whether/how their actions are influenced by the structures present. In addition, this framework incorporates the power of the employee to do 'otherwise'. As neither structure nor agency is given primacy, both aspects are illuminated, as opposed to taking a dichotomous view of structure and agency, thereby sacrificing any perspective that the other position (either structure or agency) could offer. The central concept of duality has produced much debate and critique in academic circles (e.g., see Archer, 1995; Mouzelis 1991, 1995; Parker, 2000). Archer (1995) in particular argues that, although the concept of duality can be recognised as existing or accepted as present, the investigation of structure and agency must adopt a separation of both components, that is, dualism. This dualism is introduced very briefly using methodological bracketing within Stones's (2005) reimagining of ST's 'stronger' version (see below, in particular section 3.6), in order to identify aspects of action and structure. Without the brief introduction of dualism within ST by Stones (2005), the examination of agency and structure would be difficult, because both (agency and structure) are in a constant, continuous and at times transformative relationship with each other, that is, a duality.

Structuration is perceived by Giddens (1984, p. 376) as "[t]he structuring of social relations across time and space, in virtue of the duality of structure". This conceptualisation means that structuration occurs as a result of duality (see above). Therefore, how social relationships evolve, change and develop over time are inextricably linked to the fundamental assumption that a duality exists between structure and agency.

Giddens's (1984) ST was seen as having limited application to empirical work owing to its high level of abstraction, but this shortcoming and others (see above) were remedied by Stones (2005). Giddens having "moved on to other things" (Stones 2005, p. 3) left the groundwork for Stones (2005) to develop, refine and delineate a 'stronger' version of structuration theory. This stronger

version “is not an alternative version of Giddens’ theory but an attempt to provide a strengthened version of the theory that has developed among current sociological thinkers which will be primarily of use in empirical research” (Jack and Kholeif, 2007, p. 209).

3.4 The genesis of Strong Structuration Theory (SST)

The TF used for this research will be SST, as suggested by Stones (2005). Whilst SST is a development of Giddens’s ‘parent’ ST (1976, 1979, 1981, 1984), Stones (2005) has retained the essence of ST in his re-conceptualisation. Both theories view an agent’s behaviour as being neither completely influenced by an organisation’s control system or structure (objective), nor completely autonomous (subjective). ST’s two defining features, according to Stones (2005, p. 4) are first, that the relationships between structures and agents are embedded in phenomenology, with hermeneutics and practice being “at the heart of the interrelationships and interdependencies between the two”; and second, that these two dimensions (structures and agents) are themselves embodiments of phenomenology, hermeneutics and practice. Stones (2005, p. 4) claims that this conceptualisation of structures and agents is where ST’s “distinction lies”. Therefore, this unique linking of structures and agents may be why ST is utilised in a research project.

Stones (2005, pp. 189–190) has six key points of departure within his re-conceptualisation, one of the most prominent being his approach to ontology and levels of abstraction. Stones (2005, p. 7) notes that in Giddens’s ST there was an “absence of clear links to substantive circumstances”, thus meaning “that structuration theory was too free-floating”. He conceptualises ontology at two different levels: first, ontology-in-general that is concerned with the abstract and philosophical level that is congruent with Giddens’s theorising; and second, an ontology-in-situ that is “directed at the ‘ontic’[6], at particular social processes and events in particular times and places” (Stones, 2005, p. 8).

[6] Ontic level is “the way that the abstract ontology looks when it is filled out and shaded in by the details and empirical evidence of actual social relations in particular times and places” (Stones, 2005, p. 77).

Linked to the distinction of the two ontologies above, the other significant contribution from SST is the development of the meso level conceptualisation of ontology. In order to 'ground' theory, Stones (2005) developed a meso (middle) level bridge to anchor theory in empirical evidence. Stones's (2005) offering provides a bridge (see Figure 3.1) between Giddens's (1984) abstract general ontology level (ontology-in-general) and the detailed and specific ontic level (ontology-in-situ). Stones's (2005) perspective assists in exploring the meso level, that is, the bridge between the two levels. Jack and Kholeif (2007, p. 211), citing Stones (2005), identify that "… the value of the meso-level ontology *in-situ* is that the researcher can then analyse action and structure in relative terms". Thus these two developments of ST within SST provide a more user friendly theoretical scaffold that is practically applicable and less abstract and philosophical.

Figure 3.1 below represents how the meso level provides the link between the abstract 'free floating' level and the ontic level that is empirically embedded. The ontological concepts guide both the conceptualisations at the meso level and the research at the empirical level (blue arrows). However, pushing upwards towards the ontological concepts are the discoveries and insights from the empirical evidence (the green arrows), which shape and augment the ontological concepts. This assists in conceptualisations at the meso level and subsequently feeds into the 'free floating', abstract, ontology-in-general level.

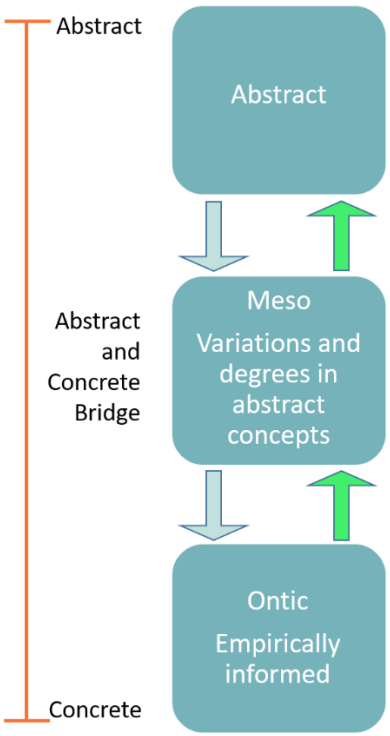


Figure 3.1: The three abstract-concrete levels of ontology (adapted from Stones, 2005, p. 77).

Another of Stones's (2005) developments is his suggestion of a quadripartite framework, explained in section 3.5 below. The four parts of the framework represent the process of structuration and are: external structures (conditions of action), internal structures (within the agent), active agency/agent's practices and outcomes (Stones, 2005, p. 85). This is a recasting of Giddens's (1984) tripartite modalities of signification, legitimation and domination. Through his quadripartite framework, Stones (2005) expresses his interpretation of the duality of structure. This framework, however, has received some criticism in a similar way to ST before it (Parker, 2000, 2006). Nevertheless, SST has steered many studies towards successfully answering their research questions (see section 3.7 below).

3.5 The Quadripartite Framework

The quadripartite framework is explained below. It is Stones's (2005) conceptualisation of the process of structuration using the four parts introduced above. Each part is explained and investigated in more detail below.

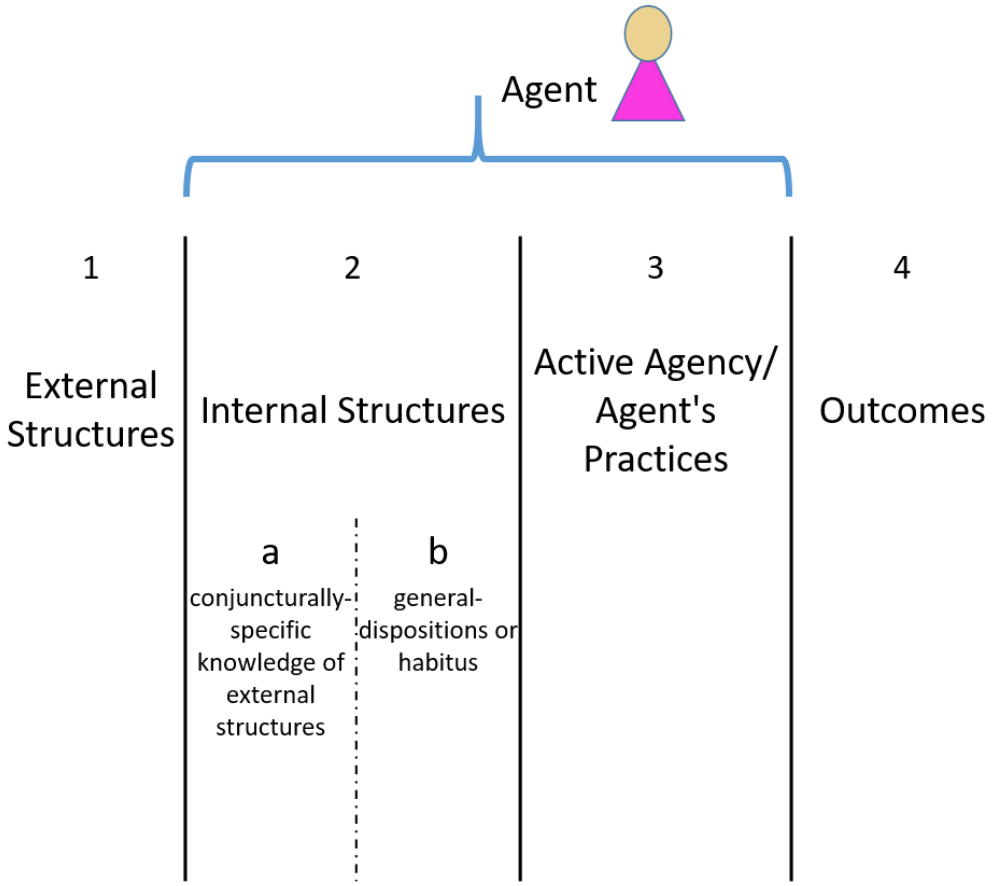


Figure 3.2: The quadripartite nature of structuration (adapted from Stones, 2005, p. 85).

3.5.1 External structures

Stones (2005) conceptualises external structures as forces that apply pressure on an Agent-in-Focus (AiF). The employee whose reality is being investigated when interviewed or when his/her transcript is being analysed becomes an AiF. The AiF will have created his/her own socially constructed unique reality (see Chapter 4) and these external structures may feature in his/her reality. The thoughts and evaluations of an AiF that lead him/her to act in a sustainable way at work are usually hidden and unknown. This study aims to uncover what those thoughts are and understand how sustainability actions of the AiF follow on from those thoughts and evaluations.

SST (Stones, 2005) is used in this research as the theoretical framework (TF). However, its conceptualisation has been developed and extended when

compared with recent studies and their respective research designs (e.g., Feeney and Pierce (2016) who used six AiFs in a field study approach).

An employee within this research organisation can be one of three distinct types of employee, that is, an academic, an administrator or a policy maker. The category into which an employee falls will govern his/her position within the organisation, and hence give rise to a particular contextual field and connected relationships therein. To deem all organisational employees as homogeneous social actors would be incorrect, because each type of employee (academic (AC), administration and support (AD), policy maker (PO)) has a different role within the organisation. These organisational roles incorporate different responsibilities and obligations.

Therefore, to address the research questions the three key types of employee are being conceptualised as three separate (types of) agents-in-focus (AiFs). Each of the three agents may have common and unique structures present in their respective contextual fields and they may also share similar or different hermeneutical perspectives. However, what may be different is how the three agents implement their sustainability engagement, and how the forces and pressures act upon them by virtue of their particular position, role and responsibilities within the organisation. Furthermore, these dimensions may give rise to different understandings and interpretations in the thoughts of the AiFs.

In order to capture these broad dimensions, as well as the finer nuances, 12 employees (a cluster) from each employee category (AC, AD, PO) were selected and interviewed. This approach of interviewing a cluster enables a triangulated view of the AiF to emerge, rather than a single employee being interviewed to give a 'full' perspective of how an employee operates in an organisation of 40,000 employees (see Chapter 5 for further research organisation details).

In order to understand the prevailing external and internal structures faced by an employee, Stones (2015) suggests that there is a balance to be struck between the depth and breadth of both objective and subjective analysis. This proportionality of analysis (objective/subjective) is governed by the research questions in this thesis. All four research questions address aspects not only of

an individual's agency but also of collective agency, especially in terms of establishing management control systems. In order to understand employee practices and behaviour for each of the three AiFs, then an appropriate number of employees within that particular employment type (AC, AD, PO), or cluster, needs to be interviewed, so that a fuller picture of that particular AiF can be formed. However, when an interviewee's transcript is being analysed, he/she will be a representative AiF (allowing for the balance of subjective and objective analysis). However, individual perspectives will inform the overall collective view of that particular AiF – see Figure 3.3 below.

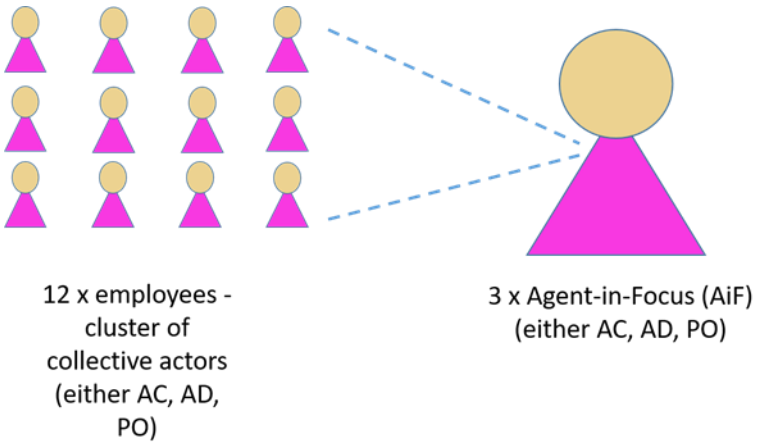


Figure 3.3: Representative AiFs informing the collective view of an AiF

This conceptualisation of the three AiF types is based in part on Stones's (1996) writings, where he proposes a 'floater' metaphor. The floater metaphor is characterised by the breadth of perspective that a view from above the social activity can yield (the view from above meaning that of one floating over the activity). Though the view is "extensive [it is] lacking in detail" (Stones, 1996, p. 77) as if in a hot-air balloon. However, Stones (1996) opines that the detail can be explored from time to time when the hot-air balloon lands. These concepts are operationalised in this research, the cluster view of the AiF being the view from the hot-air balloon (Position A in Figure 3.4 below). This enables the breadth of the conjunctural/positional terrain to be viewed and appraised, by virtue of an employee's job role and responsibility, that is, his/her institutional position. By developing this particular cluster view, an employee's practices

within the particular AiF category (AC, AD, and PO) may be revealed. Further details, such as the "finely grained texture of reality" (Stones, 1996, p. 82), can be illuminated though the individual, dispositional and hermeneutical frames of meaning by individual employees (a view from within the cluster, that is when the hot-air balloon had landed), which will provide detailed contextualisation and complexity (Position B in Figure 3.4 below).

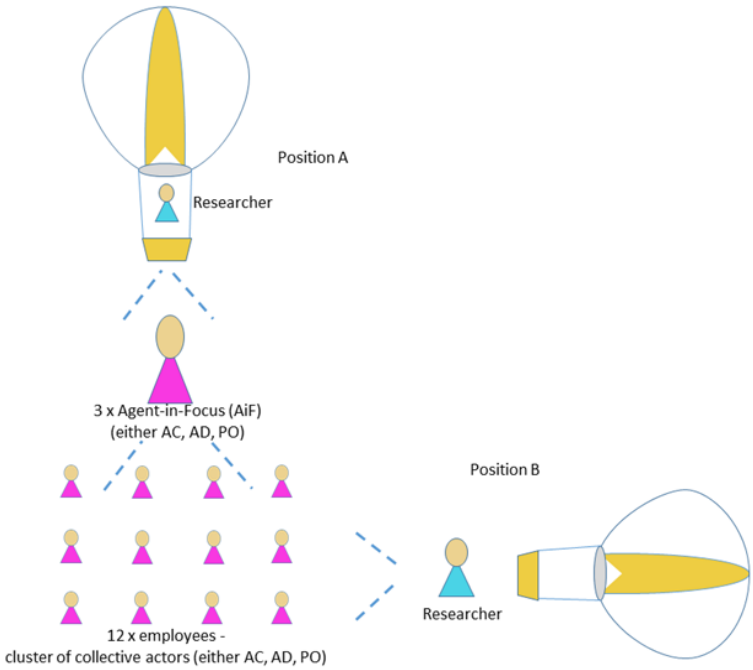


Figure 3.4: Floater metaphor (adapted from Stones, 1996, p. 77).

There is no rule or regulation that Stones (1996) suggests for the adoption of the floater analysis, but rather it is governed by the research undertaken and the RQs. This research is based at the meso level of analysis, that is, at an organisational level, so consequently, the scale of AiF investigation should mirror this, leading to a symmetry between the clusters selected, the data obtained and the analysis undertaken.

An AiF's evaluative process may include external structures. These forces could constrain the AiF or present him/her with "possibilities and capacities" (Stones, 2005, p. 109). In this research they could include, but are not limited to, the sustainability control systems (SCSs) present within the UoN

and the control systems employed by management at the ontic level. They could also be the social norms and culture of the organisation at the meso-level or they could be the broader structures of the contextual frame that impinge on the UoN such as higher education (HE) sector pressures.

Stones (2005, p. 111) describes two types of external forces, namely independent causal influences and irresistible causal forces. The conceptualisation of these forces forms part of the six departure points, mentioned above. The first force is, as the name implies, independent of the agent. These forces flex, repeat and reform without any engagement with the social actor, or any consideration of an agent's desires. In this research context, such forces could include income tax rates, the price of fuel or HE sector regulations. Stones (2005, p. 111) conceptualises that an agent does not have the "physical capacity" to resist this force. Second, irresistible causal forces, can be resisted by the social actor, but phenomenologically, agents "*feel that* [emphasis in original] they do not have the ability to resist" (p. 111). An agent can only resist irresistible causal forces when three rules are met. These cover an agent's adequate level of power, knowledge and critical distance (p. 115). Any deficit in one of these areas, prevents an agent's ability to resist. An agent's power (capability) to resist is anchored in, the ability of an agent to still meet his/her own needs if individual power/capabilities are exercised. Adequate knowledge describes the knowledgeability of an agent in relation to his/her options and other avenues of action in a given situation. This element also covers the knowledge of the subsequent consequences that may or may not, arise from the action/s. Lastly, critical distance relates to the ability of an agent to move away from a situation, thereby being able to develop a different perspective of the external structure. By moving away, the agent develops "a strategic stance" (Stones, 2005, p. 115) relative to the external force/s and pressure/s. Given this, however, Stones (ibid.) conceptualises that even when no deficit is present in the three areas, an agent still may not resist the pressure from external structures, simply because "they [agents] have no desire to".

Stones (2005) suggests that researchers should employ position–practice relations to determine the external structures present for an agent. This theorisation is another point of departure from the original ST. This position–

practice framing enables the movement of focus between the positions of the individual social actor and larger societal structures/forces. Position–practice relations can be defined as how agents go about their daily activities whilst being situated within a given organisational position. This technique considers the capabilities of agents within their network of relationships and how they negotiate the various decisions made and the actions executed. Ultimately, do the agents, who are situated in position–practice relations, find the particular external structures they are exposed to as having facilitating or constraining properties? Coad and Herbert (2009, p. 191) support this position–practice approach, adding that they (with hindsight) should have employed this type of analysis from the start of their study. They muse (ibid.) that "we would have preferred to have asked more penetrating questions regarding agents' understanding of external and internal structures, their interpretation of their range of capabilities, [and] their understanding of the choices available to them". This research seeks to benefit from their reflections and to use Stones's (2005) approach from the outset. Using this approach enabled appropriate questions to be designed for use in the interviews, as this was the primary method of data collection from employees (see Chapter 4). The benefits of this early adoption of the SST framework are twofold, enabling both the analysis and the interpretation of data.

Knowledge of external forces can also be in the form of relationships with other social actors. This information resides within the conjuncturally–specific internal structure of the agent (see section 3.5.2). These forces and relationships can be dynamic and fluid. AiFs can also exert force on the relationships that they have within their other networked agents/social actors/employees and vice versa (see section 3.6). This complexity of relationships is referred to by Greenhalgh and Stones (2010, p. 1288) as "webs of networked relations". These relations are not limited to singular agents but can comprise clusters of agents. Within this study, three types of employee clusters are being examined: (i) academic; (ii) administration and support; and (iii) policy makers and influencers. Using position–practice relations will assist in uncovering how the three types of employees interact with each other: harmoniously, antagonistically, or a combination of both. This is vital to

understanding which forces are exerted (or not) by the groups and how the relationships are flexed, forged and developed.

The diagram below shows an AiF embedded within a web of position–practice relations.

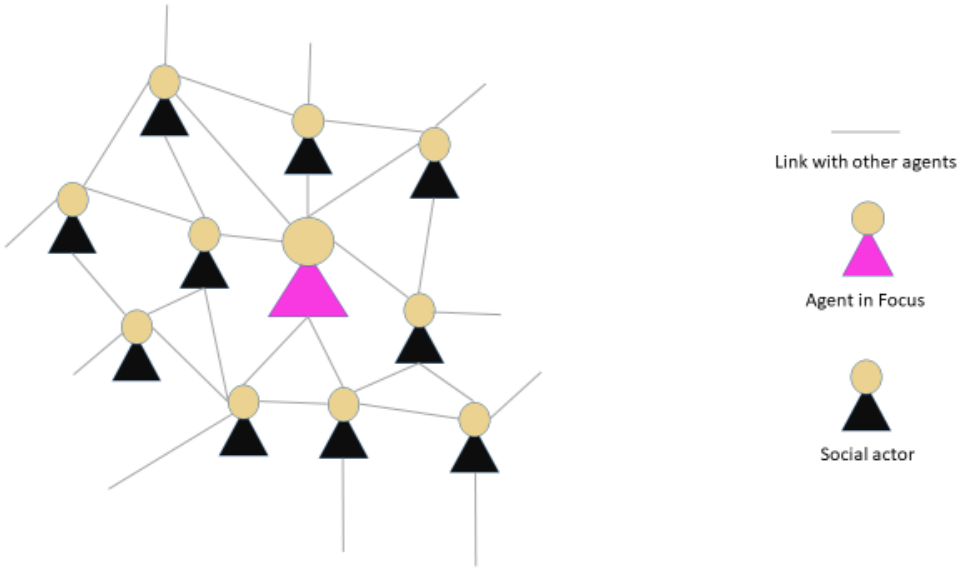


Figure 3.5: Agents embedded in position–practice relationships (adapted from Stones, 2005, p. 94).

There have been several studies that have operationalised this position–practice mechanism. A particularly comprehensive application and development of this concept is seen in Coad and Glyptis (2014). In their study of joint venture companies within the oil and petroleum industries, they developed a more powerful lens to examine an agent's network relationships. They cite this as a complement to Stones's (2005) position–practice lens, and a counterbalance to other more popular aspects of structuration studies that focus on structures, rather than agency. They suggest four dimensions of position–practice relationships that can be investigated. They are praxis, positioning, capabilities and trust. The essence of structuration is still present but the labelling of its constituent parts changes so as to provide a better understanding of the meaning of structuration. Below is a diagram (Figure 3.6) that expands on the meaning of each dimension.

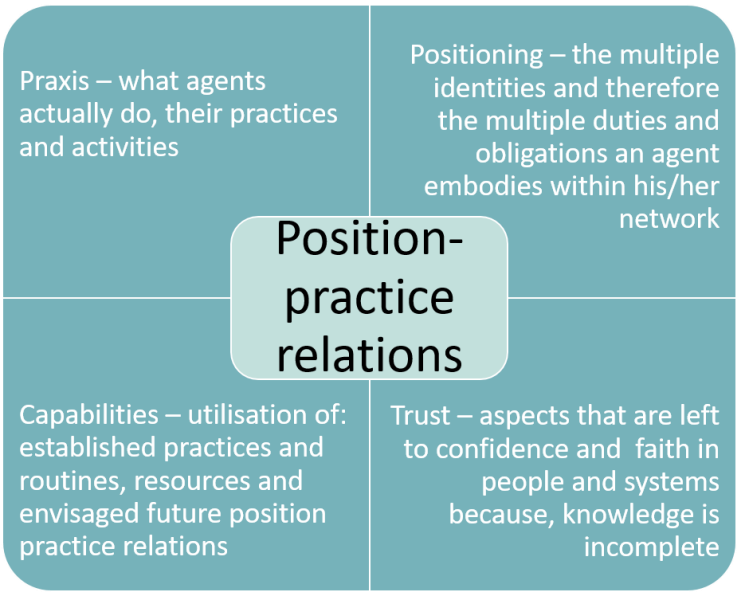


Figure 3.6: Position–practice relations (adapted from Coad and Glyptis, 2014, pp.144–148).

Using aspects of Coad and Glyptis's (2014) position–practice concept in this research will provide better guidance on how to unpick the data that are gathered. It offers more direction and signposting to other avenues of investigation, whilst keeping to the spirit of ST. This framework assists in directing the researcher to a lens with a higher resolution that can bring into focus the micro details of the social actor's agency. This research will also respond to their call (ibid.) for more agent-centred structuration research.

3.5.2 Internal structures

The internal structures of an agent are expressed through two elements: the conjuncturally–specific and the general–dispositional (habitus). These internal structures are, as the name implies, internal to the agent and cannot be readily observed because they are located in the mind of the agent. An insight of what constitutes the internal structures of an agent can be gained from what the agents say in relation to questions asked of them.

Conjuncturally–specific knowledge is the knowledge that employees will have about their local context and environment, which includes their job and the local environment that they see. It concerns their perception of the

boundaries of autonomy that come with their role at the UoN. It is about what they feel are their boundaries, how far they reach, and which boundaries can be breached, that is, the circumstances in which they are able to act "otherwise" (Stones, 2005, p109). This internal structure is composed of two aspects. The first relates to the immediate local environment (position A in Figure 3.7 below), and the second to how the local environment is perceived by the agent's own frame of understanding (position B in Figure 3.7 below). This double focus is particularly important in examining an agent's conduct and context because the conjuncturally–specific internal structure will play a part in both, as it looks both inwards and outwards. A hermeneutic underpinning (see Chapter 4) is essential in dealing with an agent's conduct because it "deals with that whole process of understanding the context out there in relation to [the agent's] own values, duties, obligations, orientations to the world and so how they come to act in one way rather than another" (Stones and Jack, 2016, p. 1148). Consequently, Stones (2005, p. 123) describes conjuncturally–specific structures as "a kind of hinge between external structures, on the one hand, and general–dispositional frames and agent's practices, on the other".

The general–dispositional covers everything that an agent carries within him-/herself: habits, experiences, values, beliefs, speech, gestures. It encompasses the whole gamut of things that make a person an individual. This aspect of the theory is adopted from Bourdieu's (1977, 1990) idea of habitus.[7] Stones (2005) suggests that these two forms of internal structure are what the agent calls upon to decide what to do. For this research, the employees who will be the agents in context/situ/focus will also be drawing upon these structures in order to make their day-to-day sustainability decisions and choices. Figure 3.7 below expresses these two dimensions of internal structures. In order to discover what comprises these structures, questions regarding both these dimensions were developed and asked of the employees/interview participants. The data gathered will help to identify any commonalities or patterns within internal structures that play a part in how employees execute sustainability behaviours at

[7] Stones (2005, p. 88) describes habitus as "[a] realm embedded in corporeal schemas and memory traces and is best conceptualised as existing, for the most part, in a taken-for-granted and unnoticed state".

the UoN. The access to this data is 'unlocked' thorough the use of a hermeneutic approach, that is, by asking questions of employees because the data are situated in the minds of the agent in focus, that is, the employee. This knowledge could potentially be used to identify the current tensions and barriers that impede sustainability practices at the UoN. The discovery of these aspects could also lead to better designed management control systems (MCSs) and sustainability control systems (SCSs), in particular those that lead to and facilitate improved sustainability behaviours.

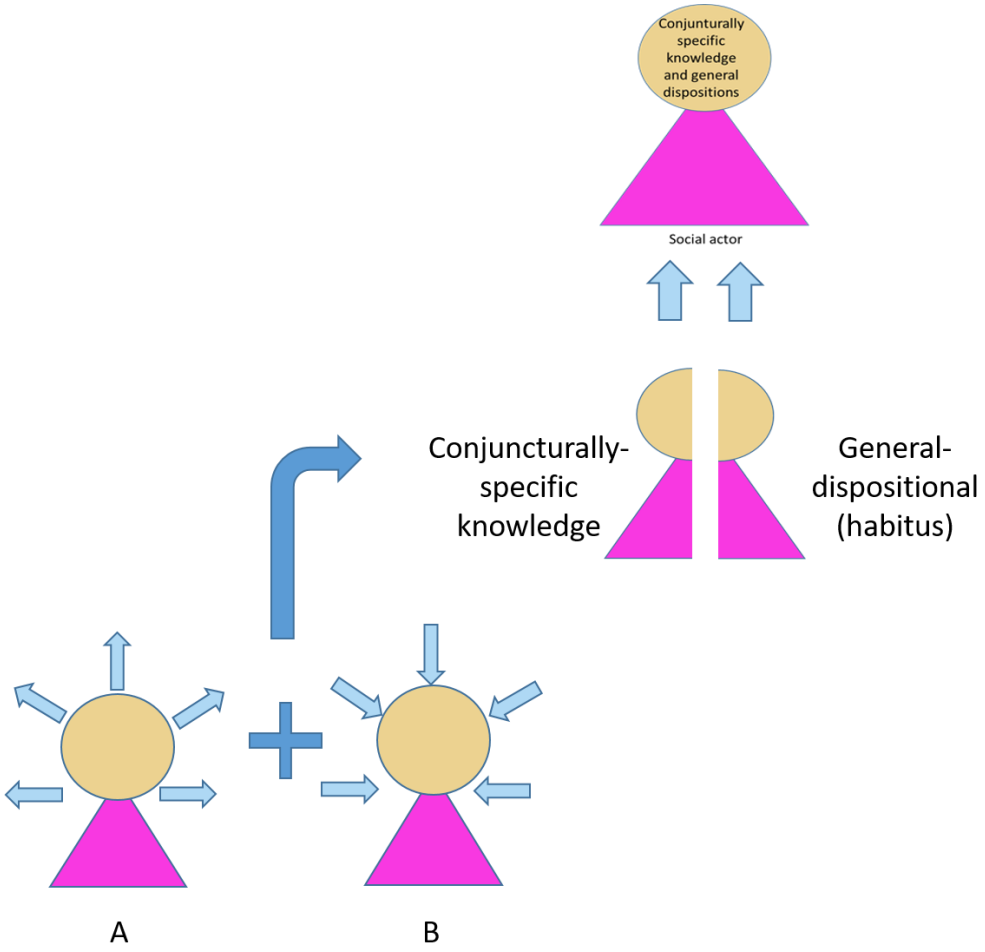


Figure 3.7: Internal structures (adapted from Stones, 2005, pp. 87, 122–123).

3.5.3 Active agency/agent's practices

This aspect concentrates on what the employee actually does. Coad and Glyptis (2014) described this aspect as praxis. Active agency, while encompassing an

agent's ability to act, also includes an agent's ability to do nothing and maintain the status quo. Stones (2005, p. 100) suggests two dimensions to active agency: first, where actions are decisive and conscious, and second where actions are executed unconsciously. Stones (2005, p. 101) suggests five composite aspects of agency in his quadripartite model. These are:

1. Shifting horizons of action
2. Creativity, improvisation and innovation
3. Degrees of critical distance and reflection
4. Conscious and unconscious motivations
5. The ordering of concerns or priorities

Understanding of active agency is paramount in uncovering how the employee/agent draws on his/her internal structures, in order to behave. Examination of the active agency may provide insight as to the barriers and enablers of employee engagement, thus enabling RQ3 to be addressed and potentially RQ2.

3.5.4 Outcomes

The process of structuration as expressed by the quadripartite framework and it culminates in outcomes. These can be described as "changes to, or reinforcements of, external and internal structures" (Harris et al., 2016, p. 1196), or as Stones (2005, p. 85) expresses it, "change and elaboration or reproduction and preservation" of existing structures. Coad and Herbert (2009) outlined the range of outcome options to an agent as reproduction, learning or change. They surmise that, although agents may be embedded in similar position–practice networks, structuration occurs at a particular point in time and space; and agents when deciding on what to do are cognisant of past experiences and future desires – their "phenomenological and hermeneutic inheritance" (Stones, 2005, p. 4). The agent is able to draw upon the continuum of time for a decision in the present.

While the development of SST tried to meet some of the deficiencies and shortcomings of ST, there are limitations, drawbacks and areas of uncertainty

that remain. One of the limitations that has been identified when using the quadripartite framework is how external and internal structures relate to one another (Coad and Herbert, 2009). Although the framework assists in identifying the structures present, it does not provide any explanation as to how the structures themselves interact and interface.

For this research, the outcome of the process of structuration is very important, that is, what the employee does and how sustainability is practised. Evidence of the outcomes contributes to answering the first research question of the study (*How do employees implement sustainability engagement?*). Outcomes potentially provide a way to measure the UoN's performance regarding sustainability engagement, and this aspect of outcomes also contributes to RQ4 (How effective is the measurement of sustainability engagement at an organisational level?).

3.6 Methodological Bracketing

The duality that is central to the theory of SST is also one of its problems. The fact that the relationship of structure and agency is in a state of constant flux makes the separation of each difficult. Although the quadripartite framework conceptualises structuration, it is through the use of methodological bracketing that the processes that constitute structuration are revealed. Methodological bracketing as conceptualised by Stones (2005) is a development in SST and another point of departure from ST. Methodological bracketing has been used as a mechanism to suspend the duality of structure, temporarily, in order to reveal and focus upon the structures and agency present during moments of structuration. Stones (2005) has ensured that the anchors of epistemology and methodology are highlighted and incorporated into research studies that use SST, by virtue of this bracketing. He provides a methodical approach that can be followed in order to apply the brackets (see Chapter 4).

Methodological brackets provide the practical tools to focus in on aspects of the process of structuration, "allow[ing] one to focus more sharply on the issue of which abstract and meso-level ontological concepts are 'relevant' to a piece of research" (Stones, 2005, p. 120).

The use of methodological brackets is applied to bring into focus either an agent's conduct or an agent's context. The brackets respectively allow the researcher to see clearly how an agent's actions (agency) have been negotiated via his/her internal structures (conduct) and the environment in which the social actor is embedded (structure) and the options this provides to the agent (context). Conduct analysis focuses upon how agents have made sense of their environment and what is going on in their head. An agent's context analysis emphasises how the agent perceives his/her contextual field. It involves looking outwards at the agent's environment. Both conduct and context analyses embrace the central idea of hermeneutics within SST (see earlier discussions on hermeneutics above and Chapter 4).

This bracketing has attracted criticism because, once the two dimensions are separated, the question of dualism as opposed to duality arises. Figures 3.8 and 3.9 below explain the nature of the two categories of bracketing:

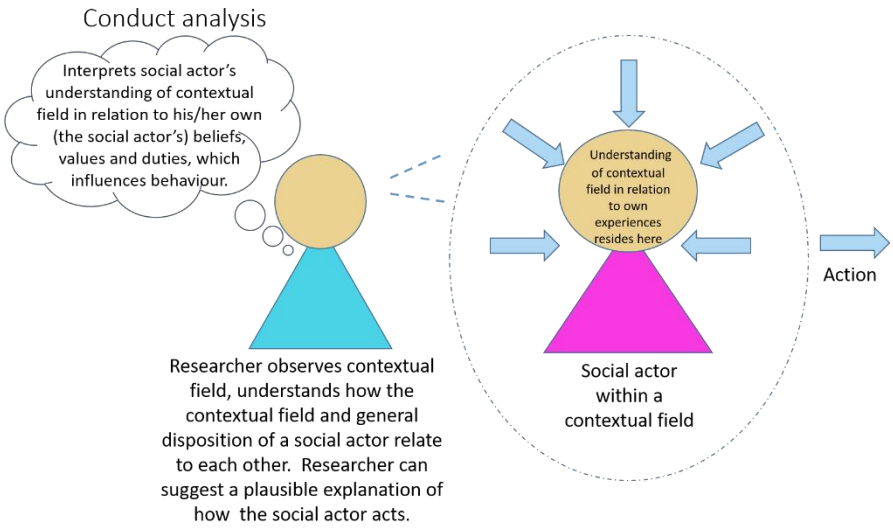


Figure 3.8: Conduct Analysis (adapted from Stones, 2005, pp. 121–123).

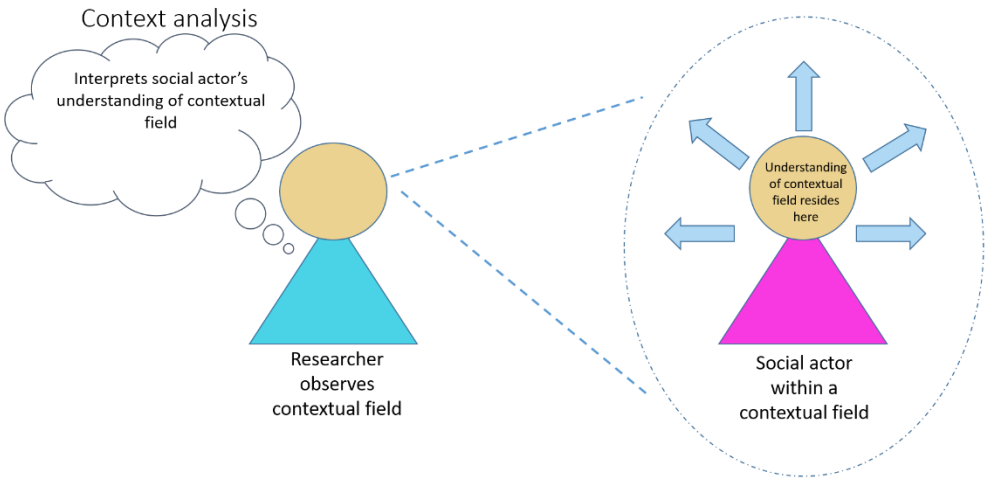


Figure 3.9: Context Analysis (adapted from Stones, 2005, pp. 121–123).

Stones and Jack (2016, p. 1149) suggest that "what's going on in the heads of people is never free floating", which resonates with Llewelyn (2003, p. 665) who suggested that:

> … everyone has a need for "theory" to go about their everyday affairs. 'Theories' do not just reside in libraries, waiting for academics to 'dust them down'; they are used whenever people address ambiguity, contradiction or paradox so that they can decide what to do (and think) next.

Employees in this case study will have things in their heads, related to sustainability, that are also not 'free floating'. This raises two important questions: first, how does one access what is in their heads? Second, after what is in their heads is accessed, what is to be done with it? The approach by which what is going on in the heads of employees is made clearer is by using a hermeneutic approach (see Chapter 4). For the employees in this research, their sustainability actions and behaviour will be the result of their environment, and their own experiences and values. The unlocking of the thoughts and perceptions in people's heads leads to the better understanding and explanation of people's sustainability actions and behaviours. Slack et al. (2015) conducted a case study that tried to understand how employees engaged with the phenomenon of Corporate Social Responsibility (CSR) in a company. The study indicated "a separation of organisational and personal CSR engagement" (p. 543). Within this study, the personal interests of employees were cited as one

of the reasons for employee CSR engagement. An example of this was observed in the frequency of company initiated CSR emails sharing CSR news and requesting sponsorship for charitable activities compared with those from employees that had a personal/outside of work interest in CSR. The personally initiated emails had a higher frequency than the company/employer initiated emails. In addition, when employees were invited to suggest a charity to receive a donation from the company at Christmas time, the company received many "detailed explanations" and "in-depth" (p. 543) reasons for why *their* particular charity should be selected. This demonstrates how a personal interest in a charity provided increased traction for organisational CSR activities. Slack et al. (2015) used an interpretative (hermeneutic) approach to uncover why employees acted in particular ways in relation to CSR. In a similar way to this research, they executed the data gathering through face-to-face semi-structured interviews with employees, amongst other things. If particular, similarities and patterns were discovered in this research, which can assist with theorising about how employees engage with MCSs and SCSs within the UoN, this may lead to a further development or refinement of theory. Thus part of this research seeks to discover the anchors (the theorisations) that reside within the heads of employees that underpin their sustainability conduct and context.

Methodological bracketing, whilst reintroducing dualism, does provide the mechanism by which analysis of an agent's conduct and context can be made. If it were not utilised, the relationship between structure and agency, as it is deemed simultaneous, could not – or rather could not very easily – be investigated. In order to operationalise bracketing within SST, Stones (2005, p. 123) suggests some recurrent steps that can be applied to the research process. The details of operationalising methodological brackets are given in Chapter 4.

This approach to methodological bracketing has been adopted in two recent studies. Feeney and Pierce (2016, p. 1173) adopted both forms of methodological bracketing in a small case study to reveal how accounting information was used. They used six AiFs to generate the insights but recommended that "[f]uture studies are required to consider how to implement this strategy in larger, more complex organisations with looser boundaries and a greater number of organisational actors". This thesis is a response to this call,

as the research is based in a larger, more complex organisation and employs interviews from 36 organisational actors from different employee groups. Hence, within this research, each agent (employee) will become the AiF, as his/her individual interview transcript is analysed using the framework. Thus, at the end of the analysis, 36 lenses of analysis (36 AiFs) will have been used to enable identification of the internal and external structures that are at play in influencing an agent's conduct and context.

As mentioned in section 3.5.1, the AiF is situated in a 'web of relationships', so when a social actor is 'in-focus', part of his/her external context is comprised of 'other' agents. In this study of 36 employees, when an agent is 'in-focus', the other 35 employees will become Agents-in-Context (AiCs). Some of these AiCs will become relevant to the AiF because they constitute an aspect of the AiF's contextual field, hence they will also influence the AiF. This is the particular strength of using SST and methodological brackets, as the whole of the contextual field can be illuminated by using the observational lenses of the AiF.

The second prominent study using methodological bracketing was that of Warren and Jack (2018), in a response to a "lack of strategic conduct studies" (p. 484) within the literature. They concentrated on one half of the bracketing methodology, the conduct analysis, when looking at the capital budgeting process in the energy sector. They used semi-structured interviews as the primary mode of data collection. They complemented the primary evidence collected by using secondary data, in the form of document analysis, using other appropriate publicly available material (e.g., company and industry reports). This demonstrates that methodological brackets can also be used with other forms of data/evidence to verify and enhance the understanding of the contextual field facing social actors. The other sources of evidence to be used within this study are detailed in Chapter 4.

Coad and Glyptis (2014) argue for more research into the praxis of agents because, they suggest, primacy has been given to aspects of structure within published structuration studies at the expense of agency. This research seeks to redress the balance by harnessing both aspects of methodological bracketing, thus ensuring that emphasis is given to both the structures and the

agency of the agent. In this research, understanding is sought about the control systems at play (structures) but also how these impact on the employee (agent) and the agent's subsequent actions and behaviours (agency). As Stones (2005, p. 123) notes, "[t]he two forms of bracketing working together are required to release the substantive potential of structuration theory".

3.7 ST and SST in accounting research

Since the seminal works of Giddens (1976, 1979, 1981, 1984) and Stones (2005), there have been noteworthy contributions from several authors as to ST's appropriateness in accounting research over the last 30 years (Coad and Herbert, 2009; Coad et al., 2015; Englund and Gerdin, 2011, 2014; Jack and Kholeif, 2007, 2008; Macintosh and Scapens, 1990; Stones and Jack, 2016; Warren and Jack, 2018). The first contribution is in the study by Macintosh and Scapens (1990), who considered the applicability of ST to management accounting research. They argued that conventional accounting research had been dominated by positivistic theories (much like Tomkins and Groves argued in 1983) and although it had embraced other theories and paradigms, it seemed to lack direction. Their concluding remarks suggest that ST's main contribution could potentially be "as a sensitizing device for researchers to understand the nature of management accounting and its role in organizations" (p. 474). The second contribution lies in the recent discourse between supporters of SST (Coad et al., 2015) and those supporters of a flat local structuration ontology (Englund and Gerdin, 2011, 2014). This is explained in more detail below.

One of the most significant debates regarding structuration is in terms of its ontology. Englund and Gerdin (2011) argued for the adoption of a local and flat ontology. This is described by Coad et al. (2015, p. 156) as follows "local ontology means there is no such thing as 'external' social structures that exist beyond the human mind; whereas a flat ontology suggests that there are no levels of social structures (e.g. micro/macro structures)".

Coad et al. (2015, p. 156) find Englund and Gerdin's (2011) position problematic, arguing that adoption of a flat ontology views humans as mere "effects and denying the embodied emotional nature of human existence". Harris (2005, p. 173) suggests that:

> [i]nstead of a natural science that could explain society or vice versa, we arrive at a 'flat' ontology or sociology in which there is neither the global or local, but only networks of translation that extend and multiply without hierarchy. There is only the organization of the 'glocal' as a single plane of endlessly entangled translations.

The adoption of a flat ontology would in this study be inappropriate, because the UoN is itself an organisation based upon a hierarchical structure: for example, employees report to managers and managers report to the executive senior leadership team. Furthermore, the phenomenon of sustainability has both a local and global dimension (see Chapter 2): it can have an individual, micro dimension, such as an employee carrying a reusable coffee cup; a meso dimension such as the UoN establishing paper recycling points in office corridors; or a macro dimension such as the melting of polar ice caps or rain forest degradation. These multiple and complex levels of hierarchical forces and structures are precisely what this study seeks to investigate. Therefore reducing everything to a 'flat' ontology would not be compatible with this study's conceptualisation of society or a social actor.

Whilst the debate is still ongoing and will perhaps continue for the foreseeable future, Englund and Gerdin (2016, p. 261) conclude that it is for the researcher to choose 'a side' and although "the two ontologies may well come up with similar 'end results', the underpinning 'explanations' may be fundamentally different depending on which ontology is chosen". A final point on the use of ST theory comes from Jack and Kholeif (2008, p. 209), who posit that by using ST theory, users accept "the duality of structure and the problematic nature of understanding the objective–subject[ive] nature of human beings".

The debate has moved on significantly since Macintosh and Scapens's (1990) initial suggestion of ST as a sensitising theory. SST has been used/applied in several case studies over the last few years (Adhikari and Jayasinghe, 2017; Chan et. al., 2010; Coad and Glyptis, 2014; Feeney and Pierce, 2016; Greenhalgh et al., 2014; Harris et al., 2016; Jack and Kholeif, 2008; Makrygiannakis and Jack, 2016; Moore and McPhail, 2016; Warren and Jack, 2018) as a more practicably applicable theory that can be used in

substantive empirical research (see Coad et. al., 2015; Daff and Jack, 2018; Jack and Kholeif, 2007; Stones and Jack, 2016; Warren and Jack, 2018). Adhikari and Jayasinghe (2017) used SST's context and conduct analysis as a lens to view how budgetary routines within Nepal's central government were shaped and reproduced by key internal stakeholders. In another study Moore and McPhail (2016) used the conceptualisation of Stones's (2005) ontological scale to examine how external structures influenced carbon accounting frameworks. This TF has particular relevance within the management accounting and control discipline. Englund et al. (2011) and Englund and Gerdin (2014) have identified many studies that have adopted Giddens's composition of structuration in some way to craft and execute research. Both ST and SST are well used lenses through which to view empirics and investigate phenomena. Although its usage has increased (see Adhikari and Jayasinghe, 2017; Chan et. al., 2010; Coad and Glyptis, 2014; Feeney and Pierce, 2016; Greenhalgh et. al., 2014; Harris et. al., 2016; Jack and Kholeif, 2008; Makrygiannakis and Jack, 2016; Moore and McPhail, 2016; Warren and Jack, 2018), Coad and Glyptis (2014, p. 143) suggest that "structuration theory has still to reach its full potential in accounting and control research".

This study will contribute to the growing literature that uses SST within the management accounting discipline. Furthermore, it will utilise SST in the context of sustainability, something that has not been done before. In so doing, it may lead to a better understanding of what are some of the key internal and external influences on an agent, that elicit (or not) sustainability behaviours in organisational actors. It will also help to illuminate the extent to which current management and sustainability control systems affect a UoN employee.

The use of SST in this study reflects the dynamic that exists between social structures and agents. It can allow for the various levels of structure that exist (micro, meso and macro), but it is also able to 'see' the connections between the three. SST can highlight how the micro actions of UoN employees relate to meso level organisational controls and thereafter to the macro global challenges that the literature (see Chapter 2) suggests the world is facing.

More recently, SST has developed into a comprehensive empirical framework that has been called upon from the outset of projects. The use of this

theory provides a stronger, empirically focused framework on which to base this research and provides a more defensible argument for its use.

3.8 Summary

This chapter has provided justification that SST provides an empirically utilisable framework to investigate the process of structuration, as "it is a holistic theory, which depicts structuration as a quadripartite intertwining of external structures, internal structures, active agency and outcomes" (Harris et al., 2016, p. 1181). Whilst Stones's (2005) quadripartite framework is a comprehensive illustration of the process of structuration, it does not on its own explain which specific structures and forces an agent draws on or to which he/she feels exposed. The way to remedy this problem is to use methodological brackets. The brackets as conceptualised by Stones (2005, 2015) enable the incorporation of epistemological and methodological dimensions, and a clear research path that can be adopted for their use (see Stones, 2005, p. 123 and Stones, 2015, p. 32 and p.65). These brackets allow the use of a more powerful lens in order to see the prevailing internal and external structures, which exert force/s on an employee, and ultimately influence an agent to act.

SST allows for an agent's autonomy within organisational systems/structures and does not assume that an agent mechanically and mindlessly replicates routine actions reinforcing existing structures. Hence when it comes to an employee's response and behaviour towards sustainability, SST has enough flexibility to allow for the range of possibilities that may arise when accessing this information. In addition, the power of SST also lies in its conceptualisation of social structures and agents, that is, as a duality:

> Social structures almost always either have agents within them and/or are the product of the past practices of agents. And agents, for their part, have social structures within them, not least in the guise of particular forms of phenomenological and hermeneutic inheritance. Social structures are not reified entities denuded of human beings and their irreducible qualities, just as the views and experiences that prompt the thoughts and actions of social agents are not those of beings who are islands unto themselves, secreted away from social currents. The phenomenology and hermeneutics of practices play an indispensable role in structuration's conception of social structures, just as social structures

> play an equal role in the understanding of the phenomenology, hermeneutics and practices of agents. (Stones, 2005, p. 4)

The adoption of the conceptualisations within SST provides an appropriate ‘way to see’ the phenomenon under investigation, and enables the research questions (see Chapter 2) to be answered.

Chapter 4 Research Methodology

4.1 Introduction and overview

The previous chapters have explained the overall rationale for the research and its location within the current literature. They have also considered the lens through which the empirics are to be viewed.

In light of the above, this chapter discusses and defines the specific research methodology to be adopted in order to execute and deliver the intended research, and ultimately to answer the research questions. The 'research onion' (see Saunders et al., 2019, p. 130, and Figure 4.1 below) is used as a framework to help guide the approach adopted to answer the research questions in this thesis. The 'research onion' acts as a mechanism for navigating a route from philosophical underpinnings to data collection and analysis. The discussions in this chapter follow the specific research pathway through the 'research onion' adopted for this thesis (see Figure 4.2 below).

The chapter begins with an introduction to the 'research onion' (section 4.2). The philosophy of the research is considered in section 4.3 which leads into section 4.4, theory development and methodological choice (section 4.5). This research is based in an organisation that is deemed a 'case study', the rationale behind this is discussed in section 4.6. Thereafter, the time horizon for the research (section 4.7) and the techniques and procedures of data collection (section 4.8) are explained. The chapter concludes with a summary in section 4.9.

4.2 The 'research onion'

By working from the outside of the 'research onion' (philosophy) to the inside (data collection and analysis), a research path can be set out. This starts with the researcher's philosophical positions and assumptions of reality and how knowledge of the phenomenon under investigation can be acquired and understood.

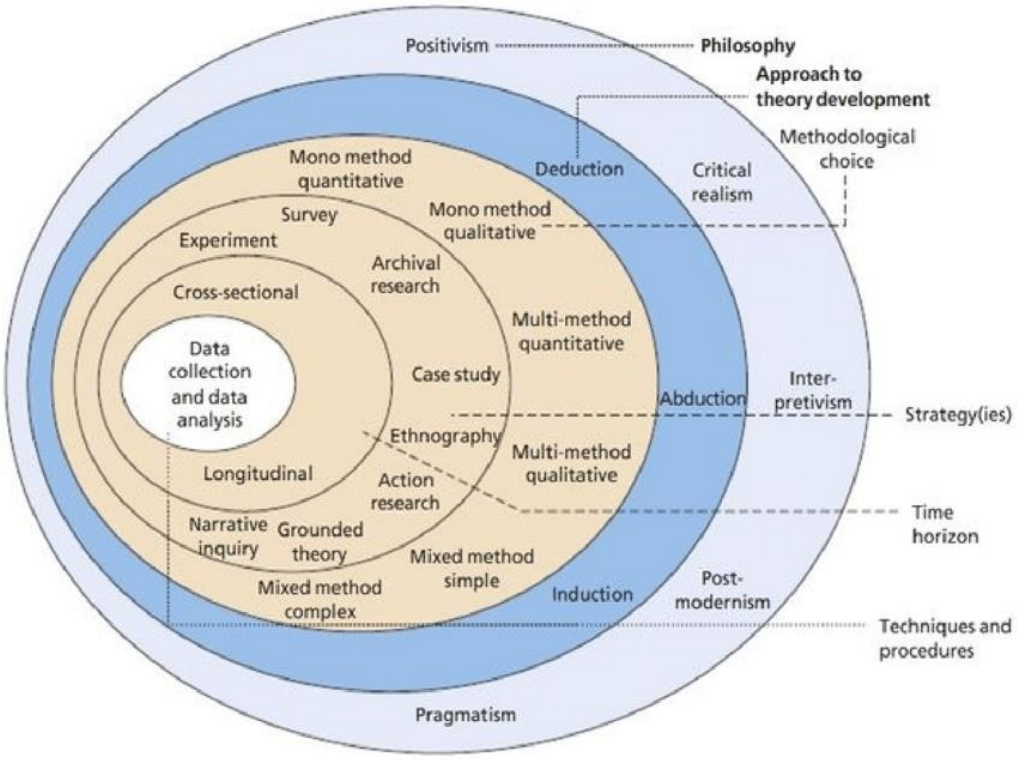


Figure 4.1: The research onion (Saunders et al., 2019, p. 130).

Below are discussions of each layer of the onion and how it relates to this research. The revised diagram below (Figure 4.2) shows the specific research path to be navigated in this thesis.

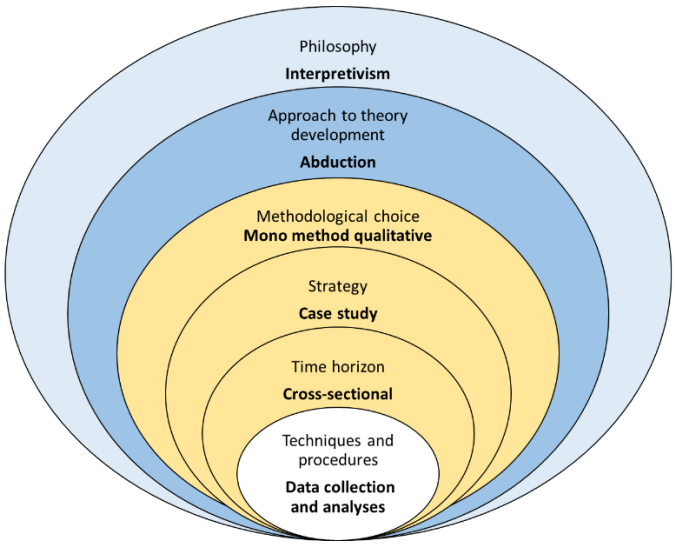


Figure 4.2: The adapted research onion (from Saunders et al., 2019, p. 130).

4.3 Philosophy – interpretivism

The outer most layer of the onion considers research philosophy. An interpretive philosophy incorporates a socially constructed reality. Hopper and Powell (1985, p. 446) provide a comprehensive explanation of an interpretive approach. They suggest that it:

> emphasises the essentially subjective nature of the social world and attempts to understand it primarily from the frame of reference of those being studied … [t]he focus [being] on individual meaning and people's perceptions of "reality" rather than any independent "reality" that might exist external to them (Hopper and Powell, 1985, p. 446).

There have been many studies within management accounting control and the accounting discipline in general that have adopted an interpretive approach (Ahrens, 1996, 1997a, 1997b; Covaleski and Dirsmith, 1983, 1986, 1988; Dent, 1991; Granlund, 2001; Lukka, 1988; Preston, 1986; Roberts, 1990; Scapens and Roberts, 1993; Vaivio, 1999).

This study seeks to understand employees' subjective reality of organisational sustainability control, from their own frame of meaning. Insights from this perspective will enable the illumination of how employees respond and interact with sustainability control systems (SCSs) present within the Univeristy of Nottingham (UoN). Therefore, this study is also located in an interpretive approach.

Burrell and Morgan (1979) developed a schema of research paradigms that can be used in categorising research. That schema has been used (see Figure 4.5 below) to situate this research and to help explain its philosophical orientations (ontological, epistemological and methodological).

Ontological and epistemological assumptions guide the choice of research methodology chosen: see the quote by Ryan et al. (2002, p. 35) below.

> [T]he selection of the most appropriate research methodology is dependent on the nature of the phenomenon being researched. In particular, the assumptions which the researcher holds regarding the nature of the phenomenon's reality (ontology), will affect the way in which knowledge can be gained about that phenomenon (epistemology), and this in turn affects the process through which research can be conducted (methodology). Consequently, the selection of an appropriate

> research methodology cannot be done in isolation of a consideration of the ontological and epistemological assumptions which underpin the research in question.

As stated above, the overall philosophy of this research is interpretivism. Diving deeper into this philosophy and how it relates to this research's ontology and epistemology can be summarised as follows: the ontology is social construction and the epistemology is interpretive (Burrell and Morgan, 1979). The methodology (the way the research is conducted) therefore, will need to support these two philosophical positions. These two research foundations (ontology, epistemology) as they relate to this research and how they are linked are explained in turn and in more detail below. The discussions also address how and why, within the epistemology of interpretivism the method of hermeneutics has been selected.

The social actors (employees) within the UoN will have created/create their own subjective reality. This particular 'reality' orientation commits this research to a socially constructed ontological dimension. All the social actors in this study have their own experience and knowledge of the management/sustainability control systems (MCSs/SCSs) within the organisation, and their own views and opinions with regard to sustainability. This research aims to understand the extent of the influence of the control structures, and the actions of the employee that arise thereafter. Knowledge about how employees interact with the MCSs and SCSs is held within the minds of the social actors themselves (see Figure 4.3 below), and it will be their own unique view. However, these individual perspectives, although unique, may when viewed as a whole exhibit similarities and a degree of congruence. These patterns of similarity may enable theorisations (see Chapter 3) to emerge from the data gathered.

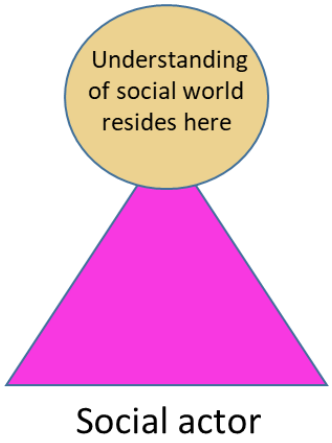


Figure 4.3: The social actor/employee of the UoN.

Subjectivity is not the only form of reality, that is, ontological assumption, which exists. Morgan and Smircich (1980, p. 492) suggest six ontological positions, or rather six ways of viewing reality (see Figure 4.4 below). They view these positions on a continuum from subjectivity at one end to objectivity at the other. At one end is a reality that is a projection of human imagination, at the other a reality that is a concrete structure, with several positions in between. Using Strong Structuration Theory (SST) as the theoretical framework (TF) (see Chapter 3) suggests reality is somewhere in the middle of the continuum (the pink circle on Figure 4.5 below). This resonates with the view that, in interpretive management accounting research, much research is positioned in between the two points (Kakkuri-Knuutilla et al., 2008).

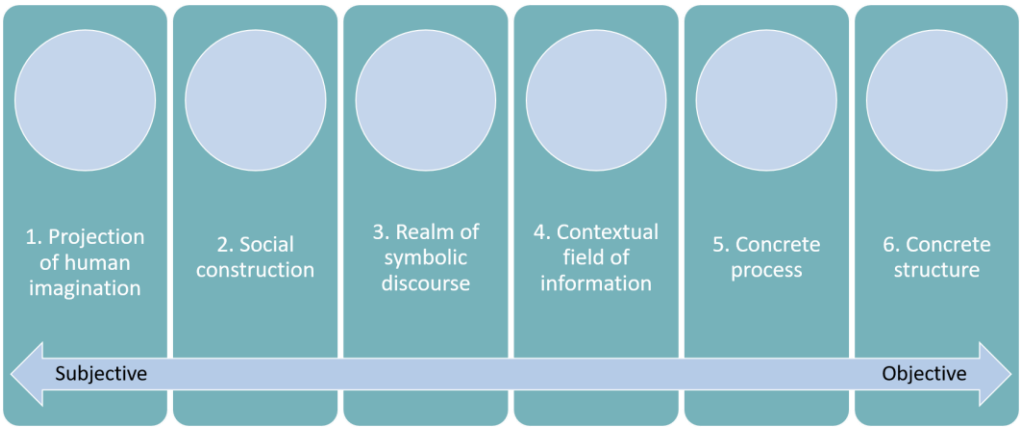


Figure 4.4: The subjective–objective continuum (adapted from Morgan and Smircich, 1980, p. 492).

Burrell and Morgan's (1979) approach to social theory also recognised this subjective/objective continuum in the nature of science (in a similar way to Morgan and Smircich, 1980). However, they conceptualised the nature of society as existing on a sociology of regulation and a sociology of radical change axis. The sociology of regulation views society as ordered, stable and unified, as it is "concerned with the need for regulation in human affairs; the basic questions which it asks tend to focus upon the need to understand why society is maintained" (Burrell and Morgan, 1979, p. 17). The purpose of MCSs/SCSs is primarily to regulate the everyday affairs of the employees at the UoN and maintain some sort of order within the organisation. This research seeks to understand how well the current control structures/regulations deliver employee sustainability; therefore it views society as regulated, as per the orange circle on Figure 4.5 below. The coloured circles on Figure 4.5 represent aspects of ontology, epistemology and methodology, and their respective locations suggest that this research is anchored in an interpretive paradigm. The pink circle has been explained above as the positioning of the duality of structure within SST (a middle position between the subjective/objective continuum). The orange circle denotes the assumption made about the nature of society (towards regulation). The green circle corresponds to the way in which a social actor's reality can be known and it is explained below.

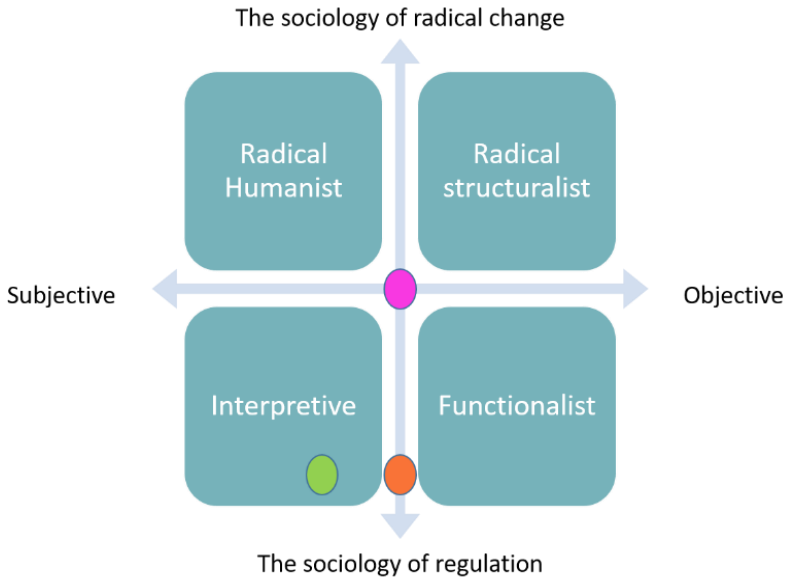


Figure 4.5: Paradigms (adapted from Burrell and Morgan, 1979, p. 29).

The 'way of seeing' in this research is assumed to be social construction. This assumption has implications for how one can gain knowledge about/understand this reality (epistemology). Given that employees construct their own realities, through social construction, the understanding of their 'worlds' can only be accessed through the interpretation of their understanding and meanings of their respective realities. An interpretive position assumes that "the subject matter of the social sciences – people and their institutions – is fundamentally different from that of the natural sciences" (Bryman, 2016, p. 26). Thus it requires a different approach in order to study it.

One way of studying the social world within an interpretive epistemological approach can be found in the form of phenomenology. Phenomenology "is concerned with the question of how individuals make sense of the world around them" (Bryman, 2016, p. 26). Furthermore, Stones (2005) notes that phenomenology lies at the heart of Structuration Theory (ST) (see Chapter 3). An interpretive epistemology enables the researcher to access a social actor's constructed reality (i.e., his/her interpretation), thus allowing the researcher to glean an understanding as to how, with reference to the meanings that social actors give to their social contexts, they decide to behave and act.

There is a spectrum of techniques by which this interpretation can be accessed but the method chosen for this research is discussed below.

Hermeneutics has been selected as the method of interpretation (see the green circle on Figure 4.5 above). Stones (2005, p. 29) highlights the importance of hermeneutics within SST (see Chapter 3), saying that "structuration's hermeneutic and phenomenological emphasis means that it would be difficult to overemphasise the point that all these different aspects of agents and agency should be seen as suffused and informed by an agent's hermeneutic frame of meaning". "Hermeneutics can be described as the theory of interpretation" (Llewelyn, 1993, p. 235). It is the interpretation of the researched social actors' reality, via the interview dialogues (the first hermeneutical interpretation), that the researcher seeks to understand through the researcher's own interpretation (the second hermeneutical interpretation). Figure 4.6 below gives a visual representation of this cycle, that is, the second hermeneutical interpretation. This is what Giddens deemed the double hermeneutic (Giddens, 1976, 1982, 1984).

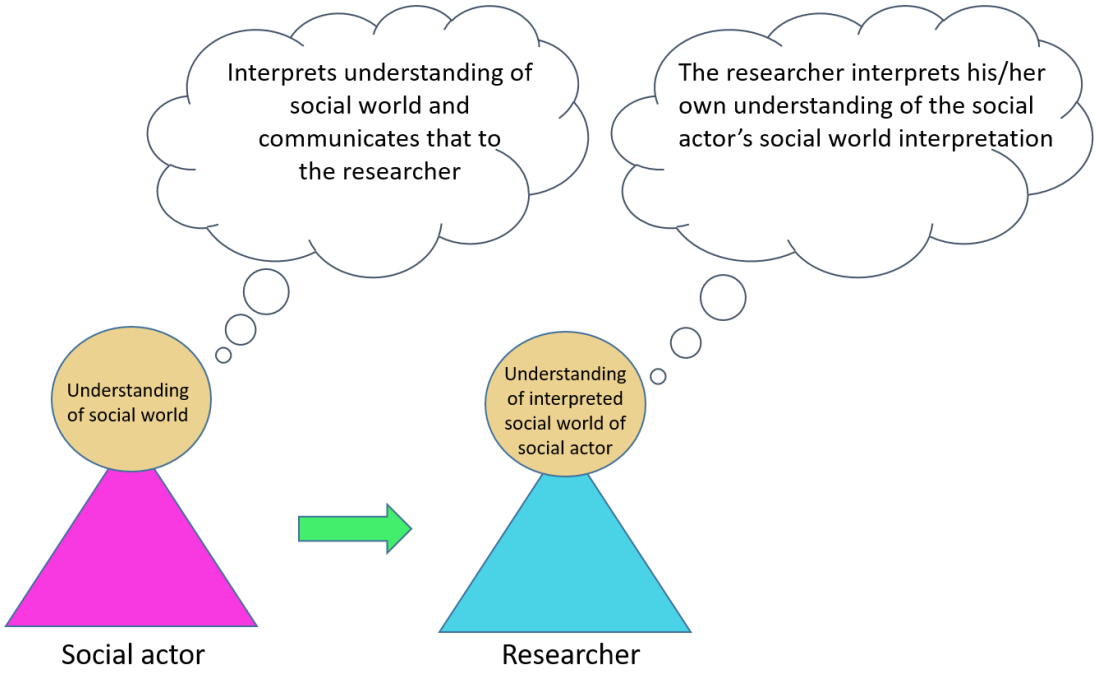


Figure 4.6: Interpretive research, the double hermeneutic cycle.

This reinterpretation by the researcher can be seen as a weakness of the interpretive research philosophy. The interpretations made of the social system will be subjective and contain a thread of bias, although steps to reduce this bias as far as possible will be taken. Llewellyn (1993) suggests three subjective characteristics of hermeneutics that are ever present in interpretations. The first is how the research participants' and researcher's sets of values, or points of reference in relation to evaluating sustainability, align together. The researcher and the employees will all have had different experiences that will have coloured their understanding of sustainability. There will need to be some form of reflection and reflexivity on the part of the researcher to ensure that there is a merging of these frames of reference. Second, the researcher needs to show how she has bounded the study in order to understand the whole picture from little snippets of information. In this study 36 employees have been interviewed, and it is through the brief and narrow view of their reality lens that a bigger picture of the whole is woven together. To ensure a credible view of the whole picture, the interviews will be further supported by using secondary evidence, such as annual reports, specific employee blogs and other publicly available information in order to triangulate and validate the findings. Finally, as the settings of the research will be fleeting points in time and space, any concrete understanding about the phenomenon being investigated will be inextricably linked to that specific, and yet past, moment in time. Because of this, the account of the phenomenon reflects its transient nature. However, by using the duality of structure conceptualisation (see Chapter 3), agents reproduce and recreate structures constantly. This particular characteristic of SST means that events in the present and future are mixtures of past structures, practices and contexts. Therefore, while a particular moment cannot be recreated, the idea of structuration has a past, present and future dimension, and consequently investigations that are in past contexts and time frames can still inform understanding in the present and beyond. This particular aspect of SST resonates with Burrell and Morgan's (1979) sociology of regulation dimension (see above): that, although it examines the current sustainability activities of the organisation and its employees, understanding of these activities can inform future sustainability improvement.

Stones's (2005) SST is used to provide a theoretical scaffold (see Chapter 3) right from the outset of this research which enables an initial direction into sustainability investigations. Theory is often described as lens through which 'to view', but how it is developed and utilised within a particular research setting is also an important consideration.

4.4 Approach to theory development – abduction

This study uses an abductive approach to theory development. Abduction can be understood in relation to the two more traditional positions of theory development, namely induction and deduction. As Peirce (1903, p. 216) asserts:

> Abduction is the process of forming an explanatory hypothesis. It is the only logical operation which introduces any new idea; for induction does nothing but determine a value and deduction merely evolves the necessary consequences of a pure hypothesis. Deduction proves that something *must* be, Induction shows that something *actually is* operative, Abduction merely suggests that something *may be*. Its only justification is that from its suggestion deduction can draw a prediction which can be tested by induction and that, if we are ever to learn anything or to understand phenomena at all, it must be by abduction that this is to be brought about.

Suddaby (2006, p. 639), when referring to Peirce's (1903) definition of an abductive approach, suggests that "Peirce recognized that pure induction and pure deduction are necessarily sterile. New ideas result from a combination of these fundamental approaches, which he termed 'abduction' ".

The traditional methods of induction and deduction differ in the way they utilise theory in relation to the particular research undertaken, and how conclusions are synthesised (Alvesson and Skoldberg, 2009; Lee and Lings, 2008). Bryman (2016, p. 23) models the difference, as shown below:

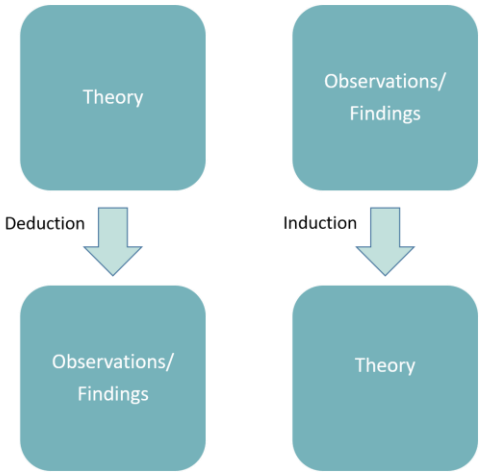


Figure 4.7: Deduction and induction (adapted from Bryman, 2016, p. 23).

Deduction begins with theory and leads to observations/findings, whereas induction begins with observation/findings and leads to theory. As Taylor (2018) suggests, one emphasises theory, the other data; and one tests existing theory while the other generates new theory. They are usually viewed as opposing positions and are underpinned by different ontological and epistemological foundations (see Bryman, 2016, p. 32). However, despite the different assumptions of each position, there is still continuing debate among scholars as to the boundary of their particular ontological and epistemological assumptions (Ahrens, 2008; Armstrong, 2008; Cunliffe, 2011; Hopper and Powell, 1985; Kakkuri-Knuutilla et al., 2008; Laughlin 1995; Layder, 1998; Lukka, 2010; Malmi, 2010; Vaivio and Sirén, 2010; Willmott, 1993).

Induction and deduction pay either too much or too little attention to theory, when in practice, theory and empirics (especially in qualitative research see section 4.5 below) are in a continuous relationship (Vaivio, 2008; Van Maanan et al., 2007). The challenge for researchers is to be able to give equal primacy to both empirics and theory – a 'duality' relationship. Some academics have reasoned that an abductive approach (the continuous relationship between theory and empirics, allowing for modification of both as the research progresses) mirrors the reality of how qualitative research is actually executed (Alvesson and Skoldberg, 2009; Dubois and Gadde, 2002, 2014; Van Maanan et al., 2007). Taylor (2018, p. 513), for example, suggests that "[d]uring an

abductive research process, the empirical area of application can be adjusted, whilst at the same time, prior theory can be challenged and refined", thus forging a deeper relationship between theory and empirics, and yoking the two closer together.

The closer relationship of data and theory within abduction has led to the development of frameworks that try to show how abduction can work in practice. Two such frameworks have been suggested, the first by Dubois and Gadde (2002) and second by Taylor (2018) (see Figures 4.8 and 4.9 below). Each framework illustrates how abduction can happen during the process of research. Specifically, each emphasises the processes of matching, direction and re-direction (Dubois and Gadde, 2002, p. 556).

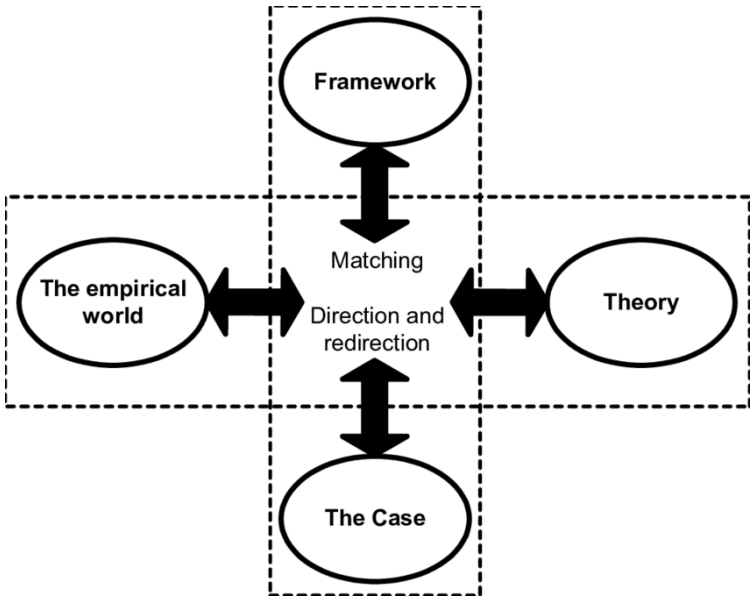


Figure 4.8: Systematic combining (from Dubois and Gadde, 2002, p. 555).

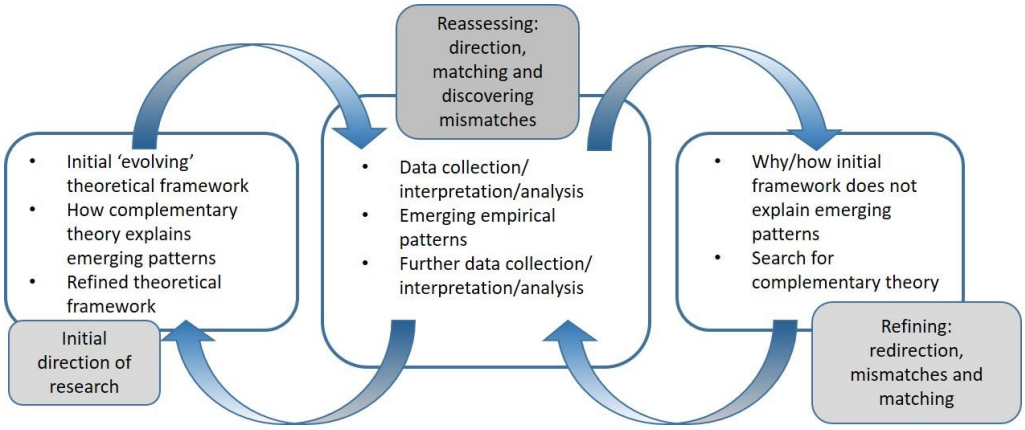


Figure 4.9: The process of abductive theorising (from Taylor, 2018, p. 518).

Matching is "about going back and forth between framework, data sources, and analysis" (Dubois and Gadde, 2002, p. 556). For this research it will mean a constant interaction between SST, the interview transcripts and other sources of data (such as annual reports, specific employee blogs and other publicly available information) and time for reflexivity in order to support analysis. Direction is concerned with looking for elements in the data that align with the theoretical framework, although Dubois and Gadde (2002) suggest that there should also be endeavours made to discover new insights. These new insights may lead to the redirection of the study. These processes to match empirics to theory will be used in this research. The interview data will be compared with the TF and the degree of 'matching' and 'discovery' will indicate the steps to take next.

Abduction embraces the use of existing theory, in this case SST, as a plausible conceptual framework. The use of SST as the initial TF has been used to guide the overall research direction, research question(s) and the data collection in the early phases of the research. Over the course of the research, the empirical data that emerge have been used to guide theoretical insights, but it is not a case of making the theory 'fit' (see Berry and Otley, 2004; Scapens, 2004). This may lead to refinement of theories. There is enough flexibility in the SST approach to innovate and capture new understandings of any phenomenon within this theory (see Coad and Glyptis, 2014). This ensures that theories reflect the empirical world, resonating with Llewelyn's (2003) suggestion that theory should be employed on grounds of utility rather than truth.

This refinement of theory is supported by Vaivio (2008, p. 77), who suggests that all theories, even if they are established and respected, should be treated as "provisional and incomplete". They should be treated in this way to encourage theoretical development, rather than using research findings simply to agree with extant theories (Vaivio, 2008).

The essence of both Dubois and Gadde (2002) and Taylor (2018) will be used in this research to assist the matching and re-matching of empirics to theory. In particular, Taylor (2018) not only directs the researcher to find a complementary theory but also focuses on helping to 'refine' existing theories. It has already been mentioned in Chapter 3 that SST has "still to reach its full potential" (Coad and Glyptis, 2014, p. 143). This approach to theory development resonates with Llewellyn's (1993, p. 246) suggestion that "accounting research needs a strong on-going programme of empirical work in order that theory is constantly generated, challenged and re-worked through exposure to processual change". Abduction can meet this challenge, because within this approach, theory and empirics are in a constant, linked relationship with one another, and because the researcher steps back from the empirics to reflect on theory and vice versa (Blaikie, 2010; Layder, 1998). As Taylor (2018, p. 513) notes "[a]bductive theorizing is a continuous rather than discrete aspect of the research process".

The two operationalisations of abduction discussed above are possible in this study, although the actual way that abduction is operationalised will depend on what emerges from the data. An abductive approach to theory development may enable new insights to be formed about the subjectively created realities of the social actors. These subjective and unique realities are supported using a qualitative methodological choice.

4.5 Methodological choice mono method qualitative

This study uses a qualitative approach, because it is embedded in researching and interpreting the subjective frames of meaning that employees of the UoN create, in regard to SCSs. The primary technique (mono method) adopted to access the reality of the social actor is semi-structured interviews.

On the 'research onion', the methodological choice comes after the philosophical assumptions. This is not by accident. As Ryan et al. (2002, p. 35)

point out: “the selection of an appropriate research methodology cannot be done in isolation of a consideration of the ontological and epistemological assumptions which underpin the research in question”. These two aspects of ontology and epistemology in relation to the methodological choice, and the research questions of this study (see Chapter 2) are discussed below.

According to Parker (2012, p. 55), qualitative research traditionally “pursues issues of meaning and interpretation in the social world”. The ‘real’ world for employees at the UoN is their own unique, subjective construct. This particular characteristic of a unique reality will be common to each employee/social actor of the organisation, thus making the idea of ‘real’ life somewhat complicated, diverse and messy to express in any numerical way. Braun and Clarke (2013, p. 20) agree with Parker (2012) that meaning is fundamental to qualitative research, but develop their thoughts further saying that “[a]t its core, qualitative research is about capturing some aspect of the social or psychological world. It records the messiness of real life, puts an organising framework around it and interprets it in some way”. Often the appropriateness of qualitative research is contrasted with the more established quantitative tradition. Ahrens and Chapman (2006, p. 823) put it very succinctly: “qualitative methodology seeks to explore aspects of social order that are not objectively real but are instead subjectively created through the interaction of actors, rarely mentioning the words hypothesis or testing at all”.

The understanding of sustainability controls by employees will be captured by their responses to interview questions. The factors and relationships impacting on their daily sustainability choices and decisions, such as work context, personal values and knowledge, cannot be easily standardised or quantitatively structured. Employee understanding is conveyed in the meaning of the employee’s words spoken in the interview, as knowledge about sustainability within the minds of employees cannot be easily quantified and expressed as relationships between two variables.

The researcher is the one responsible for interpretation and extracting meaning from the words and texts produced from the interview. In qualitative research, the researcher is not an independent observer. Only by the researcher interpreting the meaning of the words spoken at the interviews (via the

transcriptions) will the phenomenon be understood and ultimately the research question/s answered. This is in contrast with a quantitative approach that views the researcher as independent from what is being researched.

There is not an infinite amount of time which can be devoted to a research project, including this thesis. Furthermore, the choice of method(s) brings its own benefits and disadvantages. Given time and other constraints, the researcher has to evaluate which method(s) are going to elicit the best understanding of the phenomenon. The technique of interviews was chosen as the primary (mono) data collection method. This is an established and legitimate way of collecting data. As Qu and Dumay (2011, p. 238) comment: "[t]he research interview, one of the most important qualitative data collection methods, has been widely used in conducting field studies and ethnographic research". The technique of interviewing (see section 4.8 below) is not a casual 'chit-chat' but needs appropriate planning and preparation to realise the benefits of the dialogue. In addition to the data gathered through interviews, the process of triangulation using other sources of evidence (such as annual reports, specific employee blogs and other publicly available information) will be undertaken to enhance and further validate the data (see section 4.8 below). This will enable cross-referencing of all sources of evidence (including the interviews) and ensure that conclusions are robust and legitimate. Ultimately, this will result in more reliable conclusions being drawn in response to the research question(s).

This research seeks to understand the interactions of agents and the MCSs/SCSs system in a university. Each social actor will experience his/her world slightly differently, though there may also be shared experiences and views. The nature of qualitative research will illuminate both the uniqueness and commonalities of their worlds. Using a qualitative approach in this study will enable a rich and dynamic understanding of the social world within the case organisation. The answers to the research question(s) may also lead to better designed and more appropriate sustainability control mechanisms and systems.

This section has explained that a qualitative methodological choice supports a subjectively created reality (social construction). A qualitative approach will enable the 'richness' of that reality to be known, thereby supporting an interpretive orientation. Saunders et al. (2019, p. 180) suggest

that there are many strategies that can be used with qualitative research, but one of the most popular is that of case study research. This is explained in more detail in the Strategies section below.

4.6 Strategies case study

Scapens's (1990, 2004) work offers some insight when considering how case study strategies blend together with this research's philosophical and theoretical approaches. He suggests that case studies "are concerned with explanation" and they "provide practitioners with a deeper and richer understanding of the social context in which they work and make them aware of the problems, and the possibilities for solutions" (Scapens, 1990, p. 278). This supports one of the goals of this research, namely to 'understand' the social landscape in which the employees of the UoN operate and to help to illuminate the various structures present. The aim to understand the phenomenon supports a qualitative research position (see section 4.5). Furthermore, Scapens (1990) argues that within positivist case study research, case studies assume an exploratory role. The purpose of the case study is to enable hypotheses' development and empirical testing, but it cannot "explain 'the process' of individual behaviour" (Scapens, 1990, p. 263). If the research seeks to 'explain' a phenomenon, then case study research, informed by social theory (as in this research, see Chapter 3), is most appropriate. He adds that this is because a case study that incorporates social theory "gives a much more central role to case studies – indeed, they [case studies] are fundamental to the development of explanatory theories of management accounting practice" (Scapens, 1990, p. 279) as opposed to a peripheral role of case studies within positivist research.

Using Scapens's (1990, 2004) categorisation of case studies, this particular study could be described as an 'explanatory' case study, which is defined as:

> … attempt[ing] to explain the reasons for accounting practices. The focus of the research is on the specific case. Theory is used in order to understand and explain the specific, rather than to produce generalisations. If available theories do not provide convincing explanations, it may be necessary to modify them. (Scapens, 1990, p. 265).

The definition above supports an abductive approach to theory development (see section 4.4). It encourages the incorporation of theory from the outset of the research, and also the development of theory if directed by the empirical evidence. Lastly, Scapens (1990, p. 264) suggests that the case study research method will be "helpful in explaining the process which leads to individual accounting practices". This resonates with the ultimate research question this study seeks to answer, namely 'how and why' employees might behave sustainably with reference to the control systems present. The selection of the case study approach fortifies the philosophical assumptions discussed earlier (see section 4.3).

Another reason why a case study approach is adopted is because management and sustainability control systems exist only within an organisation. Therefore to examine how employees interact with the phenomenon of sustainability, the research has to be based in an organisational context, where employees and the phenomenon actually exist. As Dubois and Gadde (2002, p. 554) point out "[t]he interaction between a phenomenon and its context is best understood through in-depth case studies".

A particular strength of this approach is that any theoretical developments are grounded in empirical evidence from the 'real' world (Berry and Otley, 2004). This close relationship between theory and data makes it suitable as an approach when using abduction (see above) because "theory cannot be understood without empirical observation and vice versa " (Dubois and Gadde (2002, p. 555).

Cooper and Morgan (2008, p. 160) draw on Stake's (2000) writing to provide a pertinent interpretation of case studies, noting that "[c]ase studies focus on bounded and particular organizations, events, or phenomena, and scrutinize the activities and experiences of those involved as well as the context in which these activities and experiences occur". This interpretation is relevant to this research for two important reasons.

First, employee activities and experiences are central to understanding the conduct of agents. The daily routines of employees and their job roles will have pressures associated with them, which will exert force on how the employee behaves. Employee education, family and personal interests, although

not always expressed within a work environment, do influence employee experience, activity and behaviour. Second, the case study approach gives importance to the setting of the research and its examination, that is, the context. An employee's environment is full of relationships and structures that he/she must navigate, and these too will impact on the experiences and activities that occur. The investigation of both agent conduct and context are central to SST (see Chapter 3). Furthermore, a strategy that can highlight these two areas will enable the operationalisation of methodological bracketing (see data collection below).

The discussions in this section suggest that a case study strategy is a good match to support, and align with, the other elements of the specific research pathway discussed earlier.

4.7 Time horizon – cross-sectional

The use of a cross-sectional time horizon is appropriate in this research for two main reasons. First, the WasteNott sustainability initiative (see Chapter 5, section 5.5) was due to run over a one year time frame. Therefore, the research needed to be conducted when the initiative was running, to understand how employees engaged with it. The UoN ran this campaign throughout the 2018/19 academic year in their UK campuses (UoN, 2018). The UoN had not indicated how long the initiative might last after the initial first year, so the engagement of users with the initiative was studied within this one year window of time. The initiative started in September 2018 but the data were collected between July and October 2019. This intentional delay was so that employees were given sufficient time to become familiar with the initiative in the course of their daily lives at work. This also segued with the cessation of the academic year. This meant that employees in all interview groups (academic, administration and support, policy shapers,) had more flexibility in their schedules to participate in interviews for this research.

Second, the researcher wanted this study to have some practical benefit for the UoN. This notion of 'value added' was kept in mind when developing the research questions (see Chapter 2). It was hoped that, because the UoN has many sustainability credentials and interests (see Chapter 5), a study that investigated the impact of sustainability initiatives on employees would be

welcomed. As this study has progressed, many of the senior managers became interested in its findings. A study like this had not happened at the UoN before, hence, using this current cross-sectional 'snap shot' time horizon could potentially promote better understanding of employee commitment. This new understanding could lead to amendments of existing sustainability controls or assist management in developing new controls that provide enhanced employee sustainability engagement.

In addition to the above, there are the practical considerations about how much time is available when undertaking a project such as this. This thesis was time bounded which has meant that its development required a focused and systematic approach. The scheduling of events followed a logical path and the various activities were meticulously planned, although unforeseen situations did arise. This caused some slippage in the timings, meaning that the scheduling of some tasks and deliverables had to be altered, and revised deadlines set and met. The researcher, throughout the research process was aware of the time implications of activities and tried to keep slippage to a minimum, in order to meet the thesis submission deadline.

4.8 Techniques and procedures – data collection and data analysis

This section is in two parts. The first part explains how and from where the data for this research were collected, the ethical processes that were followed during the data collection phase, and also the researcher's reflections on data validity and reliability. The second part explains how the data have been analysed and synthesised in order to produce the findings and the results (see Chapter 5 onwards).

4.8.1 Data collection

Interviewing is one of the most popular methods of qualitative data collection (see section 4.5 above). Within this study, semi-structured interviews, carried out over a three month period, formed the primary method of data collection (see Bailey, 2007; Brinkmann and Kvale, 2015; Holstein and Gulbrium, 1995; Rubin and Rubin, 2005). However secondary data were also collected in the form of organisational annual reports, specific employee blogs and other publicly available information to triangulate and compare the various forms of data. This

was done to ensure an accurate representation of the results and findings by cross checking all the types of evidence for consistency and plausibility.

The use of semi-structured interviews enabled the responses to have some structure and to stay within the areas being investigated without the responses being too constrained. As Qu and Dumay (2011, p. 246) note:

> [t]he semi-structured interview involves prepared questioning guided by identified themes in a consistent and systematic manner interposed with probes designed to elicit more elaborate responses. Thus, the focus is on the interview guide incorporating a series of broad themes to be covered during the interview to help direct the conversation toward the topics and issues about which the interviewers want to learn … the guides all serve the same purpose, which is to ensure the same thematic approach is applied during the interview.

The identified themes used in the prepared interview questions were synthesised from Stones's (2005) quadripartite framework and methodological brackets (see Chapter 3). The interview guides/protocols incorporated questions about internal structures, external structures, employee conduct and context (such as specific job role capabilities in regard to sustainability). The policy shaper participants were asked slightly different questions that related to the sustainability policies and control systems of the organisation. Thus, this type of interviewing style could incorporate the themes of the selected TF from the outset and support (in part) the beginning of an abductive approach to theory development.

Qu and Dumay (2011, p. 246) note that one of the more significant characteristics of semi-structured interviewing is that it is "capable of disclosing important and often hidden facets of human and organizational behavior". This is a pertinent observation because part of this research seeks to understand how employees engage with sustainability at the UoN.

The core of this study rests on understanding the 'reality' of the social actors from their points of view. The discussions so far have reasoned that an employee's world is subjectively created. In light of this, semi-structured interviews facilitate responses from interviewees "in their own terms and in the way that they think and use language. [Semi-structured interviewing] proves to be especially valuable if the researchers are to understand the way the

interviewees perceive the social world under study" (ibid.). This technique of data collection was an excellent fit for the type of data that were required in order to answer the research question/s (see Chapter 2), whilst supporting the overall philosophical assumptions (see section 4.3).

All appropriate ethical protocols were followed during this research process. With regard to individual participant consent, both written and verbal consent was obtained. The University has an Ethics Committee (EC) that approves all research undertaken by staff and students, and this research was also approved by the EC (see Appendix D). In addition, the Committee gave permission for the case study organisation to be referred to by name, that is, the UoN. However, the interview participants were assured of their anonymity and were informed that they could withdraw from the interviews at any time.

Five exploratory interviews were conducted to understand some of the sustainability issues and finalise, as far as possible, the interview questions, but the researcher expected to refine the interview questions as the interviews progressed (see section 4.4 approach to theory development – abduction). Interview participants were chosen from different levels of the organisation, some being managers and part of the senior management team (policy shapers/influencers), some being administration and support staff and others being members of academic staff (both of these two latter groups would be subjected to the sustainability control systems developed). These formed three distinct clusters of 12 interviewees in each of the three groupings. In contrast to Duarte (2010), who investigated the responses of five corporate social responsibility (CSR) managers in three organisations, this research intended to understand interactions from many more types of employees. Not all organisations have specific CSR or sustainability managers, and to deliver sustainability all employees have to do their part (see Wood, 1991). In contrast to Slack et al. (2015), this research has not overlooked employees who may have a professional or personal interest in sustainability. The objective of the research was to explore employees' interaction with the sustainability control system(s) regardless of the employees' position within the organisation. To reflect honestly the diverse nature of this organisation, the sample of participants needed to be indicative of the variety in the employee body. It also needed to

include both employees who might have a CSR or sustainability tendency (because that was one of key reasons the organisation was chosen) and also employees who did not. Interview participants were chosen primarily using snowballing[8] techniques, supplemented by some purposive choices to ensure that all departments in the Business School were represented (for both techniques, see Bryman, 2016; Miles et al., 2014; Saunders et al., 2019). This particular School was chosen because this area of the organisation has several sustainability initiatives already present within its operations. Therefore, exploring engagement with the various systems would be better facilitated in this area rather than in a department or school that had no sustainability engagement at all.

The interviews were arranged by emailing potential interview participants. The email provided basic details about the research and informed them that their anonymity would be protected, should they provide their consent to being interviewed. Before each face-to-face interview was due to take place, a short email was sent to the participants to inform them of the key themes of the research and to give them some time to collect their thoughts on the subject of sustainability.

The researcher prepared for the face-to-face interviews by reading through the interview questions and adjusting/refining any that she felt were unclear or that had been misinterpreted by previous interview participants. The researcher made a note of particular themes that were emerging from the data in previous interviews so that she could follow up these areas in successive interviews. The researcher also thought about where the interviews could take place. The researcher let the participants decide where they would feel most comfortable to undertake the interview, either in the researcher's office, the participant's office or another suitable location suggested by the participant. Interviews were recorded, with the participants' permission and subsequently backed up and stored safely and confidentially.

Most interview participants were available for an interview when given a few weeks' notice, but policy shapers had less availability and these interviews

[8] The snowball technique (Bryman, 2016; Miles et al., 2014; Saunders et al., 2019), is when potential interview participants are suggested by employees who have already been interviewed.

had to be arranged two months in advance, and sometimes re-arranged even then. The researcher began each interview with a short introduction to the project, and she reminded participants that there were 'no right or wrong' answers (particularly a concern for academics). While the interviews were in progress, the researcher took notes throughout. These notes consisted of what was said but also contained notes about an interviewee's facial expressions, changes in tone when talking, pauses when reflecting or thinking about questions. The flexible nature of semi-structured interviews allowed for 'on the spot' questioning if the researcher felt that particular responses needed further probing and examination. As the interviews progressed and themes emerged, some of the interview questions needed refining (see section 4.8.3 below). The interviews were transcribed verbatim in due course by a professional transcription service, which was used to dealing with confidential interview material.

4.8.2 Reflections on data validity and data reliability

The two central themes permeating the literature when evaluating research quality are validity and reliability. Both of these are examined in relation to this research below.

Saunders et al. (2019, p. 218) define validation as: "the process of verifying research data, analysis and interpretation to establish their validity/credibility/authenticity". They suggest two techniques to validate data, first triangulation and second participant validation, both of which techniques have been used in this research. Triangulation (see also section 4.5 above) involves cross referencing the data from the transcripts with other available evidence. For this research, other evidence took the form of organisational annual reports, specific employee blogs and other publicly available information to corroborate the findings in the transcripts. Miles et al. (2014) note that validation is not an 'extra' process but is already present in the research design of a diligent researcher as he/she would have considered and built in 'checks and balances'. This researcher from the outset of the research has been mindful of the need to use several data sources, so as to build in this particular aspect of

quality. McKinnon (1998, p. 42) also supports the use of "multiple indicators of the phenomenon".

Participant validation occurs when the participants are sent back their research data and invited to comment on accuracy. All participants were asked if they would like to review and check their interview transcripts, although not all participants agreed to review their transcripts. Participants who had consented were sent the original interview transcripts and asked to review them for accuracy, and to ensure that their intention and meaning were conveyed. If the participants felt that this had not been done, then they were invited to amend the transcript and send it back to the researcher. Again, in this way, consistency and trustworthiness in the interview transcripts were ensured, and the overall findings of the research validated.

An abductive approach can also enable validation of the research (Lukka and Modell, 2010). They argue that validation "may entail an important explanatory element" (Lukka and Modell, 2010, p. 475). They propose that abduction could help, because in the process of matching, directing and redirecting (see section 4.4), abductive reasoning promotes plausible explanations and naturally dismisses less plausible ones. Therefore the degree of plausibility in itself will validate the research (or not). Hence, using an abductive approach supports this research's plausibility and, therefore, will enhance its validity.

Reliability can be defined as the "[e]xtent to which [a] data collection technique or techniques will yield consistent findings, similar observations would be made or conclusions reached by other researchers or there is transparency in how sense was made from the raw data" (Saunders et al., 2019, p. 815). In essence, reliability checks evaluate whether adequate care and attention has been paid to the research. Miles et al. (2014, p. 312) expand their use of reliability to include dependability and auditability. Scapens (2004, p. 268) goes so far as to describe reliability as "an audit trail" that is procedural in nature. As this research has progressed and taken shape, the researcher has ensured that extensive notes have been taken throughout and that the design of the research has been made explicit. This chapter explains the rationale of the research and how the different parts of the 'jigsaw' have been fitted together, in

order to answer the research questions. Another researcher could review this research because all the appropriate information and reasoning has been made available. Scapens (2004) suggests this clarity and comprehensive documentation as exhibiting reliability.

This research has clearly identified and detailed its philosophical assumptions, positioning and methodology, in order to answer the overall research questions. These specific characteristics (through the explanations above) have been shown to be compatible with the research questions and TF of this study. In this research, a large number of participants (36 participants) was interviewed but compared with the number of people within the employ of the UoN, this is still a small number. The researcher has remained mindful throughout the research that the thoughts, understandings and realities of all the UoN employees will not align exactly across all the participants interviewed.

4.8.3 Data analysis

Once the interviews had been transcribed, the transcripts were analysed using NVivo 12[9]. Using NVivo 12 helped in sorting out the emerging themes from the data. The themes started with umbrella terms such as 'internal structures', 'external structures'(based on the TF) and then extended out to a hierarchical system of more specific themes and areas. The transcripts were then individually investigated using methodological bracketing. Methodological brackets provide the mechanism by which data can be analysed. There are two types of bracketing, first brackets of agent conduct and second brackets of agent context. They are also used to suspend temporarily the duality between structure and agency (see Chapter 3). This temporary suspension enables the researcher to focus on either agent conduct or agent context. In order to operationalise bracketing within SST, Stones (2005) suggests some recurrent steps that can be applied to the research process (see Stones, 2005, p. 123). These recurrent steps were applied to each individual transcript, and while this was being done, the interviewee whose transcript was being analysed became the agent-in-focus (AiF). Applying the methodological brackets of conduct analyses reveals the

[9] NVivo is a type of computer assisted qualitative data analysis software. It is a "program[s] containing a range of tools to facilitate the analysis of qualitative data" (Saunders et al., 2019, p. 692).

internal structures (conjuncturally–specific and general–dispositional) of AiFs, and context analysis reveals the external structures and the position–practice relations present.

As the different interview scripts were analysed, the AiF changes, thus acting as a different lens through which to view the phenomenon. Feeney and Pierce (2016, p. 1172) refer to this as 'micro-analysis'. This detailed analysis using both the brackets enabled them to isolate external and internal structures, active agency and outcomes. Thus they could then cast the process of structuration using Stones's (2005) quadripartite framework. Warren and Jack (2018) use one side of methodological bracketing, that is conduct analysis, to illuminate what agents thought about their contexts, how they planned their conduct and the actions that they took thereafter. Both of these studies demonstrate how methodological brackets have been utilised to analyse data collected, and provide reassurance to the researcher that they are an appropriate tool for data analysis.

4.9 Summary

This chapter has discussed and explained the research methodology and methods adopted to execute investigations into exploring the phenomenon of employee sustainability behaviour and action at the UoN. The 'research onion' has been used to help frame the research assumptions and methodological rationale adopted in this study.

The over-arching reality that this research assumes is one that is mentally constructed, that is, reality is created, subjectively, in the minds of social actors. The social actor's information (of knowledge and meaning) regarding reality needs to be obtained from the social actor, in order to understand his/her particular reality. Following an interpretive philosophy emphasises the subjective nature of an actor's reality and understanding that reality from an actor's perspective. The researcher has embraced an abductive approach to theory development because it gives primacy to both theory and empirics. To support the selected ontology and epistemology of this research, a qualitative methodological choice has been made. This choice supports the pursuit of meaning and interpretation as expressed through the use of words by the UoN employees rather than numerical expressions. A case study strategy has been

selected because it provides the context within which the phenomenon exists and, therefore, can be investigated. It also supports the philosophical assumptions that underpin the study and offers the potential to refine theory that is anchored in empirical data. The cross-sectional approach to this study assists with the time parameters of the project and the duration of the WasteNott initiative at the UoN (see Chapter 5, section 5.5). The final layer of data collection and analysis has been arrived at by considering all the previous 'layers'. The primary data collection method of semi-structured interviews was able to capture the richness of an employee's understanding of his/her social world and work environment.

Chapter 5 Background to the Research and Introduction to the Empirical Chapters

5.1 Introduction

This chapter extends the contextual background to the research and contains a brief introduction to the empirical chapters. The focus of this chapter is to highlight visible objective and subjective factors present within the contextual field already. In particular, it explains some of the external forces that act on the University of Nottingham (UoN), such as regulators and other connected stakeholders. In addition, the chapter introduces the research organisation including its strategic vision and overall strategy, and provides the contextual information to examine subsequently the sustainability credentials of the organisation. The investigation of the contextual environment (objective and subjective) is essential, in order to understand 'how and why' social actors confront and live in their environments, in the way that they do.

Section 5.2 details the sector in which the research is based, and thereafter section 5.3 discusses the research organisation. Section 5.4 focuses on the organisation's sustainability credentials and initiatives, including the WasteNott initiative. Section 5.5 explores the WasteNott initiative and incorporates illustrative comments from the interview participants. The final section, Section 5.6, introduces the main themes and sub-themes that have emerged from the interview data through the lens of Strong Structuration Theory (SST) (Stones, 2005, 2015) using methodological bracketing (see Chapter 3 for more detail). Section 5.7 provides a summary of the chapter.

5.2 Research sector

The organisation that will be used in this research is a university in the United Kingdom (UK). Currently, most universities are classified by the Office of National Statistics (ONS, 2017) as "non-profit institutions serving households (NPISH)". This classification predates the significant increase in tuition fees, the changes in university funding and the adoption of the European System of Accounts' statistical framework (ONS, 2017). In light of these major changes, the ONS is currently reviewing its classification of universities and suggests

that, in future, a university will be classified as either a "private non-financial corporation" or remain as an NPISH. However, a statement issued by the ONS in April 2018 indicates that the review for the time being has been paused (ONS, 2018). For the purpose of this research, the university used will be deemed an NPISH.

An NPISH as defined by *The UK National Accounts, Blue Book 2019* (ONS, 2019) as an institution that:

- provides goods and services, either free or below the market prices
- mainly derives its income from grants and donations
- is not controlled by government

The ONS goes on to say that in the UK the NPISH sector includes:

- charitable organisations
- trade unions
- religious organisations
- political parties
- universities and further education establishments

Whilst universities do not have shareholders or a profit motive to satisfy, they do have stakeholders and they need to be run as going concerns. Carroll (1993, p. 60) advises that stakeholders are "those groups or individuals with whom the organisation interacts or has interdependencies" and "any individual or group who can affect or who is affected by the actions, decisions, policies, practices or goals of the organisation". For a university in the UK, one of its key stakeholders (and one of its funders) is the government. A 2016 report entitled *University Funding Explained*, published by Universities UK, suggests that just over 25% of university funding is provided from UK government sources (Universities UK, 2016).

Up until 1 April 2018 the Higher Education Funding Council for England (HEFCE) had two important roles within the sector. The first was to distribute government funding to universities and further education colleges, and the second to serve as the sector's regulator. Since then, HEFCE's responsibilities have been divided between two newly created organisations, each of which is deemed to be a non-departmental public body (NDPB). An NDPB is defined as a "body which has a role in the processes of national government, but is not a

government department or part of one, and which accordingly operates to a greater or lesser extent at arm's length from ministers" (UK Government, 2013), although an NDPB is accountable to Parliament via a 'sponsoring' ministerial department. This means that there a relationship back to government albeit at a distance.

The two new NDPBs that were created are UK Research and Innovation (UKRI) and the Office for Students (OfS). The UKRI was established to oversee the funding of universities and is supported by the Department for Business, Energy and Industrial Strategy. On its web pages, under *Themes and Programmes*, UKRI publicises that it is interested in funding several areas that fall within the remit of sustainability, such as urbanisation, energy and food (UKRI, n.d.). Given UKRI's interest in sustainability, universities would be incentivised to focus on sustainability research because funding and income are linked to this particular theme. Though this NDPB is at 'arm's length' in relation to the government, there is potentially some influence that the government could exert on the nature of research funded by UKRI. The OfS is responsible for the regulation of universities and is supported by the Department for Education. The aims of the OfS are to defend and support the interests of students and ensure that students receive a "good deal for their investment in higher education" (UK Government, 2018).

5.3 Research organisation

As detailed above, universities historically have been deemed to be part of the non-profit institution sector, supporting the position that they have motivations other than profit maximisation. Research that concentrates on the non-profit sector in terms of sustainability, at the employee level using SST (Stones, 2005), has been limited. Many of the studies discussed in the preceding chapters are conducted in profit-seeking organisations, researching sustainability strategy implementation using other theoretical frameworks. Concentrating on a research site in the non-profit sector – in particular, a large charitable status organisation, at the micro level – is therefore likely to reveal new understanding and knowledge of sustainability that will contribute to extending the current body of literature, and answer the research questions (see Chapter 2).

The university that has been chosen for this research is the UoN of Nottingham (UoN). Approval to identify the research organisation within the thesis has been obtained from the UoN via the Ethics Committee. According to its *Global Review and Financial Statements Report (GRaFS)* in 2018 (UoN, 2018a, p. 38), "[t]he University is a corporation formed by Royal Charter and is an educational charity". The University is a large organisation and will have many management control systems (MCSs) in operation. The size of the organisation will allow consideration of the formalised MCSs utilised for sustainability behaviour management that may not be present in smaller organisations as well as of the informal control systems that may be present (such as culture). In addition, it has meant that a large pool of participants could be drawn from to assess how employees engage with sustainability. In previous research, the number of interview participants has been small and researchers have called for studies in larger, more complex organisations (see Feeney and Pierce, 2016). The UoN has been chosen for its particular sustainability credentials/initiatives and ease of accessibility, which provide the sustainability system interactions/sustainability MCSs that this research seeks to explore.

By revealing the identity of the research site this research will be able to provide the essential context and background to the research, which form a significant part of why this organisation was chosen. This consideration of the context in addition supports the importance of contextual framing that is a key dimension of using SST (Stones, 2005).

The University's 2017 *GRaFS Report* (UoN 2017 p. 36) promoted the UoN as a "leader in the field of sustainability", evidencing this by referring to its second position ranking "in the 2017 Universitas Indonesia (UI) Green Metric World University Ranking". The UoN has received other accolades for its 'green' campuses. They are noted in the 2019 UoN's Financial Statements, such as "securing a Green Flag award for the sixth year in a row on the University's Jubilee Campus and for the 16th year on University Park (UoN, 2019a). The Green Flag Award scheme "recognises and rewards well managed parks and green spaces, setting the benchmark standard for the management of recreational outdoor spaces across the United Kingdom and around the world" (Green Flag Award, 2020).

During the time period covered by this research the UoN published its new strategy, in December 2019 (UoN, 2019b). Professor Andy Long, Provost and Deputy Vice-Chancellor, introduced the University's new strategy via a blog saying:

> I am delighted to publish the new University Strategy which will guide our community's research, teaching and operations over the long term. It articulates decisively a core set of principles and values, which are shared across our global institution – whether in Nottingham UK, Ningbo China, or Semenyih Malaysia – as one University with campuses in three countries. (UoN, 2019c).

The implementation of the new strategy will began in earnest in the 2020/21 academic year, and is underpinned by seven strategic aims.[10] Of the seven aims, two are pertinent to the theme of sustainability to varying degrees. The first is the aim of "cherishing the natural environment and providing spaces that support the wellbeing of the community" and second, the aim to contribute to the "United Nations sustainable development goals through our research, education and engagement with partners, and supporting Nottingham's desire to be zero carbon by 2028 and working with partners in China and Malaysia to improve sustainability within their regions" (UoN, 2019c). The advent of the new University strategy indicates that sustainability is seen as a very important issue for the University as it has appeared in two of the seven aims.

5.4 Sustainability credentials and initiatives

The UoN has clearly set out its policy and performance vision regarding sustainability (UoN, n.d.(a)):

> We will make an outstanding contribution to supporting the United Nations Sustainable Development Goals (SDGs) through our research and education, our engagement with partners and our behaviour on campus and in our communities. We will place a special emphasis on environmental sustainability, supporting the City of Nottingham's desire to be a net zero carbon city by 2028 and working with partners in China and Malaysia to improve sustainability within their regions.

[10] The empirical evidence for this research was carried out before the pandemic. The possible impact on the strategy of the pandemic is considered in the concluding chapter of the thesis.

This University's commitment to sustainability manifests itself in different ways. Some of the mechanisms by which the UoN executes its sustainability responsibility are discussed below. In addition, the UoN has many initiatives that it uses to promote its sustainability impact and inform stakeholders of its sustainability activities, some of which are also incorporated into the discussions below.

The UoN has a sustainability newsletter, called the *Sustainable Nottingham* bulletin that is published monthly (UoN, n.d.(b)). This bulletin reports on sustainability activities and developments taking place within the University. Whilst the bulletin is freely available on the website, if someone searches for it, recipients who wish to receive it on a regular basis need to subscribe to it.

The University has a keen interest in ensuring that its buildings are sustainable and that they minimise their environmental impact. Part of how it delivers environmentally friendly buildings is by using the BREEAM and Passivhaus energy efficiency standards. BREEAM (2020) "is an international scheme that provides independent third party certification of the assessment of the sustainability performance of individual buildings, communities and infrastructure projects". The Passivhaus principles have been developed by the German-based Passivhaus Institute (Passivhaus, n.d.), which defines Passivhaus buildings as ones "provid[ing] a high level of occupant comfort while using very little energy for heating and cooling". This aspect of the campus buildings having a sustainability focus was commented on by one AiF,[11] who observed that:

> *Er I am also aware of the way in which this campus er is designed architecturally to get maximum benefit from renewable energies and from er things like heat pumps and recycling of grey water and things like that. (AD4)*

The UoN's strategic plans regarding sustainability have impacted on other areas too, such as catering, transport, carbon and energy, waste and

[11] A list of all abbreviations can be found on page vii.

recycling. Ways in which it evidences its commitment in these areas are discussed below.

First it has adopted a sustainable food policy (UoN, 2016). The food policy document provides guidance about how/which food should be procured for the University. Some key elements that it concentrates on are the reduction of food 'miles',[12] the increase in use of biodegradable packaging for sandwiches and use of cleaning materials that have a reduced impact on the environment.

Second, the University has a community of over 40,000 people (staff and students) spread over a multi-site campus in Nottingham. In addition, it has two sister campuses in Malaysia and China. Owing to this volume of people and location of sites, it generates a substantial need for travel and communication. To support staff and students in making informed travel choices, the University has several transport initiatives designed to encourage low carbon and healthier travel, for example, walking or cycling. Some of these initiatives are free electric car charging points, a car share scheme for staff, cycle hire/buy schemes and video conferencing (UoN, n.d.(c)). Video conferencing reduces the need for people to travel to meet colleagues, which is especially useful for the UoN as it is a tri-campus university (England, Malaysia and China) and employees will need to meet other colleagues from different campuses. AiFs are aware of some of the schemes, as can be seen in this comment by AiF AD3: "*... and they [UoN] have got the schemes like the cycle to work scheme and things like that*".[13]

Third, the UoN reports annually on its progress towards energy efficiency and reduction of carbon. Not only is the University concentrating on reducing its consumption of energy and lowering its carbon emissions, but it is also looking for ways of improving its efficiency and ensuring it has robust energy systems in place. Hence the University generates its energy partly from renewable sources, such as solar panels, biomass boilers and ground source heat pumps. The University announced in April 2018 that it would completely divest its investment portfolio from fossil fuels in the following 12 months (UoN, 2018b).

[12] Food miles are calculated as the distance from where the food has been grown to where the food is eaten.

[13] The established remote communication technology has also made moving to 'life-online' easier during the Covid-19 pandemic.

Fourth, according to its website, the University estimates that it produces "3,000" tonnes of waste each year, the majority of which has usually gone to landfill. However, publicly available figures for the University indicate that the recycling rate has significantly improved. Per the University's website, the recycling rate was 5% in 2005 but increased to 99% in the year 2017/18. To assist with waste reduction and improvements in recycling, the University launched its "WasteNott" initiative, which sought to reduce the amount of 'single-use' plastic used on the UK campuses (UoN, n.d.(d)).

Investigations and evidence gathering from publicly available information for this thesis, particularly for this section, have demonstrated that the UoN is strongly committed to its sustainability credentials and exploring new ways of working that minimise or reduce its daily operational impact on all of its campuses. Its interest in sustainability and in discharging its social responsibility extends beyond solely buildings, as it has included initiatives within its most recent strategic plan to deliver better sustainability practices in many areas: catering, in the form of reduction of food miles; transport, in the form of electric car charging points; waste and recycling in the form of different categories of bin for different types of waste, etc. The information accessible via the internet, that is, in the public domain, presents a sustainability-aware and proactive organisation that is doing myriad things to limit its environmental impact and promote its sustainability credentials.

These sustainability initiatives and schemes form part of the MCS that the organisation uses to direct sustainable behaviour. Whilst there are some facts and figures that appear to support the University's aim of being more sustainable, how these initiatives impact on individuals working or studying at the University is less apparent.

The UoN's website (UoN, 2018c) publishes its commitment to the United Nations' (UN) Sustainable Development Goals (SDGs) and seeks to support students and staff to meet these targets. The UN SDGs are a framework of 17 goals designed to assist organisations in all countries to deliver the UN *2030 Agenda For Sustainable Development*. The SDGs officially came into effect on 1 January 2016, having been agreed by world leaders at the UN summit in September 2015 (UN, 2018). These goals are designed for all countries as a

call to action, aiming to fulfil a tripartite objective: to end poverty, fight inequality and injustice, and address climate change (UN, 2015). In addition to the SDGs, the University has also adopted a more educational-focused sustainability framework, in the form of the UN Principles of Responsible Management Education (UN PRME). This voluntary framework provides academic institutions, in particular business and management schools, with guidance on how to integrate sustainability, responsibility and ethical values into their respective teaching curricula and research. The integration of these themes will, UN PRME envisages, contribute to better sustainable development by raising "the profile of sustainability in schools [business and management schools] around the world, [and equip] today's business students with the understanding and ability to deliver change tomorrow" (UN PRME, 2020a). A testament to the efforts of the UoN Business School in this matter is provided by the School successfully claiming the award for UN PRME Champion and maintaining it over several years (UN PRME, 2020b). The public commitment shown by the University to both these international frameworks demonstrates a keen interest in sustainability. Furthermore, it evidences the UoN's motivation to be doing, and to be seen to be doing, its part in contributing to sustainability at an international level.

The UoN has supported several initiatives as discussed above, but the initiative that this research is most interested in is the WasteNott campaign. The following section looks at this initiative in more detail.

5.5 The WasteNott initiative

This research was conducted to align with the running of the WasteNott campaign to ensure that a sustainability initiative was 'active', in order to gauge the degree of engagement of employees. The essence of the WasteNott campaign, according to the website (UoN, n.d.(e)), was to reduce the amount of "single-use plastics" across the UoN campuses. The 2019 Financial Statements reported that "[t]he University's #WasteNott campaign began in September 2018 and has actively engaged staff and students in reducing unnecessary plastics – targeting single-use hot drinks cups and reducing their number by over 50,000 in the first 9 months" (UoN, 2019a). The initiative was supported by the

Vice Chancellor, Professor Shearer West, who commented "Reducing single-use plastic on campus is an important part of our commitment to environmental sustainability" (UoN, n.d.(f)). The leadership of senior management is further evidenced in the comment below from one of the participants in the policy shaper group.

> *There's a lot more buy-in around this agenda from the top. You know, the whole WasteNott campaign came, effectively, from the Vice Chancellor. You know, she had an interest, like lots of people, she saw Blue Planet and wasn't comfortable with that, and so that's where WasteNott developed. So yes, I think we've, yes, we have seen, I suppose it comes down to three areas, more resource available for initiatives, more senior buy-in and much broader and not just estates focused. Not that we've got it right yet. (PO2)*

The observation from PO4 (below) suggests that the WasteNott campaign has received a lot of campus publicity since its emergence, through the use of posters around the University and at the point of sale in cafes around the campus, and is well recognised.

> *WasteNott was the most noticeable thing that's happened during my time here. Er WasteNott campaign is very well run and it only started as a single-use plastic campaign. It's now one of the most recognisable campaigns across the whole University. (PO4)*

The quotes below suggest, however, that the campaign is not as 'recognisable' as PO4 thinks. This employee (AD2) seems to be struggling to name any initiatives or campaigns, except the "cup one" which was in part related to the WasteNott initiative. This participant has been in the employ of the UoN for over 20 years but was unable to think of any sustainable initiatives that were familiar.

> ***Are you aware of any sustainability initiatives at the UoN?***
>
> *The cup one which I have mentioned er.*
>
> ***Any others you have you might have heard about?***
>
> *(No response)*

Or any of these initiatives you have seen or things that have changed?

I am sure there must be.

Any that come to mind, if they don't – there is no right or wrong answer?

... I am sure there must be but I can't bring any to mind. (PO4)

For one participant (AC2) the WasteNott campaign and other sustainability initiatives generated a more sceptical tone. The description below points towards the Business School *"trying to ... at least"* do something towards sustainability. In reference to the WasteNott campaign in particular, a *"symbolic"* rather than a *"substantive"* change is noted.

> *Er so well University of Nottingham they are kind of trying to, well I think the Business School at least, er the University also, er so you have got the WasteNott campaign at the moment. Er they are also encouraging through student activities like Enactus, social enterprises that address sustainability. Er so WasteNott is the cup thing so I don't know if that is kind of also very symbolic rather than really substantive. Er but you know there are initiatives like that and also you know trying to support er research centres, disciplinary research centres that address different facets of the ecological or social challenges like you know modern slavery or future food systems, or green transport, or you know green chemicals whatever that means. All of that I think is part of what the University is trying to do. (AC2)*

For other employees such as AC3 (below) sustainability initiatives evoke little interest.

Are you aware of any sustainability initiatives at the UoN?

> *Yes but I don't know that well, I heard UoN something or …. I am pretty sure I heard the printing centre, the printing system that was I heard that is another sustainability issue. I heard a couple but I don't pay too much attention.*

Do you take part in any of these initiatives?

No.

The above quotes relating to the WasteNott initiative suggest that there are varying degrees of employee engagement with the initiative, supporting the case for the research questions of this thesis (see Chapter 2).

5.6 Themes emerging from the data

Five central over-arching themes/categories have emerged from the analysis of the interview data. These are waste, environment, knowledge, control systems and media. The five themes are illustrated in the diagram below.

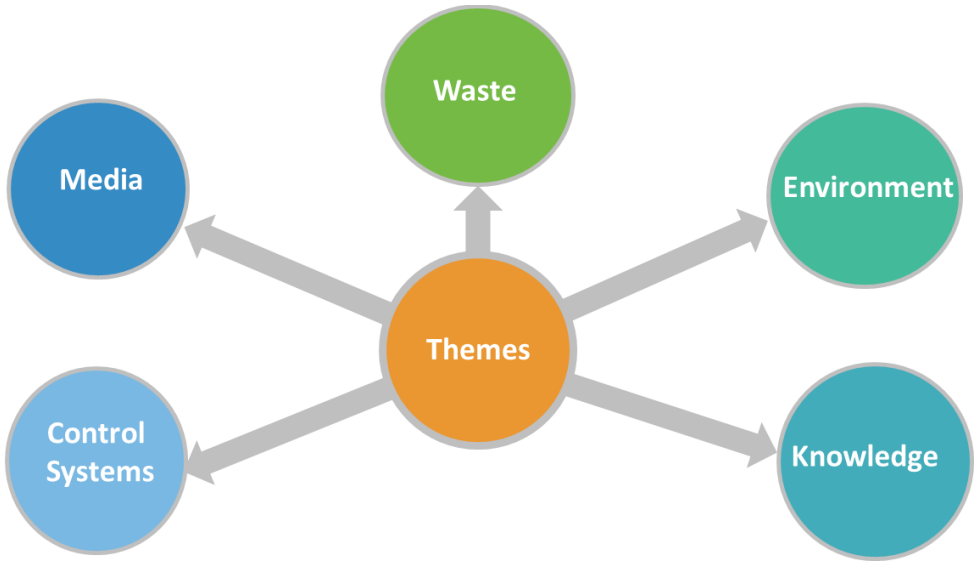


Figure 5.1: Five themes emerging from the data.

Each of the five themes has itself served as an 'over-arching' theme that has been further analysed into sub-themes. These corresponding sub-themes and their relationships to the five central themes are illustrated in the diagram below.

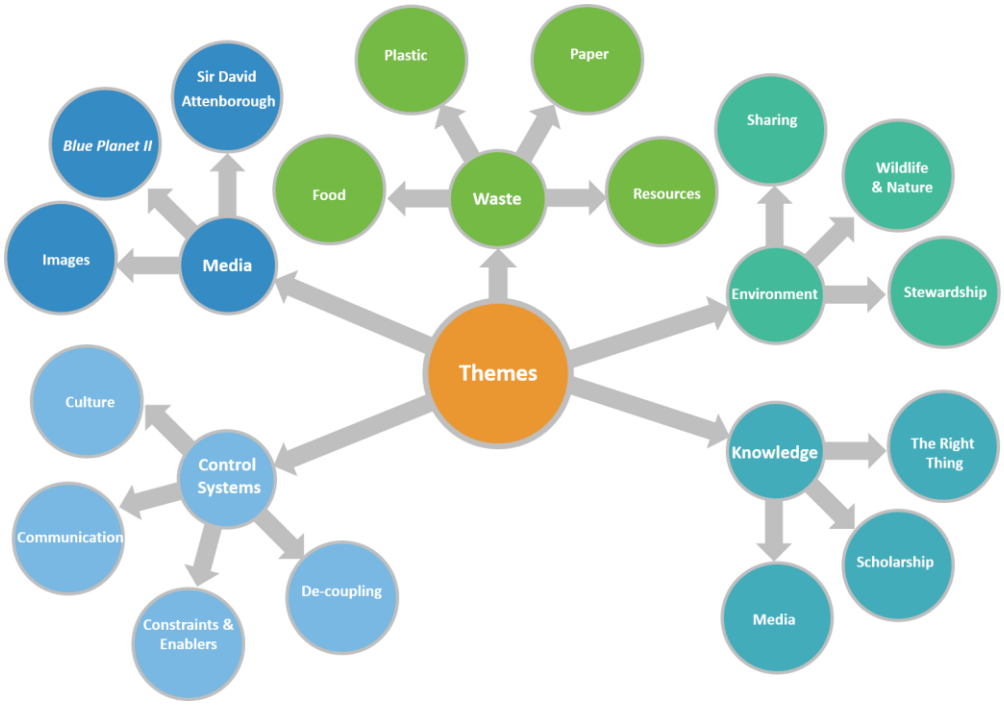


Figure 5.2: Five overall themes from Figure 5.1 and their respective sub-themes

Each of the main themes and sub-themes is described in Figure 5.3 below.

Main Theme	Description	Sub-theme	Description
Waste	Investigates how waste is related to the theme of sustainability for employees.	Food	Examining how food is related to the concept of sustainability and waste.
		Plastic	Plastic waste is a key concern for many employees.
		Paper	Within the University paper and the theme of waste are closely related for many employees.
		Resources	The meaning of sustainability is embedded within resource stewardship.
Environment	Examines the immediate environment of the employee and employee conduct. In addition, investigates the societal and global environment of the employee.	Sharing	Examining how employees share their sustainability views with others in their environment.
		Wildlife & Nature	Investigating how wildlife and nature are implicated in an employee's understanding of sustainability.
		Stewardship	How the care of the environment is considered as a responsibility by employees.
Knowledge	Explores how employees evaluate what to do and how to behave. Explores how employees develop their knowledge of sustainability.	The Right Thing	Explores the understanding of an employee in terms of right and wrong.
		Scholarship	How employees learn and develop their sustainability knowledge.
		Media	Examines influence of media on the knowledge of employees.
Control Systems	The systems that are in place influence how employees behave and act. This theme considers the extent to which the current systems enable sustainability.	De-coupling	Identifies aspects of the current sustainability system that are disjointed from one another.
		Constraints & Enablers	Examines the constraints and the enablers of sustainability that employees encounter.
		Communication	Investigates how employees feel about sustainability communication within the organisation.
		Culture	Observations regarding the prevailing culture of the organisation.
Media	Particular aspects of the media have influenced employees to behave more sustainably.	Images	How particular images have impacted on employees.
		Blue Planet II	What particular aspects of this programme have affected employees.
		Sir David Attenborough	Examines how David Attenborough is perceived in relation to the concept of sustainability.

Figure 5.3: Descriptions of main themes and sub-themes.

The themes and sub-themes have emerged using SST (Stones, 2005), in particular by using the quadripartite framework and methodological bracketing as lenses to examine the data. The themes and sub-themes are discussed further in the findings, in Chapters 6, 7, 8, 9 and 10.

5.7 Summary

This chapter has highlighted the contextual factors, both objective and subjective, that confront an employee at the UoN. The discussions in the proceeding empirical chapters are framed by some of these factors.

In addition, the chapter has identified the main themes and sub-themes that have emerged from the data, using SST (Stones, 2005). The following chapters examine each theme and sub-theme in more detail using Stones's (2005) quadripartite framework and methodological bracketing (see Chapter 3). These five findings' chapters seek to illuminate and understand the response of employees in relation to their own unique position and prevailing context/s.

Chapter 6 Waste

6.1 Introduction

This chapter is concerned with the theme of waste. The discussions explain how the concept of waste is thought about in the everyday lives of employees at the University of Nottingham (UoN). Furthermore, the chapter unpacks the complex behaviour of the social actors relative to their understanding of the issues connected to waste.

The central theme of waste incorporates four sub-themes, Figure 6.1 (below) illustrates the relationship of the sub-themes emanating from the central theme of waste. The first sub-theme to be examined is food, in section 6.2. The discussions then turn (in section 6.3) to issues of plastic waste and some of the concerns relating to plastic that employees have aired during the interviews. Section 6.4 then considers issues of paper waste. The last sub-theme is resources (section 6.5), which explores some of the broader findings surrounding the waste of resources in general rather than focusing on specific areas of waste (sections 6.2–6.4). Section 6.6 provides a summary of the key points of the chapter.

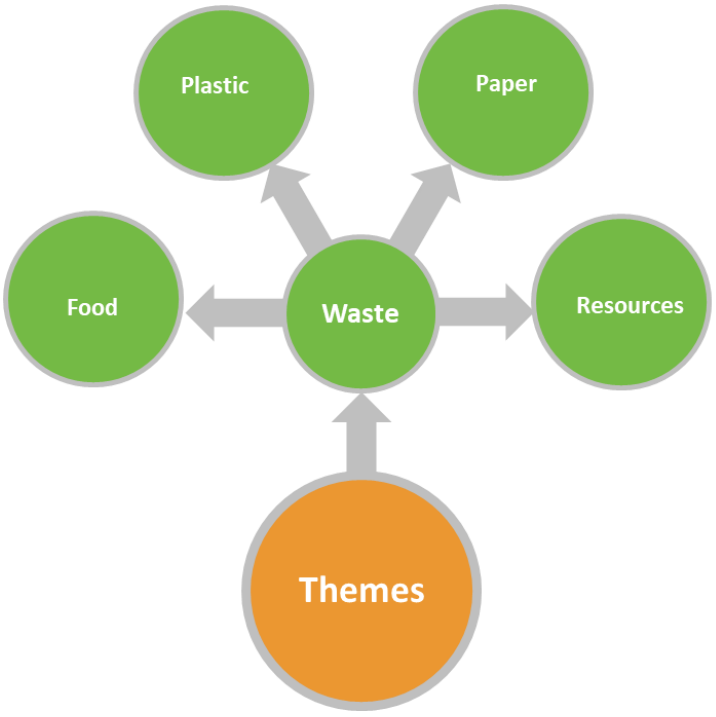


Figure 6.1: The overall theme of waste emerging and subsequent sub-themes.

The issue of waste was a common theme that emerged from the data and several AiFs referred to waste as a factor that has influenced their sustainability engagement. In particular, it is the inefficient consumption of a resource that seems to be affecting AiFs when it comes to waste. The comment below reflects this concern.

> *OK, so I take that very personally, what I associate with sustainability. So it's an abhorrence of waste, it's an abhorrence of excessive unnecessary consumption. It's an understanding of the effort and the energy that goes into producing something and, therefore, it's the respect for the output of that energy and that effort. (PO5)*

What is interesting about this comment is that it is not limited to the stewardship of finite resources (Almond et al., 2020). It is a more insightful perspective that considers "excessive unnecessary consumption" and it considers both the input into and output from the commodity that is produced. These comments are similar to the holistic approach that the notion of a circular economy model suggests (see Attenborough, 2020; Geissdoerfer et al., 2017; Stahel, 2016; WRAP, 2020), in contrast with an industrial model of "take-make-waste" (EMAF, 2017). Though waste for many individuals is embedded within the concept of resource stewardship, for this AiF it means much more. In fact, the comment implies that the AiF recognises waste to be more than just the physical and tangible aspects of waste management, and shows understanding of the less visible aspects of waste, such as the energy and the effort input throughout the lifecycle of the product. This particular AiF's understanding of waste seems to be particularly well developed.

The overall theme of waste aligns to the significant literature regarding waste in the literature review chapter (Chapter 2). The issue of waste has received much traction on a global scale and there is a worldwide 'push' not only to manage better the waste humans are producing but also to change consumption patterns. Part of this is seen in the various reports that have been produced by the United Nations (UN) at an international level (Hertwich et al., 2009) and at a national level by the Department for Environment Food and Rural

Affairs (DEFRA) (UK Government, 2018). The next section considers the sub-theme of food waste that emerged from the central theme of waste.

6.2 Food

Food waste was a key theme that emerged from the data. This theme was in relation to external structures and pressures, such as supermarkets and corporate food waste, for example, organisational meetings that have surplus left-over catering after the meeting has ended. The issues of dietary choices also emerged as a sub-set of the food sub-theme. This area in particular demonstrates how the conduct and praxis of AiFs are underpinned by their context analysis and their internal structures (see Chapter 3). This is examined using methodological bracketing and position–practice relationships throughout the chapter.

The comment below from AD3 suggests that the levels of food waste that are present in society are not commonly known, because the AiF conveys genuine surprise at the food waste figures that he/she has encountered.

> *[T]here was a statistic that shocked me at how much food is grown and not used, it's sort of thrown away. I can't remember but it was a high percentage high enough to think 'my goodness'. And it wasn't just the thought you know that we buy food and we waste our money because we throw it away. It was the thought of all that energy into producing that food and it being thrown away. So yes little things and then you know you try and make these little changes. (AD3)*

The above comment is interesting as although AD3 cannot recollect precisely the percentage figure, AD3 does remember that it was a significant figure that has prompted him/her to make changes in his/her behaviour. This recollection may have been from media sources such as television, radio, newspapers, etc., and while the AiF has not remembered the mode of communication, he/she has been able to recall that the food waste figures were impactful enough to shock him/her (for more information on media see Chapter 10). This resonates with the figures reported by the Food and Agriculture Organisation of the United Nations (FAO) (FAO, 2011) as regards the amount of food waste on a global scale.

Food waste reduction can also be seen in the workplace at the UoN as illustrated by the comment below by AD3.

> *Oooh … I suppose so waste food, so a part of my job and the team I work in is you know we organise meetings, seminars perhaps, er we might be asked to order … er biscuits, cakes, sandwiches and er we do that through delivered catering. And ... I have, along with other team members, when that meeting has finished we go and we take away the food that has been left over and we will circulate information to say it's available for somebody. (AD3)*

The AiF draws on his/her internal structure of waste reduction within habitus to deliver an outcome in his/her conjuncturally–specific domain that minimises the food wasted after meetings. This behaviour is not necessarily part of AD3's work responsibilities but the AiF, in a bid to reduce food waste, mobilises his/her agency via his/her internal structures to redirect the surplus food. This usage of agency is achieved by the agent examining his/her local environmental context and then comparing that with individual personal values and beliefs, that is, mobilisation of his/her conjuncturally–specific knowledge. This praxis is not only evident in the AiF's conduct in isolation but is exhibited by his/her team members. This indicates that there is potentially sharing and learning of practices within this AiF's local environment and that there is a consensus view, or rather a commonality, between the teams' internal structures. This redistribution of food also demonstrates a way of employees being able to implement their sustainability engagement at work. As Stones (2005, p. 101) suggests, this creativity and innovation in the AiF's agency with regard to the redirection of food surplus is "a response or [a] reply to the exigencies of the situation on the basis of a *combination* [emphasis in original] of the orientations, principles, habits and skills sedimented within habitus". This behaviour is also present at a more strategic/executive level, as the following observation demonstrates.

> *Er I think now the initiative around er catering for university meetings, over-supply of food er, UEB [University Executive Board] is taking a lead on not having meat in any of its catered events which is quite an interesting commitment. Er although we had a catered event in here the other day in my faculty and there were probably maybe five percent of the sandwiches were vegetarian and the rest was meat. And there was an over-supply of food. It's difficult to get the balance right but I have*

been at meetings where you have had four trays of sandwiches left over right so there is a big question around appropriateness there. (PO11)

Employees also focused on food waste in general, at both societal and macro levels.

…. Because we are in a culture where we shouldn't have wastage, we shouldn't even have big corporations like Tesco's or Sainsbury's throwing out food. There shouldn't be an amass of wastage like what we have. And I think because I've grown up in a culture where we don't have wastage or you take on your plate what you can eat and you make sure you can eat it all, don't take any more if you are not going to eat it. (AD9)

This is an interesting comment by AD9 as he/she observes that "we are in a culture where" we should not have waste. It suggests that, because we live in a developed country where we do have basic comforts such as access to food (UNDP, 2020), we should not be wasting it. Not only does this signal an awareness of intra-generational equity but also indicates how AD9 perceives his/her world. AD9's perceptions have been informed by the culture around him/her growing up and this has remained within his/her habitus from childhood into adulthood. This is addressed in the literature by Palmer and Finlay (2003), who draw out the significance of culture, faith and beliefs as aspects that develop the mind. This is further supported by Kahn's (2002) suggestion of how children can prioritise and act on their own internal values. Putting both these aspects together, the significance of culture (context) and aspects of habitus formed in childhood seem to shape the conduct of the AiF in the present. In addition, there seem to be two cultures present for this AiF – one in the external environment and one in the agent's internal structures. What is interesting is that the AiF comments on the macro and micro contexts but leaves out the meso level organisational cultural context in which he/she is actually embedded whilst at work. In reference to AD9's comment regarding supermarkets, the issue of waste has been recognised at a societal level, and recently some of the biggest food retailers have committed to a government pledge that seeks to reduce food waste by a half by 2030 (UK Government, 2019).

All the above observations addressing food waste seem to suggest that valuing food and not wasting it are priorities at an individual level. A further aspect of food waste that emerged was that of dietary choices made by an AiF. Several AiFs commented that they had reduced meat and/or dairy consumption because of environmental concerns. Some employees had made the move to vegetarian or vegan diets because they felt very strongly about how their personal dietary choices were impacting on sustainability issues.

> *Er … in recent times the fact that I have become vegan and so I don't have any animal products at all in my diet. I think that er farming and the way animals are used for food is very damaging to the environment so I have taken that out of my own diet. I do a lot of reading about er the effects on the climate, renewable energy things like that, listen to a lot of podcasts so it's quite an important thing for me. (AD5)*

The comment above (AD5) supports the finding of Kalof et al. (1999) in terms of environmental factors being the primary reason for a change to a vegetarian diet, though in the case of AD5 it is a vegan diet and lifestyle. AD5 is intensely attached to his/her views and comments that it is "quite an important thing for me". To choose to eliminate all animal products from one's diet is a difficult thing to do, but this does highlight the degree to which the AiF has been affected by his/her context (such as reading and listening to podcasts) which have promoted a marked and significant change in conduct. For other AiFs, there has not been a complete change in diet, but the AiF (AC2, below) is more aware of what he/she is eating and the implications of eating certain foods, for example, meat.

> *I switched my diet as well, well kind of tried, to switch my diet to eat a lot less meat. Er I wouldn't say I was fully vegetarian or vegan because I am not evangelical about anything so I wouldn't be with that. But I try to eat stuff that I know like if it's meat or fish where I know where it comes from er but it can't happen all the time and it doesn't. And it does make me feel guilty when I don't follow that. (AC2)*

The dietary comments of AC2 (above) support the findings of Fox and Ward (2008), and although their study examined vegetarians, their research found that a person's reasoning behind particular dietary choices can change

over time. This has implications for food policy makers and producers at a macro level in that dietary habits are potentially flexible, and as individuals become more knowledgeable about the consequences of their food choices, such as the effect of the food supply chain, there may be significant changes to how and what individuals consume. This demonstrates that internal structures, such as those influencing food consumption are not permanent, and that critical reflection and a reordering of priorities can augment the habitus structures. Another interesting aspect to note is that by not adhering to the AiF's own dietary conduct whereby the provenance of food to be consumed is known, an emotional response of guilt is drawn out in the AiF. This negative emotion may reinforce making better choices the next time, that is, choices that align more to the agent's personal internal structures.

The change in dietary habits is exerting pressure on those who have not as yet changed their habits and the lack of change is seen by the AiF below as wrong.

> *... there is a building trend now to turn away from meat and become vegetarian. I have got family members who are vegetarian. I am not a vegetarian and that makes me a bad person in the sustainability world right, I should be a vegetarian. I should be consuming ethically, I shouldn't have leather products, a whole range of behaviours that are consistent with a sustainability agenda that I am not engaging in. (PO11)*

The move away from meat products resonates with societal changes in food trends, such as the introduction by Greggs of a vegan 'sausage' roll (BBC, 2019a). The AiF (PO11) is feeling a force that is making the agent think about choices he/she is making, and this is further highlighted to the AiF in his/her family context. The impact on the internal structures of the AiF, from the prevailing forces the AiF encounters, results in feelings of guilt, though mild. This is observed from the comments below:

> *... where I feel you know mildly guilty is if I eat a big burger or a big steak because I don't really think about the food process that brought that steak to my table. And if I read the literature er you know the environmental requirement if you will of bringing steak to the table is so much higher than bringing a salad to the table right. Er and the same*

with poultry production. So mass production of meat is hugely damaging to the environment but I haven't yet changed my consumption habits. Because I am a hopeless omnivore (laughs). (PO11)

This suggests that, though slow, there are changes occurring in this agent's internal structures, in particular his/her habitus via the emotional response of guilt that over time may result in consumption changes. Access to credible and relevant information in relation to the "burger" or "steak" being eaten for this AiF may potentially have a more significant impact. The AiF comments that, "if" he/she reads "the literature", it would show that the environmental cost of meat is high, which implies that the AiF does know the impact of his/her meat consumption but currently chooses not to read the literature (Hertwich et al., 2010) and thus be convinced by the argument, and therefore does not have to modify his/her dietary choices and conduct.

6.3 Plastic

The issue of plastic emerged prominently from the study. It ranged from consideration of the use of plastic packaging when grocery shopping to single-use plastic when having a coffee on campus. It seemed to feature within the conjuncturally–specific internal structure of the AiF, that is, within the immediate work environment of the AiF. The observations below relate to the procurement of food and drink to eat at work. The first observation explains how the choice available from the on campus shop is limited in terms of plastic and not something that is within an individual's control.

Yes, but then, equally, I bought this, because it was part of the meal deal at lunchtime, which is just like an orange juice, but it comes with the meal deal, but it's in plastic. And so then, what do you do then? Because you can't say to the person in the shop, 'Oh can we decant this orange?'. Like I'm not going to buy your product because it's in plastic because there's no other way you'd get orange juice then. So then that decision is kind of outside of my control in many ways. But the water is, and I know that's so hypocritical because I've still bought plastic, but er I guess you can only do so much. (AC11)

The unavailability of a suitable and more sustainable option legitimises the action of purchasing, in this case, the orange juice in a plastic container, as

the AiF concludes the comment with "you can only do so much" (AC11). However, all employees have access to free drinking water at staff and public water stations around the campus in campus buildings. The AiF bought the 'meal deal' as such, and the plastic bottle containing the orange juice came as a part of the deal. The AiF could have refused the orange juice, but the term 'deal' implies that is more cost effective than buying the items in the meal deal separately, although the use of plastic and waste in terms of sustainability does not seem to be at the forefront of the AiF's (AC11) thinking when a more cost effective purchase is available, as is shown above. This behaviour implies that value for money options are prioritised by the AiF over sustainability commitments. It should also be a consideration for retailers and the University that, if sustainability options are not competitively priced or if unsustainable options are less expensive, customers may opt for the more cheaply priced options. In addition, though levies have been introduced in University coffee shops when buying a hot drink to take away in a 'single-use' cup, these extra charges do not apply to plastic bottles for drinks purchased in the University shops or vending machines in the same way. It is unclear as to why only hot drinks have been targeted in this way and not all drinks that are bought in 'single-use' plastic bottles/cups.

Another comment by an AiF pointed to the convenience of plastic as a reason for its use, even though the AiF exhibited sustainability behaviours in other ways, as seen in the quote below, but when convenience is required, sustainability is not a consideration: as the AiF explains "I wasn't thinking" (AC7).

> *I guess that's to do with plastics. So er well just the fact of the way that …. you know we live our lives and it's you know I walked into Aldi today, we had been away, I had not done a food shop. I saw the water melon in the plastic and I suppose why did I not go and pick up a water melon and cut it in half myself. But there is that you know you are conscious of it and we are conscious of it and I think as a family and as an individual I have made lots of changes. So like if I make a meal now instead of putting it in a dish and putting cling film over the top I would put that in a plastic container. But that plastic container then gets you know re-used, er so it has changed my behaviour. And I suppose you know er coffee cups you know … I am much more I feel so guilty now if I have a coffee in a take-away cup. To the point where sometimes I go 'Do I*

really need that coffee?', well probably I don't need that coffee especially if it's in a take-away cup. (AC7)

So what made you buy the melon in a plastic container rather than buy the melon and cut it up yourself?

Because I thought I didn't have time (laughs) so it's convenience isn't it, to be honest I wasn't thinking. (AC7)

This reflection by AC7 on the use of plastic illustrates the argument made in the literature review about plastics being undervalued as a resource (Oberle et al., 2019): plastics are durable and convenient, but we have yet really to value this resource properly or perhaps realise its worth (Habgood, 2002). Because plastic is cheap, we dispense with it very easily without necessarily thinking. The consequence of "not thinking" (AC7) is the very reason according to Palmer and Finlay (2003) that humans are in this environmental mess. "We *[humans]* see, do, and are what we think" (Palmer and Finlay, 2003, p. xv), our perspectives and our actions being based on our thoughts, frames of reference and understanding. The point that Palmer and Finlay (2003) are making, is that, because our minds and thus our thinking are in a state of crisis, we behave accordingly. This suggests that there is a need for the re-education of individuals, that is, a revision in thinking, when it comes to the resource utilisation of plastics. This aligns with the mission of the circular economy in terms of thinking about how the input to and outputs from processes are treated and about the stewardship of all resources that mankind has (EMAF, 2017). This also resonates with the suggestions of Habgood (2002) surrounding the idea of worth as opposed to value. Though Habgood (2002) is referring to non-human life, perhaps this idea of worth can also be ascribed to the resources that we have available to use. The latter reflection of limited time by AC7 could also be a form of rationalisation on the part of the AiF. He/she may not want to admit the real reason why he/she bought the melon in the plastic container, that is, the AiF does not normally think about sustainability or how personal shopping habits contribute to sustainability issues.

Another theme arising from the data related to plastic waste, is in terms of the use of 'single-use' plastic for hot drinks in staff rooms for employees.

AD1 recognises that the staff room drinks' machines and the way the little cartons of milk are used do not support sustainability.

> *[I]t goes back to those little cartons of milk you know why have we got little cartons of milk [if] we are trying to be sustainable? Er again even down to the coffee machines with those little plastic sachets that you put in to make the coffee. That's again, because it's a plastic and inside the plastic covering you have got a metal insert and then you have got a plastic bit on the top so none of that can go for recycling. Because you have got three different components that cannot be recycled without taking them apart. So we are not actually helping ourselves in the stuff that we do. Er instead of doing … like Engineering do here in this University, Engineering they buy … big tins of coffee, they supply milk and they supply teabags and they are there for everybody in Engineering to use as and when. But it's more sustainable because they are big tins and because they are metal tins you just rip the paper cover off it and put the metal in to recycle, the paper can go to recycle. (AD1)*

It seems that there are other areas in the University that have more sustainable practices when it comes to the vending of hot drinks, but there is no standardisation or sharing of best practice throughout the different departments and faculties. The vending of coffee via coffee machines could also be viewed as an upgraded type of value when it comes to drinking coffee at work rather than using coffee from a 'tin' or 'jar'. Interestingly, whilst these practices are continuing, there does not appear to be much confidence in administration staff to be able to challenge things, especially when it comes to challenging academics. Though AD1 (below) knows the way in which he/she wants to challenge academics, there seems to be a lack of confidence about being able to do so.

> *The ability to actually turn round and say to academics er 'If you are running a three year project why do you need to see people every month? Why can't you just have one meeting every six months face-to-face and do the rest [remotely] er and have some backing for it? But there isn't any. (AD1)*

This implies that backing from senior management and leadership is not being felt by the administrative group of employees and supports the later comment from AD6 (see section 6.4) that this group of employees feels that its role is to assist rather than challenge. This external pressure to assist overrides

their own personal sustainability values and feelings so they end up continuing to do what has always been done rather than adopting a new more sustainable approach, that is, they (administrative employees) reproduce the prevailing structures. This inability to challenge acts as barrier to more sustainability behaviours that could be demonstrated, but some of the administrative and support staff do not feel empowered or supported to act. The barriers are also formed in part by the networked others within the local environments of the administrative and support staff. Although this AiF (AD1) feels unable to challenge an academic, another AiF (PO7) seems to share similar thoughts about academic travel activities as seen in the following comment: "on reflection one of the key things that I think is indefensible for academics is the amount of international travel". PO7 is part of the policy shaping group and his/her views suggest that there may be some backing available to the administrative employee group, from the senior management team, but avenues of organisational dialogue are yet to be established or are not used to bring these issues to the fore.

One AiF was not so convinced about how, as part of the plastic reduction scheme, the replacement of 'single-use' plastic coffee cups with ceramic cups was going to contribute to overall sustainability. AC1's reflections are below.

> *I support this in principle although ... er whether or not, and I am pointing to the mug thing, how do you analyse that, that is, is it actually sustainable compared with the previous? Because you have got your er ... I think it all comes down to energy, so the energy er for the plastic versus ceramic mugs. Those plastic mugs are made out oil so that oil could be used for something else, be used as an energy source or it could be used to produce the mugs, the cups. If we stop using er oil to produce those cups and we are using that oil or an energy source to power the thing, er the dishwasher, er are we sure this is better than the plastic cups? I don't know, I really don't know the answer to this. We use water to clean it, er are we sure that's not harmful? Because that water could be used to, I don't know ... to water the plants or water humans who needed it. I think this is a complicated thing and there are unintended consequences for all of these initiatives. And as an individual trying to analyse that, understand that, it's beyond me and I will be dependent on other people to answer. (AC1)*

The comment from AC1 suggests that, although he/she is supporting the ceramic cup initiative in principle, the effects of the new approach are not known in their entirety. Perhaps as an academic employee working at a university

where nearly all academics have their own disciplines and areas of specialism and research, this AiF will leave it to "other people" whose specialism is sustainability to ascertain the subsequent consequences of the new initiative. The local context of the AiF (i.e., a University environment that values discipline-based research) is, in this instance, acting as a barrier: it is stopping the AiF from challenging the new mug and dishwasher initiative, though his/her conduct is in keeping with the new initiative that has been established. There seems to be a little tension in internal structures of AC1: though he/she is compliant with the new system in place, that is, the use of the ceramic mug, the AiF is not entirely convinced that the new approach is "sustainable".

Some employees were very aware of the impact of plastic on the human food chain and the potential risk to humans. As one AiF comments, humans are dependent on the food chain and plastics seem to have entered our food chain. In part the ineffective disposal of plastic waste is leading to plastic contaminating our food supply chains as micro plastics. This concern is supported by the research of Liebezeit and Liebezeit (2013, 2014) and Yang et al. (2015), who found evidence of micro plastics in foodstuffs such as beer, honey, sugar and table salt. These studies, amongst others, suggest that the human food chain is changing and the disposal of plastic needs a systematic review.

> *... The ultimate doom and gloom! (laughs) Er we will run out of natural resources and pollute the rivers, the waters, our food chain. We already know we are finding little bits of plastic inside fish that we then eat and nobody knows how that build-up of plastics through our food chain is going to affect humans. (AD1)*

The comment above begins with a pessimistic standpoint, though it is accompanied by a laugh afterwards. This could suggest that this employee has a very negative view of the future when it comes to sustainability. Interestingly the AiF comments how the issues of micro plastics will eventually end up affecting humans. This bears some resemblance to Sir David Attenborough's observation that the human species is now under threat due to our own unintentional actions towards the planet (Attenborough, 2020). The AiF is quite

knowledgeable of how micro plastics can enter the human food chain, via marine animals (Rochman et al., 2015).

6.4 Paper

The UoN is a large and complex organisation and perhaps, unsurprisingly therefore, the sub-theme of paper waste has emerged from the interview data. This sub-theme manifested itself in two ways, first when printing student handouts for use in teaching, and second in staff meetings for paperwork and notes. What was surprising, though, was the variation in response to these issues and how AiFs exercised their agency. Many AiFs tried to limit the amount of paper they used through printing out fewer handouts for students or not printing at all.

> *Well this is an interesting one because for my first module where I was module convenor, I didn't give out handouts. I don't know if that's against University policy, I don't know what University policy is … because I teach 220 people on one of my courses. And let's say, on your average day, you're going to get a 75% er turnout, that's 50 people that you're not, that's not going to collect their things. If you've got like six pages in a book, that's 300 sheets. So I always thought, if they want it, I can provide it them, like they have to come and ask me for it. But most of, like it's just a waste if you're doing that 12 weeks across, I mean I can't do the maths, what's 12 times, do you know what I mean? It's a lot. And then the second thing I noticed as well, is that nine tenths of them have their tablet or their laptop anyway. So I thought, they're getting wasted to just be thrown or not used, then to me, it just made no sense. And, in fact, only one person on the first lecture asked if there was going to be a handout before I made this clear. And then no one else throughout the entire 12 weeks even mentioned it. I would have changed my practice as well. So if you know by week three, if they'd have said, it would be really useful, I'd have been like, that's fine, go with it. The fact that nobody even batted an eye, apart from the one person at the beginning before I'd told them what the deal was. And because it was a sustainability course, they almost bought into it. It's like, well, of course, why would you be giving us? They could see where I was coming from and they even thought themselves that it was maybe a bit silly if we were dishing out paper. But yes, I probably broke a University law there. (AC11)*

AC11's comments point to an area of confusion for the AiF, namely about the University's policy on printing. The response (above) opens and closes with a reflection about possibly breaching a University policy. However,

the employee is unsure, indicating that the University has been unclear in communicating its printing policy. This indicates a conflict for the AiF and confusion regarding desired behaviour by the University from the member of staff. AC11 is exercising his/her "possibilities and capacities" (Stones, 2005, p. 109) but the alignment with University desired behaviours is unclear to the agent. For this AiF, it is his/her own internal structure (both conjuncturally–specific and habitus) that is influencing the decision to print or not to print, rather than the control systems or mechanisms of the University. It is through the examination and evaluation of his/her conjuncturally–specific domain, in which the students are Agents-in-Context (AiCs) who bring their own laptops, that signal to the AiF that printing would be a waste of resources. This AiF is able to survey his/her local context and draw upon his/her own general–dispositional frame of reference then to operationalise personal agency and ultimately produce an outcome of reducing paper waste. This demonstrates the connected nature of the conjuncturally–specific internal structure because it "deals with that whole process of understanding the context out there in relation to [the agent's] own values, duties, obligations, orientations to the world and so how they come to act in one way rather than another" (Stones and Jack, p. 1148). A way that the AiF overcomes any difficulties with the students, that is, his/her AiCs, is by explaining his/her point of view. The AiCs are able to understand the context that both the AiCs and the AiF share. In another way, the AiF is impacting on the internal structures of the students and actually assisting them to make better sustainability choices. Through the agency and sustainability convictions of the AiF, the University is providing "questions, challenges and experiences … to develop those habits of mind and character … that will enable them to desire and pursue worthy goals" (Bohlin, 2005, p. 78). The AiF also comments that he/she "would have changed my practice", which implies that this AiF has a flexibility to accommodate different requirements of his/her AiCs, that is, students, should the students have requested any changes.

Another AiF, however, had a different view, commenting that the use of paper handouts has to be balanced with student expectations, as not fulfilling student expectations can have a negative impact on teaching scores and this can be worrying for academic staff.

To be honest a lot of individuals know that they shouldn't be printing and they know that there is no policy that says you must print. However, you must give them confidence, they must be backed by institutional structure and culture to say, to fall back on to say 'Yes, yeah, we are not supposed to print'. Because look you and I who are teaching, we will not want to do a little thing that would upset, whatever upset means to students you know. And one thing is handouts, oh I don't want my students to write me bad on my SET/SEM[14] *because we have all these SET/SEM we want to please our students, we want to baby them. We want to make them feel like these extreme customers and that to me is nonsense you know. Because I am not there to please you, you know in the sense of making you all happy and feeling good. No that's not my role, find your own happiness. My happiness is to try and impart knowledge on you in an environment that is conducive in that. If I achieve that and we can engage on that level then we are making a University a place that it should be .... but back to the printing thing, I think once we start engaging with this discussion at that level and the Business School signals, because that's what academics want just a signal. And that signal is not just to them but also to the students. Then I am sure they will be OK with that. But now those that are not bold enough to you know to fight the fight and to hold the bull by its horn will not do that. (PO9)*

From the comments made by both PO9 and AC11 (above), both AiFs are looking to the University for guidance on printing policy, as both of them feel as if they are breaking the rules, though they have different approaches to printing. Both these AiFs, though they experience a similar environmental context, choose to behave differently. This could suggest that the absence of perceived controls in the form of a printing policy is leading to a diversity of micro behaviours that culminates in the current fragmented organisational sustainability culture (for discussions on culture, see Chapter 9). The AiF comments that academics need to be "bold" and need "to fight", which suggests that the local context, when it comes to printing paper handouts for students, is far from harmonious. The comment by PO9 relating to students as being "extreme customers" supports the assertions of Naidoo and Jamieson (2007) regarding the changes that could come to pass if student consumerism is indulged. Academics are worried about their SET/SEM scores being affected, so they print lecture materials out for the students. This suggests that the focus

[14] Student evaluation of teaching (SET)/student evaluation of module (SEM) performance scores.

of academics may be moving away from their own teaching and research activities to more student and customer focused activities.

The confusion surrounding the University's printing policy is affecting academic printing choices and it is also being felt in another way by administration and support staff. The pressure to print is experienced by the administrative staff indirectly because "as an assistant you are there to assist other people so you do what they want you to do" (AD6).

> *I printed out so many copies of documents, which I don't even know what they were but for a course for an academic, and er I don't think as many people turned up for the course as … what he had hoped or what had enrolled for. And then I saw them all in his office at the end of term sort of thing ready to be ... recycled. I just wasn't sure you know is it that we have to print these out, er you know is it part of our remit in what we are supplying to the students? But I didn't feel I could quite question it. (AD3)*

Hence the external force of student expectations acts on academics but indirectly exerts a force on administrative and support staff who feel they are there to assist rather than to challenge a decision to print. The evaluation mouthpiece for students (i.e., SET/SEM scores) is controlling an academic's behaviour and impacting on the other AiCs, such as the administrators and support staff. This links back to Woodall et al. (2012) and the notion of students as customers who want value for their university fees. The study noted that a concern for students was printing costs, hence in this instance students have an expectation for printed handouts that exerts pressure on the local context of an academic who then exerts that pressure on to administrative staff. The administrative staff feel an inability to challenge that behaviour. This suggests a tension between the academic staff and administrative and support staff (i.e., between ACs and ADs). This implies that students, in wanting printed handouts, are potentially acting as barriers to pro-sustainability behaviours within the UoN employees. Overall, the particular performance measurement/management system of SET/SEM is indirectly influencing behaviour and causing a 'domino effect' that potentially promotes wasteful outcomes in networked others such as administrative staff, as opposed to mindful ways of utilising paper for all employees (and students) at the University.

There was another AiF who felt strongly about the paper issue but did attempt to change how paper was used in meetings.

> *So going electronically, I inherited a committee that I was the secretary for, so I prepared all the papers. And it was printing out over a thousand pieces of paper per person for a three hour meeting all be it. And at the end of it, 99% of it was shredded. And that was just such a wake-up call to think, why are we doing this? They'd always done it that way, that's what they were used to. Academics are perhaps resistant to change on occasion. So that, specifically, I worked very hard to create an electronic version that was suitable for the needs of the committee and, luckily, managed to achieve it. But that, and then taking a step back and thinking, do I need to write this down, do I need to print this out, can I start taking online notes or electronic notes, you know, can I do things via email or phone instead of sending letters? So it was probably that moment to think, you know, that's what, 15,000 pieces of paper I've just printed there that have just been shredded straightaway.*
>
> ***How was that, when you were mobilising that change, how was that received by members of the committee?***
>
> *There was some definite sort of running against it. It took several stages to implement it. Definitely resistance to just doing it right off the bat. There were bits that I could change and there were perhaps some things that could be shown on a screen instead of printing it out. And then gradually, sort of, it was tri-campus as well, so you had to consider China and Malaysia at the same time. And trying to create some kind of document that everybody could view electronically with page numbers, etc., etc., so everyone could relate to what they were doing at the same time. So it was a massive undertaking but the way I did it was just a gradual, OK, for the next meeting we're going to do, you know, half of it electronic, half of it paper, kind of thing, and building it up and trying to get people on board with the improvements each time. To think, OK, was that better, can we do things differently? And gaining that feedback. (AD12)*

AD12 is trying to influence his/her networked others by his/her conduct through limiting the amount of paper printed for meetings. This AiF is driven by his/her own internal structures to implement these changes in his/her conjuncturally–specific domain. The conjuncturally–specific internal structure has two positions (see Chapter 3, section 3.5.2 for a fuller explanation). One position appraises the local environment of the agent (context external to the AiF), that is, that AD12 is responsible for the preparation of the committee papers, but this is then (the second position) referenced back to the agent's own

frame of understanding (internal to the agent). The AiF is interested in protecting animals and their habitats and feels a sense of responsibility to future generations to be able to enjoy their lives in the same way the AD12 is currently doing. This can be seen in the comment below.

> *I'm a massive animal rights fan, so the sort of protection of animals, especially areas of the world where deforestation, etc., is happening at a massive rate. And just a sort of a human being aspect, that, you know, previous generations have protected the world to allow me to enjoy my life now, that I feel a responsibility to do the same. (AD12)*

The resulting conduct of the agent, that is, to implement electronic documentation, was activated by the strong internal structure of the AiF as opposed to influences within the work context of the UoN or any control mechanisms the University had deployed. This process of structuration has resulted in "change and elaboration" (Stones, 2005, p. 85) of existing external meso level structures, that is, the resulting electronic documentation instead of paper. Though several iterations of structuration potentially occurred before achieving the intended outcome, the AiF had strong convictions to go repeatedly through all the iterations of the process until the required outcome was realised. This suggests that the AiF felt very strongly indeed about the implications of wasting paper and resources, so strongly in fact that he/she was very patient and committed to gradually change the process. This also signals that the AiF has a very keen awareness of his/her external structures, and has evaluated the "possibilities and capacities" (Stones, 2005, p. 109) and constraints that are present within them. Overall, this particular AiF has been able to negotiate the subjective (within agent) and objective (within UoN) forces he/she is feeling – a process which, though usually invisible, has been brought into view by using Strong Structuration Theory (SST) (Stones, 2005).

6.5 Resources

Using resources mindfully and carefully was a prominent theme that emerged frequently from the data. The use of resources and not being wasteful was a central value to certain employees. Things that have particularly influenced employees in their thinking about sustainability have been embedded in their

internal structure of the general–dispositional. These values were so deeply embedded within their habitus that on several occasions the AiF asked to return to the question 'what has influenced your sustainability thinking?' because they could not answer promptly. This could indicate that some of the factors that promote sustainability within agents are deeply embedded, ergo a genuine part of their general–dispositional make up (see Chapter 3), in that it took a little longer to identify them. Some of these factors have been mentioned in the sections above, such as childhood experiences and a concern for animal rights.

One of the key drivers in embedding resource mindfulness was upbringing. In particular, older family relatives who have demonstrated particular behaviours or imparted certain values, have left memories to their successors in the immediate post war (Second World War) generation and an inheritance for other generations that have come afterwards, as observed by the two AiFs below.

> *I grew up in a family where, you know, my father had a water butt that took rain water off the drainpipe, you know, there was an element of recycling. It wasn't sort of 'The Good Life'*[15] *but it was perhaps a bit more of a reflective environment than some would be. And I think also, they were that sort of post-war generation, they'd grown up in the War and they had rationing and constraints for very practical reasons. There just weren't the goods and services available. So, I suppose, I grew up in that environment and now I see those issues as being important. (PO3)*

> *I think I've always been wary of waste and, again, that may be something I get from grandparents, you know, a generation growing up in the War, rationing, you know, my own parents. So, and again, my generation were also … have grown up sitting at the dinner table, you don't get down from the dinner table until you've finished what's on your plate. So again, it may be bred in me from my particular generation. As I've got older I've become more extreme in my abhorrence of waste. (PO5)*

It is the memories and examples of previous generations that have had a lasting impact on AiFs not wishing to waste resources. Furthermore, as both PO3 and PO5 comment, their thoughts about resources have become more

[15] *The Good Life* is a BBC comedy programme about a suburban middle class couple, who agree to embrace a philosophy of self-sufficiency. They do this by turning their home into a small farm, growing their own vegetables and keeping livestock in their garden. They recycle and re-use and resist the trappings of 'modern life'.

important and prominent in their lives as they have matured. This suggests that internal structures are not fixed but can change and develop over time. Some of the memories formed in childhood can act as a compass for adult behaviour. Studies by Evans et al. (2018) and Wells and Lekies (2006) observe that adults who have spent more time outdoors as children, with a greater experience of nature, tend to exhibit more pro-environmental behaviours (PEBs). These position–practice relationships from past times have, for these AiFs, left indelible patterns that mould their daily activities and how they behave. The above demonstrates how the internal structure of habitus through upbringing provides a powerful influence on these AiF behaviours.

Not only are the post-war generations having an impact on the current generation, but so is the younger, next generation of citizens. In particular, schooling and education are increasing sustainability awareness in the older generation, through conversations at home and how parents/guardians are held to account for their behaviour.

> *I have got two children and I think the second one is an incredibly ethical human being probably more than his father and I. And through his schooling and through what he has done he is the one that is sort of … but effectively is going on at us all the time. So then that's made me more aware of different things. So it's actually through their schooling and his behaviour not that the first one doesn't have the same things because, but the other one is constantly er er er in the background telling us what we should and shouldn't be doing. So I am more aware of it because of the children. (AC4)*

This supports the findings of Maddox et al.'s (2011) study, whereby primary school children were having an impact on overall household recycling. In fact, the comment above suggests that the overall schooling of the AiF's child, not just primary school, has impacted on the household's overall sustainability engagement. This AiF, through his/her children, is being educated about sustainability issues and his/her internal structures are being changed through the education of the child. The comment implies that the child is living in a different contextual field, leading to different conduct and praxis compared with that of the parents, though the parents are altering their conduct owing to the influence of the child.

In some cases, as demonstrated by the AiF (AC9) observation below, the generation of citizens which is yet to be born is also making its presence felt. These position–practice relationships of relative strangers in different parts of time and space have a very powerful impact on current world inhabitants, and can be seen in the comment below.

> *So it's like we have to be mindful and aware of what we are doing to the future generation which may not be biologically my son or grandson or daughter but it's the same thing. We are passing on a very bad state of affairs to our kids. (AC9)*

The value of inter-generational equity is a consideration for AiFs as they go about their daily lives, even when the AiFs do not have biological children of their own. This resonates with the theory of the Global Commons (Blowfield, 2013) and the responsibility that some employees feel in terms of their stewardship towards the natural resources they have been able to enjoy. They want to repay the stewardship that they have enjoyed by ensuring that the next generation also has natural resources to enjoy (and protect), that is, inter-generational equity. For this AiF, he/she is "mindful and aware" of what actions he/she is taking and there is a clear relationship between what the AiF thinks and what the AiF does, which is similar to ideas suggested by Palmer and Finlay (2003, p. xv): "[w]e see, do and are what we think".

For another AiF, thoughts of sustainability were embedded in the protection of natural resources for future generations. AD10 summarised the below in relation to sustainability:

> *Sustainability to me means to try to protect the valuable resources we have in this world and to not just use them all in one go in the next 20/30/40 years. And actually, have something at the end of that, so that we can sustain our way of life, to sustain our ability to do whatever we're doing at the moment, and to progress and to improve. And not run out of the resources that we know are limited, are finite. I think, years ago, people didn't even think of that, you know, and it's only, we've started to realise that in the past, I don't know how long, 30 years, 40 years probably, that we've suddenly started going, 'Oh hang on a minute, there is only so much coal in the ground, there is only so much gas, there is only so much whatever, er', and before that we didn't think about it. So that's my perception of it. (AD10)*

The ideas of sustainability for this AiF have matured with time as his/her own learning and understanding have changed. The finite nature of the resources that the Earth has (Almond et al., 2020) have been recognised slowly, this evolution in understanding being similar to the recent reflections of Sir David Attenborough (Attenborough, 2020, p. 100), who suggests that his own perception of the wild in his early career was an "illusion". For AD10, his/her "networked others" comprise people across 30 or 40 years. This AiF has recognised the "web-like nature of interdependencies" (Stones, 2005, p. 126) but over "a relatively extended period of time" and this is influencing the agent to act in a particular way.

6.6 Summary

Overall, from an employee's perspective, the central theme of waste manifested itself within four sub-themes which were food, plastic, paper and resources. The key insights that were revealed by the employees in order to answer the RQs are summarised below.

At an individual level, the dietary choices of employees interviewed are not fixed, and depending on the information and knowledge they have accessed or are aware of, dietary preferences can change. Several employees have modified what they eat, in particular moving away from animal products, primarily because of the impact that meat consumption through animal farming has on the environment. What may be impeding more employees from making dietary changes is either the lack of personal motivation within their internal structures to prioritise their dietary habits and/or seeking out information that may compel them to make changes. Employees execute a part of their organisational sustainability engagement by managing food waste and redistributing any excess catering.

The issue of plastic arose with regard to food being packaged in plastic making it convenient to buy food 'on the go'. Whilst employees may consider the implications of their buying choices, there are perhaps no other 'more sustainable' options available on campus and thus this acts as a barrier to further sustainability engagement.

Concern for the volume of paper wasted, when printed material is not used or collected by students, is a big motivator behind sustainability engagement, and not printing handouts is one of the ways some employees implement their sustainability engagement. A significant barrier to academics not being able to act in sustainable way when it comes to printing (choosing not to print), is the fear of upsetting students, but part of this is a result of there being an element of confusion surrounding the UoN's printing policy. Students who expect printed handouts may reflect their dissatisfaction in the surveys used to evaluate staff teaching, which possibly impacts on an academic's chances of promotion. The volume of printing requested by academics is affecting their networked others, that is, administration and support staff. Academics are themselves acting as barriers to administration and support staff implementing positive sustainability behaviours. In fact, at times, academics are causing administrative and support staff to act against their own sustainability convictions.

Though employees are compliant with UoN sustainability initiatives, thereby implementing some of their sustainability engagement through these initiatives, the employees themselves are not entirely convinced about the sustainability of the overall initiative itself.

Some employees were able to step outside their own current position in time and space and call upon previous position–practice relationships to guide them in their sustainability engagement. These could be relationships with the previous generation, such as parents or grandparents, or those from the next generation, such as children. These position–practice relationships signal the development of agents' minds in terms of considering the interdependent relationships of which the employees are a part and the part they themselves, as individuals, can play in the relationship. For others, the consideration of these interdependencies is a little more abstract, and employees consider the next generation of children who may not be biologically related to themselves. Nevertheless the employees are still thinking about how that next generation is linked to them. This aspect is highlighted in the appropriate consumption of finite resources and the concern for what is left for future generations.

When employees have very strong internal structures, they are able to modify processes and implement change, over several structuration cycles. Though operating in a complex environment, some employees had the patience, motivation and the conviction to realise their vision and optimise their own agency and capability. The strength of internal and external structures, such as childhood memories or cultural influences were some of the forces that enabled sustainability engagement amongst the UoN employees.

The next chapter extends the discussions by considering matters related to the environment, such as protecting biodiversity, and the appropriate stewardship of resources. It also considers the role of universities in delivering sustainability and the responsibility that employees felt the University had in meeting the sustainability agenda.

Chapter 7 Environment

7.1 Introduction

This chapter develops the discussions from Chapter 6 (Waste) to consider the central theme of the Environment. The analysis reveals the hermeneutical framing that is adopted by employees when considering different contexts, namely, micro, meso and macro levels. The chapter also highlights the decisions and actions resulting from the prevailing forces at the three levels.

The theme of environment emerged via three sub-themes within the data (sharing, wildlife and nature, stewardship) and are represented in the diagram below (Figure 7.1). Section 7.2 begins by considering two dimensions of sharing, the potential contribution of universities to sustainability and society (section 7.2.1) and the contribution that an individual can make (section 7.2.2). The next section (section 7.3) examines the environment in a physical sense, in terms of wildlife and nature and how agents-in-focus (AiFs) viewed these elements, and how these two aspects exert pressure on AiFs to behave in the way they do. Section 7.4 considers the environment from an AiF's frame of reference and meaning, as many AiFs understood the meaning of sustainability to be the stewardship of the environment. Section 7.5, the final section in this chapter, draws together the key discussions of the chapter.

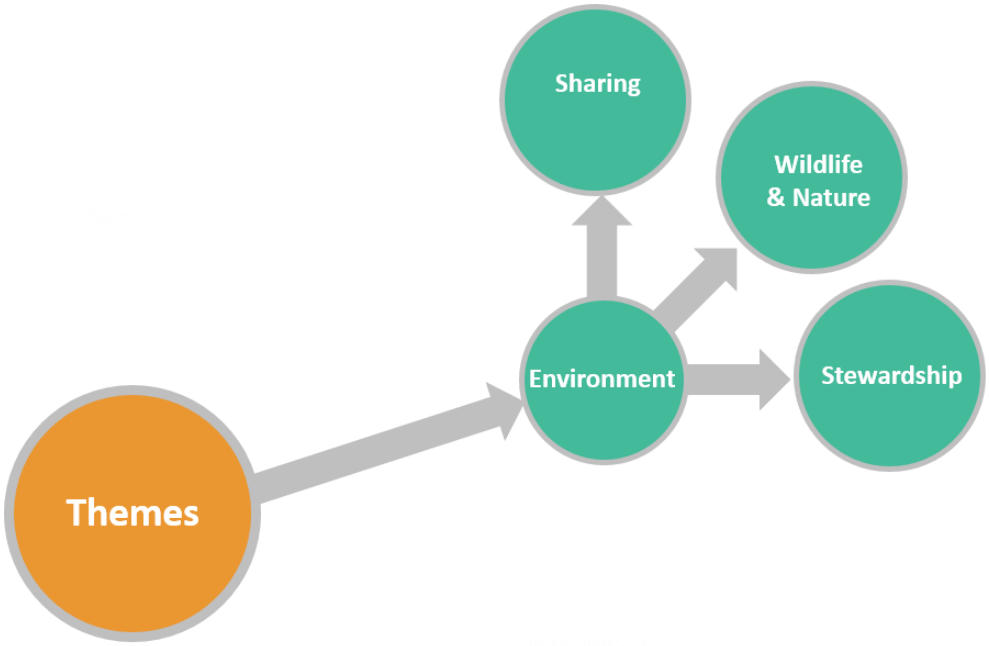


Figure 7.1: The overall theme of environment emerging and subsequent sub-themes.

7.2 Sharing

As indicated, the concept of sharing emerged in two ways from the data. The first way was through the idea of universities making a contribution to society, that is, a meso and macro level view (section 7.2.1). The second way was from a micro level perspective, which considered how individuals share their sustainability thoughts and concerns within their local environments (section 7.2.2). Both these aspects are discussed in more detail below.

7.2.1 Sharing at meso and macro levels

The concept of sharing first emerged in relation to why the UoN should contribute to sustainability and how it should make that contribution to society. Both PO2 and PO12 (see quotes below) have very clear and similar ideas of why and how the University can play a part in the sharing of sustainability knowledge. Both of these employees seem to share commonalities in their internal structures. According to PO2, the University has a "moral obligation" to discharge when it comes to sustainability, as the comments below explain:

I think it [the UoN] has an obligation, it has a moral obligation in the very nature of its existence, in terms of what a University is here for.

And what do you think a University is here for?

I think it's to educate and to contribute to research and advancement that, er, meets the challenges that the world faces. And if that's not sustainability, I don't know what it is. So yes, I think it's, you know, if you go back to the, er, there's a paragraph in various, er, strategies that Jesse Boot, er, is cited as saying, and it's a couple of lines. For me, that is very much the nature of a University and that just resonates with sustainability. You know, if we can't, as an organisation, if we're not educating and delivering, living and breathing sustainability, what chance have the people that are coming through our door got, in terms of making these global changes and supporting our future? (PO2)

This is an interesting comment because in and of itself an organisation will not have a moral conscience: it will be steered in terms of morality by its employees rather than having its own independent morality. As Pugh (1971, p. 213) identifies, an organisation is a "system of interdependent human beings", who can "affect and are affected by organizational processes". The organisation is comprised of its employees, who lead and steer the organisation. This AiF's internal structures do indicate a sense of sharing in the social duty to educate people about sustainability, but the comment implies that the duty also has a dimension of "lead[ing] by example" (Amaral et al., 2015, p 156), though the AiF does not differentiate between students or employees but refers to "the people coming through our door". The comments also signal that the AiF feels that the University has a responsibility to "meet the challenges that the world faces", which supports Shapiro's (2005) ideas of universities serving wider interests. This wider purpose in relation to sustainability can be readily seen via the new strategy developed by the University of Nottingham (UoN) (see Chapter 5, section 5.3) as sustainability forms one of the strategy's central themes. This change in strategy may support the University in delivering its sustainability goals, by enabling its employees to engage with sustainability to a greater degree.

Comments from PO12 below are alluding to the University as being a place of knowledge creation (Engwall, 2020), but the issue the AiF identifies is how the University can be "proactive in communicating". Employees are

implementing their sustainability engagement through their research activities ("there are people at the University of Nottingham who know a lot more about single-use plastics than David Attenborough"), but what seems to be missing, as identified by the AiF, is the ability to publicise and share the University's knowledge. The media, according to the AiF is a platform that the UoN has not fully embraced or cultivated.

> *And so you see people on the news David Attenborough on the Blue Planet which is fantastic, that's probably done more for the knowledge about single-use plastics than anything. But there are people at the University of Nottingham who know a lot more about single-use plastics than David Attenborough. So I think we need to be proactive in communicating. I don't think Nottingham would ever be particularly, it's better now than it used to be 20 years ago when I first came here but I don't think … we have never been particularly good at shouting about the great things that we do. (PO12)*

PO12 recognises the force that the media wields (aspects related to media and its influence are considered in Chapter 8 section 8.4 and in Chapter 10), but the external impact that the University could have at a national and international level is somewhat limited according to this AiF. Better communication with the media may be a consideration for future control systems of the organisation, as it may assist in serving the wider responsibilities of the University (Shapiro, 2005) and help in making AiFs feel that they are making a fuller contribution to society.

7.2.2 Sharing at micro levels

The second area that was evident in relation to sharing was in terms of how AiFs themselves shared their ideas of sustainability with each other. This focused in particular on how they shared their sustainability views with their 'networked others' (other employees who form part of an AiF's contextual field, that is, the AiF's Agent-in-Context (AiC)) in the course of his/her day-to-day work activities.

For AC2 sharing is part of the course of daily work activities.

> *Yes I would say like I mentioned earlier I think there [is]a bunch of colleagues, the people I collaborate with I think we share the same*

> *values which is actually why we make good collaborators. Er I share the same values I think and same meaning with my family, at least my husband. I think we are on the same page with that. And some of my friends. Er I can't speak for everybody at work, I don't think that's true but yes. (AC2)*

This AiF's networked others all shared similar views and opinions – and the AiF specifically mentions that, because of this synergy, they make good collaborators. This implies that the collaborators have similar elements within their internal structures and these commonalities support the collaborations. Although Slack (2015) identified organisational culture as being a barrier to employee corporate social responsibility (CSR) engagement, for AC2, the fact of his/her "bunch of colleagues" having a commonality within their values seems be the very reason why they make "good collaborators". This is in contrast with PO5's observations below of the UoN as not having "sustainability in its heart and its culture". For AC2 and his/her networked others, it may be easier to comply with UoN sustainability control systems as they already think that sustainability is important and worth pursuing as demonstrated by their areas of research. This potentially acts as an enabler of sustainability engagement for AiFs. Over time, if more people share similar sustainability values at the UoN, this could provide the critical mass necessary for a more prominent sustainability culture to emerge. Working with like-minded people who share common values is again reflected in a comment from another academic, AC11.

> *Yes, I mean, I guess, I work in a centre that specialises in this kind of social responsibility and sustainable thinking. So, I guess, I would er maybe share a similar approach on an academic level, as er the people I hang out with. But again, you'd have to ask them that I guess. I don't want to impose my views on them. (AC11)*

It is interesting how, although AC11 recognises that his/her AiCs may share a "similar approach on an academic level", the AiF is conscious of not wanting to share his/her views as the AiF sees it as imposing his/her views on networked others. This suggests that in a university setting where there is the space to share, and sharing is encouraged in order to innovate and create knowledge, there is a conscious decision to choose 'not to share'. This

reluctance to share in the workplace is again illustrated in the comments from AD 5 below.

> *I sort of hold back a little bit at work because I am a vegan and I have got quite strong opinions. People find it quite offensive if you voice your opinions I find. So I am very careful about what opinions I share with people because they tend to think you are crazy (laughs). AD5*

AD5, though having "quite strong opinions", chooses what to share and what not to share with people at work so that he/she does not cause offence. By choosing not to share, however, any potential to have impact on the internal structures of networked others, within his/her conjuncturally–specific domain, is entirely lost. Furthermore, the AiF's internal structure of "holding back" at work is further reinforced every time the AiF stops himself/herself from sharing. So ultimately, no changes in practice can be delivered as the prevailing structures are maintained and reproduced, both in the AiF and his/her networked others. This behaviour may also signal that the AiF feels that the work environment does not constitute a space within which experiences can be shared (Boiral et al., 2002), which thus provides a barrier to sharing tacit knowledge and information related to sustainability. The AiF is highly committed to his/her opinions and one of the ways this manifests itself is in his/her dietary choice, the primary reason for veganism being the cruelty to animals for the production of food (McDonald, 2000). Though becoming a vegan is a more subtle way of implementing sustainability engagement at work, the AiF can still come to work and feel that he/she has contributed to sustainability in some way by controlling what he/she has chosen to eat, even though administration work capabilities are frozen (see the comment made by AD6 in Chapter 6 section 6.4). The AiF may also be aware that his/her sharing of opinions may be received as 'preaching' to people about what they should and should not be doing, as identified in the comment by AC4 in Chapter 8, section 8.4. AC4 comments that he/she does not like it "when people preach to me". While some participants felt uncomfortable raising the subject of sustainability or sharing an opinion, for others the theme of sustainability seemed to arise rarely, as observed below:

Probably not incredibly often, sort of now and again, but it's a topic of conversation. Probably brought into focus by, for instance, that disaster in Brazil, that sort of highlights it there and then, and that would prompt conversation.[16] *But in terms of sort of long term, now and again. (AD12)*

For another AiF, sharing was part of the role he/she fulfilled at the UoN so sharing sustainability issues and news was a part of the work remit, as can be seen in the quote below.

I share my views yeah that is my job again, I am here not just to represent the students' views but actually to promote the issues around this. So my job is promoting sustainability initiatives to engage people in the discussion. (PO4)

It appears from the above comments that academics (the AC group) find it easier to share sustainability views and pursue sustainability activities than the administration and support group (the AD group). For those who are part of the policy group (PO group), their job remit requires that they push forward the sustainability agenda. For both AC11 and PO4, sustainability forms part of their job role, thus their particular job enhances their individual capability in relation to sustainability. Therefore by not engaging with sustainability, both AiFs would potentially be compromising the formal responsibilities of their employment with the UoN.

An interesting comment made by PO5 (below) suggests that it has been the academic community's interest in sustainability that has boosted the University's interest in sustainability matters.

Then there's been a bit of a hiatus and I've been frustrated for a while and had been feeling that Nottingham doesn't get it, you know, Nottingham does quite well in some of these green metrics and, you know, people and the planet, and gets a few awards for its grounds and it's all lovely, but it really doesn't, still doesn't have sustainability in its heart and its culture. And I thought, well, I don't know, nothing's going to happen. So we get a new Vice-Chancellor and some of us, we kind of, we try to lobby the Vice-Chancellor and we kind of did her a presentation of all very sustainability things and trying to get her interested, but nothing particularly happens. But then there is a bit of a groundswell and then you get the, er, the single-use plastics campaign. Er, you get a

[16] In reference to the collapse of the Brumadinho dam in Brazil in January 2019 (BBC, 2019d).

new chair of the University's Environment Committee, who seems to have more influence. I think it's because the current chair is a research leader, rather than, previously, it was a Director of Estates. So it's the academic community now coming back and saying, we care about this, this is important. (PO5)

For PO5 sustainability is still not completely embedded within the "heart and … culture" of the organisation. This is potentially a barrier to sustainability engagement for employees at the UoN, although, with the advent of the new University strategy, sustainability may in the future become more fully embedded. Though PO5 has identified this overall impression, there are pockets of sustainability progress that the AiF mentions. It is the academic community in particular that PO5 signals as providing the force behind sustainability changes within the UoN, rather than other areas of the organisation. They are providing the "groundswell" that is leading to changes in organisational structure and thereafter to changes in sustainability initiatives that herald the potential for changes in employee practice as in the case of "the single-use plastics campaign". This implies that the academics (ACs) seem to have a greater degree of capability in sustainability terms than the other employee groups, administrative and support staff (ADs) and policy shapers (POs). More of these organisational (meso level) changes could bring about a greater embeddedness of sustainability for the UoN at the individual (micro) level.

7.3 Wildlife and Nature

A strong sub-theme to emerge from the data was, for several AiFs, how the environment was linked to wildlife and the natural world. The beauty that is associated with flora and fauna was a considerable force motivating many employees and underpinning their sustainability views and practices. Therefore the degradation of natural habitats and the consequences of this for other forms of life on the planet were a significant concern, as is further indicated in the quote below.

Er … I think because I like nature and I like wildlife you know my ideal might be stuck on an island on my own sometimes (laughs) and it's like you don't want to see all of that beautiful nature disappearing when we could do something about it. And I think that's probably the biggest

thing is that you know it's the wildlife that we are losing, all of those sort of things you know which shouldn't happen. (AD7)

AD7 already understands some of his/her internal structures, stating that "I like nature and I like wildlife" and thus the AiF does not want them to be lost. This statement also supports the connection to nature that Miller (2005) suggests is important in protecting biodiversity. However, the comment also, perhaps, implies a feeling on the AiF's part of his/her own restricted capability to do something about the situation that is unfolding in front of him/her, that is, "beautiful nature disappearing" when something "could" be done. This may suggest that the AiF has a limited "interpretation of [his/her] range of capabilities [and] [his/her] understanding of the choices available" (Coad and Herbert, 2009, p. 191). The AiF has yet to transition from being a sustainability 'onlooker' to taking sustainability 'action'. This implies that there is an opportunity for the AiF to develop existing internal structures that could support different sustainability practice and outcomes. The connection to nature is already present so provides a good foundation on which build further biophilic behaviours. If appropriate knowledge and information connected to nature and wildlife were easily available to the AiF, capabilities and understanding could be developed, though the AiF may not at the moment be necessarily seeking out this development of internal structures for himself/herself.

Environmental considerations can, for some, be more important than the implications for human life on the planet. In a similar way (though perhaps not as extreme) to how the Voluntary Human Extinction Movement (VHEM) (Pratty, 2020) views human life, for AD11 human life does not feature when considering sustainability risks.

So I probably mostly think about nature and the planet rather than people. For me when I think about sustainability what is in my mind I think more about the planet and the nature rather than well-being of people that's how it's in my mind basically. (AD 11)

For AD11 the interconnected nature of sustainability has not been realised and the AiF views people and nature as separate entities. This is interesting as the AiF is a member of Greenpeace and feels quite strongly about certain aspects of sustainability (see below). This suggests that this AiF has not

developed a biocentric world view (Grønvold, 2013) or appreciated the interdependency of all life on Earth. It also highlights that there is an opportunity for AiF learning and for internal structures to be challenged and changed. For another AiF (AD2), however, the interdependency of life on Earth is clear as the comment below indicates:

> *Er and all the plastic that goes in the sea you know when you see turtles and they have got bands around their faces but you know, we see swans you know with round their beaks and netting around their beaks. So it's not only going to harm the humans eventually but it's currently harming the sea life and the land life, land animals. (AD2)*

Though there are several findings' chapters within this thesis, they are all very much intertwined. It has been challenging to separate the findings into individual stand-alone themes. This is illustrated in the comment above, as although AD2 is commenting in part as to how human lives will be affected, the AiF refers to the issue of plastic and how plastic (see Chapter 6) has affected wildlife. Comments are based either on the AiF's first-hand experience (as the AiF is a bird watcher) or on what he/she has seen in the media (see Chapter 10). This illustrates that the concept of sustainability does not fit neatly into a box, but is complex and has many dimensions and manifestations, so is truly multidisciplinary.

There is a very strong relationship between wildlife and internal structures for one AiF – a relationship that was formed in early life at the age of 12. This interest and conviction were felt so strongly that they manifested themselves, for this individual, in links with the rites of passage within the Roman Catholic church.

> *It just really really shocked me, really shocked me because coming from a family that loved nature we were always watching nature programmes anyway you know and I was you know passionate about animals. And a funny Irish story, you know when you are going for your confirmation when you are 12 and you have to choose a middle name and I wanted to choose Francis because of Francis of Assisi because of his love of animals. So animals were a big part of my life. And then when I just saw all of these trees being burnt down and nobody could do anything about it, didn't seem that anybody was doing anything it just seemed it was, it was the scariest thing I think I ever saw really. And just the death*

of all these animals as well that they just seemed so helpless so I was just shocked, it was the shock factor and I had never seen anything of that scale before. (AC12)

The influence of nature programmes via the media has markedly impacted on this AiF, through what was seen on the nature programmes themselves and because the nature programmes were a part of family life and potentially form part of childhood memories when growing up. As Kahn (2002) notes, children construct their own internal structures and thereafter act, drawing upon those beliefs and values that they have constructed. Soga et al. (2016) suggested that vicarious childhood experiences with nature (such as via television) can support a positive relationship with nature. This AiF has demonstrated the lasting and powerful quality of the embedded social structures within an agent (adult) in the form of "phenomenological and hermeneutic inheritance" (Stones, 2005, p. 4), potentially from childhood constructions/formations of internal structures. This suggests that some internal structures have foundations in early childhood and can generate sustainability engagement though they were formed many years ago (Chawla and Derr, 2012; Collado et al., 2015; Evans et al., 2018; Otto and Pensini, 2017). The AiF repeatedly uses the term "shocked" in relation to the images seen, which resonates with the findings of O'Neil and Nicholson-Cole (2009), who suggest that shocking images are used to 'grab' a person's (in this case a child's) attention. The images to which AC12 is referring to have certainly 'grabbed' his/her attention and they remain sharp memories that the AiF is able to access easily (for more information on the media dimension, see Chapter 10). For AC12, there is also an expression of the strength of the internal structures, by the choice of the confirmation middle name via the external structure of faith and beliefs, even at the young age of 12. Wider theological dimensions are discussed later on in the chapter (see section 7.4).

While considerations of wildlife and nature form part of the hidden internal structures of agents, some are also linked to their visible conduct. For example, AiF AD2 explains (see quote below) that he/she is an active bird watcher, so to retain this as a hobby, birds will need to be in existence. To continue his/her hobby, the AiF has been involved in social groups for bird

watching. This behaviour supports the findings of Cooper et al. (2015) that individuals who take part in bird watching activities exhibit a greater degree of environmental stewardship.

> *Er but er me and S have worked on er nature reserves as well so we go bird watching and we know quite a bit about birds as well. And so I am on the social groups for bird watching and you see things like that all the time with netting and er plastic bottles and wires and you know things like that. (AD2)*

It is interesting that AD2 is being influenced by his/her personal hobbies as opposed to mentioning any workplace influence or control system. Although the AiF is influenced through structures outside the UoN, the UoN may benefit from the sustainability conduct of the AiF if he/she is able to incorporate them into his/her work.

The care for wildlife and nature is also demonstrated through the support of environmental pressure groups such as Greenpeace. AD11 below shows how his/her feelings manifest themselves when it comes to supporting the conservation of nature and wildlife. The question of 'what can I do?' is addressed by taking action and signing up to Greenpeace and ensuring that petitions that are circulated are signed by the AiF.

> *I think I just wanted to kind of see what I could do to help. So obviously you see all the things you understand and you agree with it but then you don't know how you can help. You know and we had this conversation with our friends when they started complaining oh you know what have you heard of this case that in Russia they have got these farms that produce fur. So they grow animals specifically for the purpose to produce fur and to make clothes or fur coats out of it, this is so horrible. But I said 'what can you do about it?', so if you can do something about it you should do it. So for example me, if I am er against people producing let's say leather coats or leather shoes so I stop wearing these clothes and I stop buying these clothes. So what in particular can you do, so why are you complaining if you are not doing anything about it? So stop complaining and just do something about it. Don't wear fur, I don't know sign a petition just do something about it, don't just sit there and complain. So that's how I felt that you know it's not enough just talking about it you know and not doing anything so what I can do er right now about it? So I found that for now what I can do is at least sign up to Greenpeace and keep signing their petitions. So that's at least something small that I can do at this point in time. So that's how my brain works. (AD11)*

For AD11 seeing the impact on the environment is how the AiF is able to understand sustainability issues, but the issue for AD11 is how to "help" in the protection of wildlife and the environment. AD11 states that "you don't know how you can help", which implies that there is a need for information and knowledge, an area which is addressed in Chapter 8. The comments from AD11 imply that once sustainability issues are known to him/her, the agent cannot go back to a state of not knowing what he/she knows. For this AiF, active agency/acting is an important part of sustainability as he/she states "[s]o stop complaining and just do something about it". It is widely known that Greenpeace use images as a key part of their communications strategy (Doyle, 2007) – and part of how AD11 understands sustainability issues is via visual means "you see all the things you understand". Therefore it is not surprising that Greenpeace is the group that the AiF has chosen to join.

The pressure felt by an AiF to conserve wildlife and nature is also reflected in dietary choices, as explained in the quote below.

> *And I'm trying to cut down on dairy and meat because the impact that they have on the world is massive, compared to plant-based diets. And that kind of, we're in a privileged position, being in a more economically developed country, as opposed to a less economically developed country, where they are growing the food for the animals in the richer countries and not having enough food themselves, you know. That kind of thing is incredibly eye-opening and if that can't have an effect on you, it's just hard to comprehend sometimes. (AD12)*

For AD12, both internal and external structures have influenced his/her practice when it comes to dietary choices, as he/she is aware of how his/her choices are, along the food supply chain, affecting wildlife and nature (Hertwich et al., 2010). In contrast with AD11, AD12's internal structures have generated realisation of the interdependency of the global systems and their connection to the effects they can have on individuals across the world. AD11 is struggling to decide "what I can do", whilst AD12 has already come to a realisation of what personally can be done in terms of action. An explanation of this can be found in the components of active agency, that is, conscious and unconscious motivations (see Stones, 2005, p 101). AD11 states that what he/she knows

about dairy and meat agriculture is "incredibly eye-opening", which suggests that unconscious motivations have evolved into conscious motivations once the AiF's eyes were opened. This is further supported by a reduction of critical distance and a reordering of concerns and priorities for the agent and thus bolsters AD12's active agency (Stones, 2005, p. 101). For this AiF, there is a sense of intra-generational equity across global citizens that has motivated his/her choices, and as the AiF states "if that can't have an effect on you, [what can?]".

7.4 Stewardship

The idea of stewardship and responsible use of resources emerged on several occasions from the data. One of the most striking ways in which it appeared for one particular AiF was through his/her understanding of theological concepts, and a manifestation of one his/her innermost internal structures, that is, personal belief and values. The response detailed below is impassioned and gives a clear sense of how strongly the AiF feels about his/her environment.

> *OK, so I take that very personally, what I associate with sustainability. So it's an abhorrence of waste, it's an abhorrence of excessive unnecessary consumption. It's an understanding of the effort and the energy that goes into producing something and, therefore, it's the respect for the output of that energy and that effort and, you know, a wish to, I'm a 'make do and mend person', you know, I'm a vegetable grower. It's, er, it's a stewardship as well, which is, I know, a very kind of theological concept, but it's about a duty of care to your environment and to your community.*
>
> ***So … with stewardship and theological concept, how do the two marry up in your head?***
>
> *Er, well, I suppose I said the word, theology, because I'm conscious that in the discipline of theology, the concept of stewardship is seen as one of the ways in which theology contributes to the sustainability agenda. The theological aspects are not remotely personal to me because I don't have those beliefs, but I like the idea of stewardship. … Human beings are just one of the species on the planet, we don't own the planet. We happen to be in a privileged position, where we have more agency over the future of the planet than the other species, and, therefore, I think we need to take that very seriously into account and play our part to protect, you know, the hedgehogs and the, you know, the wild flowers, as well as protect the human species. So stewardship to me is that, er, I suppose,*

that senior responsibility and duty of care because of the privileged position of human beings. (PO5)

As humans we would be at the top of the food chain, and for this AiF it means a position of responsibility for, not dominance over, other species that inhabit the world. The comment regarding the input and output of products resonates with themes arising from aspects of the circular economy (see Attenborough, 2020; EMAF, 2017; Geissdoerfer et al., 2017; Stahel, 2016; WRAP, 2020) and a regard for the appropriate stewardship of resources, the counter position to the current industrial model of "take-make-waste" (EMAF, 2017). This position is linked to the element discussed above under the wildlife and nature sub-theme. Though PO5 identifies theological ideas as not being "personal", the idea of stewardship is taken "very personally". This could be an illustration of Grønvold's (2013) suggestion of a biocentric world view where humans are one component of creation, without primacy, and all creation is valued equally. This does not require a belief in a deity per se, but it does indicate that the AiF espouses a belief that humans "are just one of the species on the planet, we don't own the planet". It also signals a responsibility that the AiF feels that humans have for "play[ing] our part" which is anchored in protection of other species, both fauna and flora.

One of the other elements connected to stewardship and resources that emerged was that of recognising the finite resources that we have, or rather, that the resources that we have been endowed with on planet Earth are not infinite, as the comment below shows:

Er well I think it means minimising your impact on the world through the things that you do. So that's I suppose would be my sort of simple definition you know. And that really means just thinking about the things that you consume, the way that you live your life er and … amongst the number of considerations for the choices that you make ensuring that er you consider the impact on the environment. You consider the impact on the wider world.

Do you think it is important?
Oh yes very important yeah

If yes why?

Well it's you know … it's important because er to use the cliché we only have one planet er. It's important anyway because even if we weren't concerned about er er climate change for example, if we weren't concerned about the state of the planet and what we might be leaving for future generations, even if we either weren't concerned about that or didn't believe in that we should still be concerned about the resources that we consume because those resources tend to be finite too.

Why are those finite resources and how we use them so important to you?

Er I suppose it is still about the legacy that you leave behind, you know I have got children and I would like to think even if I didn't have I would care about the next generation. But they er they my children the next generation will also need access to certain resources to be able to survive and thrive. If my generation uses them all up they are not going to be there. If my generation uses them all up and/or doesn't find alternatives …. that is secondary, but nonetheless I would say that to counter those that would say well you know these pessimistic er statements about human impact on the environment are you know they are wholly unrealistic these things will never happen you know. Firstly they will and why would 99% of scientists say this if it wasn't really true? But secondly even if the 1% percent are right there is still a good reason to go in this direction. (PO10)

For PO10 there is "consideration" of the decisions and choices, which implies that there is reflection on the part of the AiF and an evaluation of the ordering of priorities in the mind of the AiF. This links back to Palmer and Finlay (2003), who suggest that the environmental crises of today are crises to do with the human mind, and therefore a solution to these crises should also be sought there. PO10 not only considers the impact on the local environment but is aware of the macro structures and comments too about the "impact on the wider world". For this particular AiF, the concern is rooted in his/her "children, the next generation", which resonates with concepts of inter-generational equity and the appropriate stewardship of the Global Commons (Blowfield, 2013). What is also revealing is that PO10 is able to maintain several, perhaps competing, arguments that are differently weighted within himself/herself without giving primacy to one universal truth (Brocchi, 2010). Another aspect that the comments of PO10 reveal is the mental agility of the agent to reflect on and project a 'future' inheritance that informs his/her actions in the present.

Though the agent is located in one point in time, PO10 can draw upon the past and also the future continuum of time for a decision in the present.

The notion of stewardship and of being appropriate guardians of the resources we have on planet Earth can be seen in the area of recycling clothes. Several AiFs mentioned how their shopping habits had evolved to incorporate the idea of recycling clothes and thinking about buying fast fashion items (see below). This indicates that the stewardship of resources is a key internal structure for agents that impacts on their conduct and decision making when considering buying new clothes.

> *I would have to say H&M because I never knew out of all the …. in terms of er clothing shops I never thought that a fashion brand like that would be involved in sustainability. And it's not until, I had never been to a shop that says to you right bring your old unwanted stuff hand it in and we will give you a fiver. That to me was like an incentive and that's what resonated with me. So I am doing something good and I am also getting rewarded for it. Whether I got rewarded for it or not I wouldn't really be bothered because I am still doing something good. But knowing that they recognise what you are doing and by giving you that voucher. And by looking on their website and seeing jeans that are sustainable or it's sustainable material. What resonates with me is I wonder if one of the bags that I put in whether something that I contributed to is in those new pair of jeans. (AD9)*

> *And now I'm starting to think about things like clothes and fast fashion and, you know, I think I've probably been as guilty of this one as anybody, you know, buying things you like and then moving them on pretty quickly, or worst still, buying things and never wearing them, that kind of thing. So I'm really trying to think much more about, you know, is this going to last me five/six/ten years? Is it something I really want, is it just a whim? Have I got three of these already in the back of the wardrobe? You know, those kinds of thoughts as well. (PO3)*

For AD9 two elements have generated sustainability engagement, first the financial incentive aligned with the recognition that the incentive produces and second, the possibility of AD9's old clothes being incorporated into new clothes. The agent in this instance has responded to an incentive, although the AiF comments that the financial benefit of "a fiver" was not what caused the behaviour change, but more the idea of "doing something good". What strikes a chord with the AiF is being able to see the 'bigger picture' of how his/her

behaviour is contributing to the overall agenda of sustainability. Handing in his/her unwanted clothing demonstrates a personal interest/curiosity in how those unwanted clothes are being reused and whether they have gone into making a "new pair of jeans". This links back to stewardship of resources and using resources wisely, corresponding to the idealogy behind the circular economy (see Attenborough, 2020; EMAF, 2017; Geissdoerfer et al., 2017; Stahel, 2016; WRAP, 2020). It also corresponds to the ideas of worth as opposed to value suggested by Habgood (2002): the old clothes still have worth rather than having a 'financial' value per se. This demonstrates that the internal structure of AD9 is moving beyond the construct of value and developing a perspective that incorporates ideas surrounding worth. This change in internal structure has meant that the AiF has been enabled to be able to "choose well" (Bohlin, pp. 74–75) and potentially exhibits the pursuit of more sustainably focused goals.

For PO3, his/her agency is underpinned by a development of critical distance and reflection before purchasing clothing, and a conscious decision is taken to evaluate purchases rather than go about daily activities in a routine and unconscious way. Again, this links back to a development of the mind and the structures we maintain, such as beliefs, culture or faith (Palmer and Finlay, 2003).

The idea of natural resources and their stewardship was a key area that arose when AiFs were describing what they understood by sustainability. This way of understanding sustainability seemed to be most common among all three types of employee groups, as the comments below indicate.

> *Well living ... living within our means in terms of resources, you know which are available and by means looking you know looking ahead that er certain resources will run out one thing. And er so you know what do we do then and we have to have alternative positions now. And then the other thing is that er you know over time we've er obviously had a negative impact on er natural resources and er … and we need to er reduce that negative impact. (AC6)*

> *Sustainability to me means to try to protect the valuable resources we have in this world and to not just use them all in one go in the next 20/ 30/40 years. And actually, have something at the end of that, so that we can sustain our way of life, to sustain our ability to do whatever we're*

doing at the moment, and to progress and to improve. And not run out of the resources that we know are limited, are finite. (AD10)

So from a meta level sustainability for me is about thinking about the future er and thinking about how one has necessary but not excessive resource for er for the future. And as a father that's about your kids and your family er and sustainability refers to what is it that this generation passes on to the next. And the way in which it's a guardian of the global commons for lack of a better word. (PO11)

The comments above imply that there is a general understanding of sustainability as stewardship and the protection of resources. For PO10 and PO1, this is linked to them having children and wanting to ensure that their children have enough resources. This is not entirely surprising, but a few employees did consider inter-generational equity in relation to previous and future generations who were not biologically related to them. This borders on global citizen behaviours and a sense of human responsibility.

The ideas of inter-generational equity feature for AD 12 (see below) as well as for AiF AC9 (in Chapter 6, section 6.5).

And just a sort of a human being aspect, that, you know, previous generations have protected the world to allow me to enjoy my life now, that I feel a responsibility to do the same. (AD12)

The prudent stewardship of natural resources was a clear and frequent theme that arose from the data. This implies that AiFs feel strongly about fairness and sharing within their habitus. This feeling impacts on how they go about their daily work activities. The meaning of sustainability, as conservation of the environment, was common to many employees who were interviewed and it is the concern for the finite resources and previous and future generations that generates their stewardship behaviours.

Other AiFs felt that sustainability as a word had become a common phrase *"*it seems to be a bit of a buzz word, you know, it is sort of everywhere" (AD8). This supports Leal Filho's (2011, p. 427) conceptualisation of sustainability as "one of those buzzwords that tends to be used widely, but which means different things to different people". AD8 indicates that it is "everywhere", which suggests that the AiF encounters the word via external

structures (such as the media) and internal ones (the work environment). This feeling of the word being in common use was felt by AC2. In fact, the word sustainability for this particular AiF (AC2) has (almost) lost its meaning.

> *OK that's an interesting question because I think if you had asked me a few years ago I would have probably pulled out a definition. I think now it means nothing to me anymore, I think the word itself has lost ... its meaning. So ... that is not helpful for you er. But that's sort of so what it means to me, it means nothing as a word. I think the word itself now is sort of anti of anything because it's been hijacked by so many people. So many agendas that are not genuinely passionate about making a difference. So perhaps if I were to try and rephrase it then I would say it's ... being ecologically sound and socially equitable. So doing no harm to people and the planet and there is no economic dimension in my definition. (AC2)*

It is interesting that for AC2 there has been a development in understanding sustainability and its implications over the years. The AiF has moved from an understanding that is definition driven, to sustainability meaning nothing and then back to an understanding of sustainability that has no "economic dimension". It is interesting that the agent understands sustainability to be "anti of anything", but the AiF appears himself/herself to be 'anti' economics, therefore 'hijacking' sustainability in the very same way himself/herself. This demonstrates that not only is the meaning of sustainability difficult to define but that the understanding of sustainability within an AiF can also change and develop as more is learned and as internal and external structures flex and change. This is reassuring because it means that faculty and staff who are responsible for teaching students are not bound to one view but can teach and impart a range of truths (Brett-Crowther, 2009). The development of an academic's internal structures also promotes innovation and the creation of new knowledge through research, which in the longer term is distributed through teaching, thereby executing two acknowledged tasks of universities (Engwall, 2020).

7.5 Summary

The discussions above indicate that there is feeling within employees that the University has a duty to contribute to society and share in the exchange of

sustainability knowledge. Part of the way in which the academic (AC) AiF contributes to and implements his/her sustainability engagement is through his/her own research disciplines (RQ1). For the policy shaper (PO) AiFs, their sustainability engagement is enabled via their job role (RQ3). This research was conducted in the time period between the end of the old University strategy and the commencement of the new strategy (see Chapter 5, section 5.3). Transitioning between both strategies has meant that definitive sustainability evaluation processes and systems were difficult to identify (RQ4), but this does highlight an opportunity for future research (see Chapter 11) to investigate the establishment of new control mechanisms that underpin the recently developed strategy.

Many employees (all three AiFs) are concerned with the wildlife and nature aspects of sustainability, and their individual habitus does apply force (RQ2), when it comes to acting in ways that support the protection of these environments. This is partly demonstrated through dietary choices, although, not all employees feel confident or comfortable within their work space to share their feelings. This behaviour creates a barrier to the sharing of sustainability knowledge in the workplace (RQ3) and any learning by networked others is lost, which also reinforces and reproduces internal structures of 'not sharing'.

A key barrier to sustainability engagement was the lack of information regarding what employees can do to preserve the environment (RQ3). The sense of distance between an individual and the macro level issues for some agents is difficult to overcome. For other AiFs, however, experiences of nature, both physical and virtual, via the media seem to have left permanent impacts on their internal structures that support their sustainability behaviours (RQ3).

For some AiFs there is an over use of the word 'sustainability' and often it no longer had much meaning for them, or they felt that the meaning of the word had changed over time for them. Depending on how the word 'sustainability' is used, this can act as a barrier and deter some agents as its use is now commonplace (RQ3). An enabler of sustainability behaviour (RQ3) is the ability to see how personal actions can contribute to the overall sustainability agenda and the recognition of that behaviour through incentives.

A strong enabler is the development of an agent's thinking and reflection

when it comes to sustainability. The internal structures that influence action are not fixed and can be developed over time if the agent has the opportunity for reflection and evaluation (see Chapter 8), but what may impede the development is the prioritisation of concerns within an AiF (RQ3).

The next chapter (Chapter 8) addresses issues surrounding knowledgeability of employees and how sustainability knowledge is acquired and used by an AiF to act (or not) in a sustainable way.

Chapter 8 Knowledge

8.1 Introduction

Chapters 6 and 7 have investigated the structures present within the external contextual field of the employees. This chapter focuses on the employee and the structures and knowledgeability within the employee. Part of an employee's action is the result of the Agent-in Focus (AiF) drawing on his/her knowledge, both positional (conjuncturally–specific) and general–dispositional (habitus). In order to make decisions and evaluate the actions that are needed, required or acceptable in particular situations, an AiF needs to be appropriately aware and informed. This chapter examines internal structures drawn upon in the course of sustainability decision making and how the structures themselves are constructed and developed.

Section 8.2 explores how agents reconcile their understanding of sustainability and their actions within themselves. These are mostly anchored in reflections and beliefs about sustainability being 'the right thing to do'. The discussions then move on to consider how an agent learns about sustainability and how the scholarship of an AiF materialises (section 8.3). Section 8.4 considers media as a key element having an impact on an agent's knowledge. The final section (section 8.5) brings together the key discussions. There were three sub-themes identified that related to knowledge, which are: the right thing to do, scholarship and media, which are represented in the diagram below.

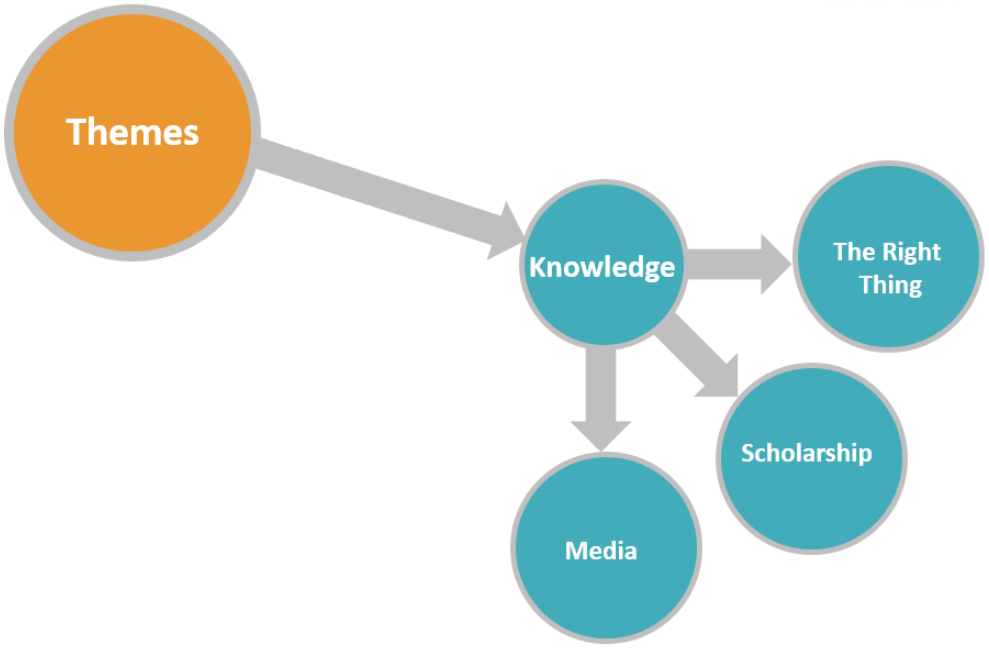


Figure 8.1: The overall theme of knowledge emerging and subsequent sub-themes.

8.2 The right thing to do

Many of the AiFs/employees in this study associated sustainability activity with being the 'right thing to do' and vice versa, that the 'right thing to do' is support sustainability. This suggests that employees already have a foundational knowledge of sustainability deeply embedded within their internal structures of general habitus, and realise its importance. For several employees, sustainable conduct is not a decision or a choice that is consciously made, as illustrated in the comments from AD10 and AD3 below.

> *We just, it's, but it's almost unconscious, it's not, oh, you know, we shouldn't do this because of. It's just like, we just make that choice. So it's not a conscious, I don't think a lot of the time it's conscious, it's just that's what we do because that's the right thing to do, if that makes sense. (AD10)*

For AD10 (above) sustainability conduct happens without conscious thought, but this may also suggest that any betterment of sustainability behaviour, that is, production of different or more innovative sustainability

behaviour is not sought consciously. This unconscious behaviour is seen with regard to recycling for AD3: " … when it comes to practicality and practice I might not think about it you know all week, I might just drop my things in a recycling bin but not really think too much about it".

This may be because there is no critical distance available between the AiF and his/her habitus. As Stones (2005, p. 88) notes about habitus, "we don't even notice that we are basing our actions upon it, it is that close to us", so practices are repeated without change. This may impede sustainability progress in an individual, as only a basic sustainability conduct is ever enacted because the internal structure is never questioned. The closeness of habitus, however, does not mean that it cannot be "questioned as the 'natural attitude' is seen, noticed and made explicit" (ibid.). AD10 recognises this characteristic of his/her own habitus rather subtly, because the AiF comments "it's *almost* [emphasis added] unconscious".

One AiF (PO2) believes, his/her habitus is very different from the mainstream general–dispositional structures of those in society.

> *What does it mean to me as an individual, I guess, fundamentally, of its core, it's about doing the right thing, er, whether that be, in terms of, er, being fair, open and honest, trying to minimise any impacts I have in anything that I do, which isn't always easy because it's very much, er, it's almost a complete, er, polar opposite to a modern society of consumerism and wanting more. So yes, it's about doing the right thing and, I guess, a big part of me is actually, in life, having experiences, rather than items. So, I suppose, that's, I haven't got a particularly scientific view of sustainability, you know, there's, clearly, the three pillar approach and the, you know, we could go back to the Brundtland definition.*[17] *(PO2)*

Comments from PO2 suggest that his/her understanding of sustainability embodies a holistic approach to life in terms of being "fair, open and honest" and "minimi[sing] any impacts". This approach guides his/her life, as the AiF

[17] The World Commission on Environment and Development (WCED) published a report in 1987 defining sustainable development. The WCED in its report, *Our Common Future* (WCED, 1987, p. 24) posits that "[h]umanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs". The report *Our Common Future* (1987) is sometimes referred to as the 'Brundtland' report after Gro Harlem Brundtland who was the Chairperson of the WCED at the time.

comments that his/her life is about "having experiences, rather than items", which links back to aspects identified by Clugston (2012, p. 4) of "being more, not having more".

For PO2, society seems to be about having more and more material things, but the AiF is positioning him/herself away from "modern society" and implies that he/she is not part of the mainstream, in essence fashioning a different identity. The AiF, through his/her own experience and knowledge, has consciously chosen to exercise his/her capability to produce a different social practice: the AiF is simultaneously in society but not of it, and therefore, in his/her individual construction of society is able to resist the prevailing structure and not reproduce it. In fact, the AiF is attempting to produce (and reproduce) a new structure, that of measured consumption and living in a balanced way, for the little fraction of society for which he/she is responsible.

This social behaviour is interesting, because although many AiFs felt that sustainability was the 'right thing to do', they did not share PO2's particular actions of enacting sustainability, such as mindfully consuming or limiting how much they bought. This is, perhaps, a result of the limited range of experience other AiFs have had when compared to the 'Damascene moment' that PO2 has experienced (see below). This suggests that although other AiFs have a baseline sustainability knowledge and understand at a basic level aspects of respecting the environment and moderating consumption, what may be missing for the agents as part of their internal structure/s is 'sustainability experiences'. Experiences would form knowledge and give the AiF the ability to enable his/her individual capabilities and implement knowledge as actions and outcomes. This lack of experience potentially acts as a barrier to more sustainability engagement for the AiFs, but this could be an area where the University may be able to support employees. As Shapiro (2005, p. 13) notes, universities should be "serving interests that include but move beyond narrow self-serving concerns", which may include the education and learning of others, such as faculty and staff, as well as students at university. Enabling employees to make better sustainability choices and decisions could be one of the ways in which universities could contribute to wider, more altruistic issues, because

employees are important in delivering HE organisational sustainability (Brinkhurst et al., 2011).

An event that PO2 describes as a 'road to Damascus moment' for the AiF is described below:

> *So these are almost, Road to Damascus moments, aren't they? I think the one memory that really sticks in my head, was the deforestation in Tasmania. And you know, it must have been 15 years ago and I can still see and smell that situation.*

The experience of PO2 in Tasmania and the memory/knowledge that remains from that experience informs his/her conduct many years later. The agent can still "see and smell the situation", so this memory is very tangible and evocative. It is the 'experience and witness' of the deforestations that has remained within the habitus of the AiF and has increased the agent's knowledge and, perhaps, individual capability, to develop an individual type of social conduct that is different from that of the majority.

PO2 comments (see above) that he/she does not have a "particularly scientific view of sustainability", which implies that this agent's view is more subjective, indirect and experiential, and is more embedded in beliefs and values. The AiF mentions that he/she "just made the connection between quite a religious upbringing and sustainability", which suggests that both the agent's exposure to religion and his/her own mental constructions whilst growing up have been an influence on his/her sustainability conduct and engagement. The impact of theology is clear to see in how the AiF even describes the deforestation of Tasmania as a 'road to Damascus moment', which suggests that religious frameworks may help to support greater sustainability engagement. This corresponds with Das et al.'s (2014) findings that suggest that once the connections between religion and sustainability have been made more explicit to believers (in the case of Das et al. 2014, believers in Hinduism), then some changes in sustainability can be observed. For other AiFs the 'right thing to do' is embedded in nature and the natural world as discussed below.

The observations from AiF PO9 (below) demonstrate that the way things are currently being done, that is, the removal of "vegetation" and "forestry" is not the right thing to do. This AiF feels very strongly about this and his/her

feelings manifest themselves as pain and the pain moved the individual to tears on a number of occasions during the interview – a striking demonstration of the power of an agent's internal structure. The experience of watching your homeland change over time provides convincing (visual) evidence of the urbanisation of previously rural areas. This visual evidence has provided first-hand experience of the reduction in nature.

> *I come from Kenya, my rural home is in Meru at the roots of Mount Kenya so I was just telling you as an example, as I grew up and as I visited my rural home I could never see Mount Kenya because there was all this vegetation all this forestry around. But these days unfortunately, and it makes me almost cry, I wake up and I see Mount Kenya. So that pains me a lot and it gives me a realisation that there is something wrong, we are not doing things right. (PO9)*

PO9 has a very strong connection to nature that formed whilst growing up (Kahn, 2002) and this has informed his/her general–dispositional internal structure. At present, however, this connection seems to be causing some anguish for the AiF, because the internal structures of the AiF, both "the positional and the dispositional" (Stones, 2005 p. 90), are in conflict with one another. The erosion and reduction of the physical biodiversity that the AiF has experienced over time, between his/her rural home (dispositional, humans, conduct) and Mount Kenya (positional, nature, context) has convinced PO9 that "we are not doing things right". The voluntary removal of nature at macro and meso levels in order to make way for roads, housing, commerce, etc., has impacted on the agent's individual (micro level) internal structures. This unintended consequence of human progress has prompted the AiF to question human conduct via a "realisation" and to lead the AiF to the view "we are not doing things right". Hitherto unconscious thoughts are being made conscious via the impacts on the AiF's home town. This links back to Miller's (2005, p. 430) discussions detailing the "estrangement of people from nature" and how, over time, as nature gets pushed out of everyday life, it becomes more and more devalued. Ultimately Miller (2005, p. 431) asks "[i]f people no longer value nature or see it as relevant to their lives, will they be willing to invest in its protection?" The cliché of 'out of sight, out of mind' is appropriate here and

could act as a barrier to agents developing feelings of biophilia (Fromm, 1973) once nature is removed from sight in daily activities.

Stones (2005, p. 92) identifies that an AiF "looks both backwards and forwards at the same time in making judgements about acting, often routine taken-for-granted judgements, that unavoidably involve the hazy, precarious, assessment of what these actions' unacknowledged conditions and unintended consequences might be". Given the current state of global progress towards sustainability, perhaps a world "impoverished of nature" (Hayhow et al., 2019, pp. 6–7) is indeed an unforeseen result and the price that is paid for local and global urbanisation (Miller, 2005).

There is the 'pushing out' of nature at all levels (macro, meso and micro), both in physical ways and mental structures. In fact, it may be that the physical dismissal of nature follows the virtual, that is, 'out of mind, out of sight'. This links back to Palmer and Finlay (2003), who suggested that the acquisition of knowledge, on its own, is not enough to confront the problems with which we are faced. There needs to be a recalibration of our mind, that is, our own mental structures too. The power of nature has been witnessed in a very stark way by the global community in 2020, as most of the world has had to deal (and is still dealing) with the Covid-19 pandemic. There is a possibility that the virus has been transmitted to humans from wild animal meat that was sold as food. The pandemic has demonstrated the ability of something in nature, that is so very small and overlooked, such as a virus, to spread and reproduce. This, for humans, has had fatal consequences at times. Therefore, if humans think that they can dismiss, and perhaps, dominate nature and non-human life without a second thought, humans need to think again.

For another AiF (PO8, below), making a sustainable decision has a positive impact on his/her well-being, but it can at times cause some conflict, as there is a balance to be struck between short- and long-term objectives. This is more of a pragmatic response than PO9's (above) and gives a more objective, non-committal response in terms of being fully sustainable or not. In fact, it ensures that when it suits an outcome, a legitimate long or short view can be taken.

I think a reasonable response is around having a balanced approach to where you put your effort on those three elements [environment, social, economic]. So trying to er take full account and understand the impact positive and negative of all of your decisions. And understand whether or not it's the right thing to do. And I think it comes down to sustainability is the right thing to do. (PO8)

I would say when we do the right thing it makes you feel positive, good and I would say the right thing being a sustainable thing. Something which has taken account of the er of the true impact of that decision and understanding where the pluses and minuses are. Er my personal view is that the right thing is often taking a long term view, you can't always do that, you have to sometimes take a tactical decision that's more short term simply because you don't know. So sometimes I do feel compromised. (PO8)

The AiF does not really elaborate on what constitutes long and short term, and these descriptions are relative both in terms of an agent's understanding and in terms of time itself, for example, the lifetime of a human, a mountain or across several generations. What the AiF does not comment on is what he/she does to investigate the unknowns.

The decisions that PO8 makes are not always straightforward there is a tension present for this agent. The "pluses and minuses" are not always known with certainty, and on occasion they come to light only in the fullness of time. This can be seen in the reflections of Sir David (Attenborough, 2020, p. 100), as his full understanding of the situation that humans are or were in, only became known to him in the twilight of his career and had developed over time. Though things can be unknown (as the AiF comments "because you don't know"), there can be things that agents can find out if they choose to, by means of their own scholarship and pursuit of knowledge, which is considered in the next section.

8.3 Scholarship

An agent acquires sustainability knowledge to varying degrees through scholarship and education, some elements of which can be conscious but others can be unconscious. The quotes below identify areas from which agents learn and how the University of Nottingham (UoN) features (or not) within their learning processes.

So then at work, how do you get to understand or learn about sustainability?

I mean anything that comes, I mean they have things like campus update, which talks about various things that are going on, on campus. They've got the message of the day. But, to be fair, because I have a laptop computer, I don't often get messages of the day because the laptop doesn't close down every day. Er, so there's general communications from the University I think, and then, you know, any promotions, like posters and stuff like that that they put up. That's how I learnt, that's how, normally, I learn about what's going on.

Are there particular things about the posters[18] ***that resonate with you more than others?***

No, I really can't remember what a poster looks like, to be honest with you. It was just that kind, they are the kinds of things that are communicated, but I honestly, with the WasteNott campaign, I've no idea what the posters look like, I can't remember. (AD10)

Some of the posters that have been generated by the WasteNott campaign have received attention from employees, as in the case of AD10, as the AiF is aware of the posters, but the comment also shows that the AiF "can't remember what a poster looks like". The poster has not left a lasting or a memorable impact on the AiF in this case. This means that, if the posters were an attempt to promote sustainable behaviours amongst employees, they have not worked in the case of AD10. This is in sharp contrast to when agents have seen other sustainability information via pictures or programmes that have left lasting memories (see Chapter 10). This may suggest that the posters were not tested to a great degree for impact before being launched as part of the initiative. Going forward, there may be room to improve the posters, such that they become more memorable and leave a lasting impression on employees who see them, and also improve other mechanisms that the University uses. Though AD10 cannot remember the exact details of the poster, this may be because of how the information is seen. Typically, a poster is seen in passing, rather than being like a television programme that is deliberately watched. When time has been set aside to watch a programme, viewers will concentrate on the programme and as

[18] These posters advertised the WasteNott initiative of reducing the use of 'single-use plastics. The posters were located on the university campus.

a result, impressions from the programme may remain. The fact that the AiF has remembered the poster at all may still suggest that the poster campaign has had considerable impact.

For another AiF, there is very little within his/her contextual field about sustainability and what he/she feels the UoN has done in terms of sustainability scholarship.

> *No. I can tell you that I have looked into it myself er because of the lectures so at work I have done the work to look at what we do at work. Has anybody ever, have I ever been informed, or gone to something that informs me about what we do at work? No. (AC4)*

From AC4's point of view there seems to be a gap in sustainability information and communication from the University. In fact, this point of view seems to be similar to that of AC7 in Chapter 9, section 9.4, about communication, indicating that, whilst there may be pockets of sustainability knowledge within the UoN, many employees are unaware of it. AC4 suggests that, within his/her conjuncturally–specific domain, there is very little possibility of learning about sustainability. The comments from AC4 highlight that there is room for the UoN to do more in terms of the everyday sustainability knowledge exchange within the work domain of the AiF. Though there is limited sustainability knowledge exchange for AC4 – and that could be a barrier to sustainability engagement in the longer term – there is an opportunity for better sustainability engagement. The AiF is interested in matters to do with sustainability because he/she has "looked into it [his/her] self" though this is for work purposes, but there could be potential for more sustainability engagement if the AiF felt that it was a priority for the University. This again resonates with ideas suggested by Shapiro (2005), who identified that higher education institutions (HEIs) should serve broader concerns, which could include contributing to societal issues such as sustainability. Furthermore, employees are pivotal in delivering sustainability outcomes (Brinkhurst et al., 2011).

The transition of sustainability from being sporadic to becoming central to the new University strategy (see Chapter 5) has meant a recalibration for many policy influencers, as they have not been used to thinking about sustainability within their decision making. This is obvious in the quote from PO12 (below):

> *Er I guess so because I have some control don't I? … So I have some responsibility at some point I guess for decision making. And I think it would be important to demonstrate given the University strategy that particularly now we are making the best informed decisions from a sustainability point of view. So I would be more conscious of doing that now, now given the new strategy of the University, I think it's important given the fact that sustainability would be at the heart of that strategy, that from a leadership point of view I am seen to be making sustainable choices. (PO12)*

This is an interesting comment from PO12, and supports a transitionary phase for the University because the AiF is a little unsure in terms of who has responsibility for sustainability decision making. PO12 views his/her own responsibility as "I have some control, don't I?" and "I have some responsibility at some point, I guess". The comment implies uncertainty about the decision making and responsibility remit due to the evolving organisational framework for managing sustainability. This corresponds to the time frame in which this research has been conducted, as the UoN was in a state of transition between the old strategy and the new strategy (see Chapter 5 section 5.3 for more details).

Another important dimension is that the AiF is "seen to be making sustainable choices", which suggests that it is important to project an image that supports sustainability. The AiF does not comment on whether this is as an individual or at an organisational level, but it would be important at both levels.

As Bohlin (2005, p.78) observes, "a university can aspire to provide the rich array of questions, challenges and experiences that will prompt young adults to develop those habits of mind and character that will enable them to desire and pursue worthy goals". Sustainability has received much media attention and could be deemed a worthy goal. The pursuit of sustainability would be especially pertinent for students because the UoN would be seen to be directly contributing to a better future for the very students who attend the University. This image also ensures that decision making is aligned with the University's 'green' sustainability credentials that are outlined in its various reports (see Chapter 5, section 5.3).

An organisational framework for managing sustainability is also important at an individual level, because then an agent's contextual field will incorporate sustainability dimensions, as sustainability is a component part of

the overall UoN mission and new strategy as explained in Chapter 5. The observation below from PO2 expands on the point.

How are /were decisions about sustainability made in the UoN?

Would very badly be an appropriate, er, response?

… whatever response you want to give.

I think, er, they're not particularly well made around sustainability. I don't think, er, sustainability is high enough on the agenda to enable those decisions to be informed. I think there's a clear lack of true understanding of what sustainability is. That isn't necessarily the fault of those that are making the decisions, it's because we haven't had a policy framework to mean that it is important that we need to educate them. (PO2)

However, everyone's understanding of what sustainability means is different (Leal Filho, 2011). This is demonstrated in the comment below by AC1:

So did I interpret sustainability right? Because people talk about sustainability like, 'Are our international numbers sustainable?', and that's one thing, and then you have got the cups and that seems to be a fundamentally different type of sustainability.

PO2 observes that a "policy framework" is lacking and hence "those that are making decisions" have reduced knowledge, especially in light of where understanding and knowledge come from for a decision maker, that is, the media (see below and Chapter 10). Hence, perhaps a formalised way of learning and scholarship may deliver a more cohesive and shared idea of sustainability within the policy shaping group. A more formalised way of learning within the organisation may also help support the new sustainability strategy that has been introduced at the UoN.

Though there may be different interpretations of sustainability, the University has paused and 'adjusted its sails' (see Shapiro, 2005). Over the last few years, the University has recognised the importance of sustainability and has incorporated it within its overall strategy.

> *No one used to talk about sustainability even a year ago not really. And now it's absolutely you know there is a new sustainability committee being formed, I sit on loads of … committees obviously you know the environmental impact of the projects that we are talking about, we wouldn't consider them two years ago, they weren't even thought of. It's just around us a lot more and it influences your behaviour in a positive way. (PO12)*

The UoN has undergone a significant change when it comes to sustainability. As the AiF (above) comments that a year ago: "[n]o one used to talk about sustainability". The UoN is a large complex organisation and changes will take time to plan and deliver. The UoN has given sustainability a 'refresh' and is developing a "new sustainability committee". This AiF is very aware how his/her conjuncturally–specific domain has changed and sustainability is now a noticeable part of the agent's work environment.

> *… the biggest surprise that I have seen in the development of that new strategy, is the real push from colleagues across the University and students around sustainability. It was almost invisible I think, I don't think anyone really talked about it a year or two ago and now it's absolutely prominent in the forefront of the University strategy. I mean I don't talk about sustainability particularly apart from in my research er I wouldn't talk about it in the pub on a Friday night with my friends, no. Er I am not, I haven't been down in London all week protesting (laughs). (PO12)*

The response also suggests that the UoN has been compelled to recognise sustainability in its strategy owing to the "push from colleagues" and "students", thus taking it from being invisible to being a central part of the new UoN strategy, and so moving from being a marginal consideration to a main priority, as the underlying narrative has changed. Sustainability in itself has become an external influence that is exerting pressure at the macro (global) and meso (organisational) levels. The University's behaviour towards sustainability has changed, and this seems to have affected the AiF. The AiF mentions that sustainability would not be a topic of conversation "in the pub … with [his/her] friends", nor has the AiF "been down in London all week protesting", but, sustainability is recognised by the AiF as important in his/her positional environment/context.

From the comments and observations made by several AiFs/employees (e.g., AC5, AC12, AD2, PO3), the responsibility for sustainability leadership and direction lies with the sustainability committee/s to discharge as they deem appropriate, but the individuals who comprise the committees are not always suitably informed. This is commented upon, as shown below.

How do policy influencers at the UoN learn about current issues in sustainability?

I would struggle to answer that I think er I mean in theory there are ways that departments and er faculties and student groups can kind of feed issues through but I am not sure that's done in any kind of systematic way. So they are probably finding things out on a reasonably ad hoc potentially anecdotal way. There are, having said that there are some surveys aren't there so there is the kind of travel survey that would feed into that. I don't know if there are any wider staff surveys that have touched on some of those issues. I suppose the stuff that has been done around the strategy may well have gleaned particular concerns and priorities from staff through that group. I think the University is trying to get there but I don't think at the moment it's done in any particularly systematic way. (PO6)

The comments of PO6 indicate that there is not a structured approach to sustainability within the University or to how sustainability information flows reach the sustainability committee. This could make it rather difficult for the sustainability committee to exercise its responsibility because it will have limited information on which to base decisions and suggestions. This AiF (PO6) is a member of the Sustainability Committee (SC), so it is his/her own personal learning regarding sustainability that contributes to the SC strategy rather than specific formal training that originates from the UoN. The overall position of the UoN and SC gives an impression of a decoupled and somewhat fragmented approach to sustainability. There seem to be few examples of evaluation or measurement at an organisational level that furnish policy shapers with appropriate information about sustainability or progress towards sustainability outcomes. As the AiF mentions, policy influencers and shapers learn about sustainability issues in a "reasonably ad hoc potentially anecdotal way". For a complex and large organisation such as the UoN, this seems to be a sub-optimal approach to sustainability management. Given that this research was conducted

when the organisation was transitioning from an old strategy to a new five year strategy and was in a state of flux, this could be one reason for the AiF feeling that information was received in an ad hoc way.

8.4 Media

Many of the AiFs are interested in sustainability and they research primarily via different media channels (podcasts, social media, television), to find out about developments within sustainability. This is an opportunity on which the UoN can capitalise, as one of the fundamental principles of adult learning outlined by Knowles et al. (2012) is the ability of an adult to direct his/her own learning. The personal investigation of sustainability suggests that employees are aware of the sustainability problems that society is facing, but more importantly, it implies that agents have the motivation to learn new things about sustainability. In the long term, this self-directed learning of sustainability by employees could provide an enabling mechanism for the UoN for a greater level of sustainability engagement.

> *It starts off with starts with media reports and news and then it's sparking an interest and then me reading about it. And then changing because of informed information. What I don't like is when people preach to me about something that I think I don't know where that is coming from. So if I can find some evidence base for it I will go on that evidence base. I won't just do it because somebody said on the media it's a good thing to do. I will go through the media. But it will only be ever really sparked by some sort of news item media item but then research by me to do the right thing if there is evidence behind it. (AC 4)*

The AiF recognises that the media is not an entirely reliable source and AC4 does undertake further investigation to validate the information. What AC4 does identify is that he/she does not like to be "preach[ed] to". This could act as a barrier for other AiCs to engage in dialogue or converse with the AiF on sustainability matters. This also links back to the observations of Knowles et al. (2012), who note the importance of independent learning and discovery of knowledge. As was identified in Chapter 7, section 7.2, AiF AD5 is "very careful" about how he/she voices his/her opinions at work, and this is perhaps because he/she does not want to appear as preaching to work colleagues.

What is important for AC4 is to see the evidence behind a media story, as the AiF will not mindlessly agree or follow what is reported in the media. The importance of 'not being preached to' is key for this agent but it may also impede the sharing of tacit information by the AiF's networked others, possibly leading to his/her own knowledge being minimised within his/her own contextual field. This links back to Boiral (2002), who notes that informal ways of sharing are important if an organisation wants to manage sustainability concerns. The idea of doing "the right thing" (see section 8.2, above) again emerges from the comments of AC4, but the agent would need supporting evidence, and preferably something that he/she have found out personally. This signals that the AiF is a motivated learner and once the 'spark' has been ignited, the AiF will pursue his/her own investigations into the media news story. This highlights that there is a curiosity and appetite to discover what the 'right thing to do' is when it comes to sustainability.

The interview participants not only rely on the news, but they listen to other media, such as podcasts on specialist subjects in which they have an interest, as in the case of AD5.

> *I think a lot of it is the things that I listen to, so the podcasts and the things that I see on social media or I read. Mainly you know like a reduction in biodiversity, the amount of species that are being lost. To me being outdoors and being, seeing the natural world is really important and we are losing a lot of that now so. (AD5)*

> *I listen to podcasts so going to work and going home every night … through the BBC … I also do quite a bit of reading on it* [sustainability], *er Facebook, Instagram, I have got lots of different organisations on there, so lots of updates as well on there. (AD5)*

> *Yes, things on the TV with the plastic, seeing the plastic, and the animals with plastic around them and how much plastic is on the beaches and in the oceans, that's a big thing. (AD5)*

Podcasts on sustainability topics, such as nature, provide a way of acquiring knowledge and learning about sustainability for this AiF. As Berry (2016b) notes, podcasts have become a 'trusted' source of information: they are convenient and easy to access, as the AiF listens to them whilst commuting to

work and in fact, they are the modern manifestation of radio communication (Berry, 2016a). The information is further legitimised by the podcast being accessed via the British Broadcasting Corporation (BBC), the mission of which is to "inform, educate and entertain" (BBC, 2020c), thus demonstrating that the BBC is a trusted source of information and knowledge, though the AiF also mentions Facebook and Instagram.

AD 5 signals that the influence of media on him/her is "a big thing". This supports the idea of media as an influencing force (see Chapter 10), especially in a visual sense, as the AiF refers to "things on the TV with the plastic, seeing the plastic". An AiF is able to acquire knowledge about what is going on regarding sustainability without being physically present in any given situation him/herself.

Some employees, though, are a little more sceptical when it comes to information via the media.

> ***So you mentioned research that influences you, is there a particular way that research is packaged and how it interacts with you?***
>
> *Er yes that's a good question actually and it kind of touches on one of my concerns about research as it's communicated generally. So I think here er I feel … capable of dealing with research that is disseminated through the sort of mass media. In other words I am not reading every journal article that relates to sustainability. Er but I am able to understand how it's reported in the media and I think that is a real problem that most people are not. Because of course you know what gets reported in the media is whatever generates the er the most interesting headlines rather than the scientific consensus. … So I think I am able to deal with that and understand you know for example where there are reports published that take the scientific evidence and look where the weight of it is pointing, that that's the thing that should carry weight. … But I think there is a general problem there with the way that scientific research is reported that can quite easily lead people to the wrong conclusions. What they will believe in the extreme things that make the headlines in the mass media, as opposed to the consensus that comes out of scientific research, which often is a lot less interesting. (PO10)*

PO10 may be concerned about *how* sustainability information is reported in the media, which resonates with findings of DeLuca (2009, p. 266), who suggests in terms of images that media outlets are reliant on "exciting" images of sustainability as they cannot repeatedly use the same ones. Though this may

be true, DeLuca (2009, p. 265) notes that images are very good for "conveying complex narratives". Sustainability is a complex and multidisciplinary phenomenon, and it can mean "different things to different people" (Leal Filho, 2011, p. 427) and therefore, visual representation of sustainability can provide a quick and clear way of communicating information, without too much ambiguity. In addition, pictures may provide a more objective presentation of a situation, because it is visual evidence of a situation at an exact moment in time, rather than a written, subjective interpretation of an author or a writer after an event. This may be seen as more credible than written accounts about sustainability.

The concerns of PO10 are in contrast to those of PO11, who reads articles in several newspapers to get a feel for the pressing issues, using both the broadsheets and tabloid newspapers for a rounded perspective, as can be seen in the quote below:

> *... I am a voracious reader of media so I read the headlines every morning across all papers er you know so I read the Telegraph, a little bit of the Mirror and Mail just to get a perspective, the Express, Metro, London Evening Standard, Guardian, Observer, Times most of those every day just through the iPad ... (PO11)*

Another interesting perspective that PO10's comment highlights is how his/her hermeneutic framing is embedded in scientific claims and research. Evidence that is based in "scientific reports" is what resonates for this particular AiF, revealing internal structures that value science, but many people do not have the skills, inclination, ability or desire to assimilate knowledge in a scientific format. Though science has made much progress in developing understanding of many things, much remains beyond human comprehension and knowledge, such as some of the Earth's own processes and systems. Therefore, to have confidence only in scientific evidence may impede revelations and understanding that other perspectives could bring to this AiF. As observed by Brett-Crowther (2009, p. 253), "neither politics nor science should be allowed on its own to assert what is the truth". If we consider, for example, the use of curcumin in the field of Western modern medicine (Deogade and Ghate, 2015),

is a relatively recent discovery, yet in Asian countries, it has been used for centuries (Gupta et al., 2013).

PO2's viewpoint is in direct contrast to PO10's, as PO2 does not have a scientific view point at all, which could be because PO2's habitus is anchored in first-hand practical experiences of sustainability. PO2 comments "I was fortunate to spend quite a lot of time out in the Seychelles, working on conservation projects and seeing the impact that development had on, er, marine life" which is different from reading about sustainability in scientific reports (PO10). This highlights the impact on an AiF of experience and how experiences can support learning. This also links back to the andragogy principles suggested by Knowles et al. (2012) that highlight the past experiences of learners as being a key principle in adult learning. Nevertheless, nearly all AiFs within the PO grouping indicated that their sustainability education stems from stories or articles from the media. In fact, another AiF (PO2) referenced PO10 as being his/her Agent-in-Context (AiC) who had shared headlines from the media (Twitter), as the observation below notes.

> *I think the more senior decision makers often, er, find out, er, in terms of, around sustainability, from briefing papers and from peers, you know, having a look to see what our colleagues are doing. Little bits they pick up in the press, you know, certainly, PO10 is often sending stuff down to us saying, have you seen this? You know, it may be a link off Twitter. So they are sort of reading things and asking for views on things. (PO2)*

From the perspective of PO2, it appears that senior management is significantly influenced by their AiCs. PO2 states that information via "peers", "colleagues" and "briefing papers" tend to be the sources of information. Twitter as a media platform also features as a channel for keeping people apprised of developments related to sustainability. This points to the media as being one force (structure) that generates engagement with aspects of sustainability. Senior managers with responsibility for the strategic direction of the organisation, invite colleagues at the more operational end of the organisation to provide "views on things" that potentially form the enabling of or barrier to further sustainability engagement. In the discussions above, PO10

is distrustful of opinions or news in the mass media but the agent's actions propagate sustainability news stories via Twitter, according to PO2.

8.5 Summary

Sustainability conduct is almost taken for granted in daily activities, as actions such as recycling (RQ1) are executed without conscious thought. An agent's habitus can be so close to an agent that it is difficult for the agent to recognise it. For some employees, however, the recognition of their general–disposition towards sustainability has been realised through physical experiences (RQ2) that have highlighted the impact on the planet of how humans live.

Nature, as a structural force (RQ2), features strongly for AiFs. One particular employee has experienced nature being 'pushed out' of his/her rural home. This is perhaps an "unintended consequence" (Stones, 2005, p. 78) of human progress (RQ3) at a meso and macro level but one that is affecting the employee at a micro level. It is the experience of seeing the reduction in biodiversity and the distance between humans and nature becoming greater that is prompting agents to take action (RQ2).

Although information for decision making is not complete, some agents do try to fill gaps in their knowledge through their own investigations, largely via external media (see below). Though the UoN WasteNott posters were mentioned alongside other modes of communication, one agent was unable to recall any of the information either on posters or conveyed via other means, which implies that way in which the University is currently trying to communicate sustainability information to employees is not working as well as it potentially could (RQ3), although one must bear in mind that a poster, seen only fleetingly, has actually been remembered by the AiF. The UoN could in future enhance the design and content of the posters to evoke a stronger reaction. Another employee felt that there was little sustainability information available within his/her contextual field, and that any of the sustainability knowledge he/she had acquired was through his/her own initiative. This implies that the pockets of sustainability research or knowledge within the UoN are not being communicated effectively throughout the organisation, and any initiatives are having a limited effect on this AiF because the AiF is unable to experience them

in his/her local context (RQ3). This highlights a significant opportunity that the University should take, so as to develop more effective mechanisms of communication in the future.

There is a fundamental issue when it comes to the meaning of sustainability in the context of the organisation, in that its meaning is context-specific (RQ3). Clarification of what the University means by sustainability may help develop a common understanding of what is meant by the term. This would then help to establish control systems that could measure and evaluate how sustainability is being delivered and managed.

Though employees may not recognise their own force, they do apply pressure on the University (as do students) (RQ2). This suggests that employees are interested in sustainability and finding out more about being sustainable, which is potentially a dimension that the UoN should develop through its control systems, because there is support from employees to learn and therefore potentially conduct themselves in more sustainable ways.

A significant enabler of agent scholarship and information provision is the media (RQ3). All groups of AiFs drew from specific news stories in the media to inform their own personal knowledge. Several employees commented about the motives of media, but all used different media platforms such as Twitter or Instagram to find and share information. The ease of media accessibility, in real time as an information resource, supports the self-directed learning (RQ3) that an AiF wishes to undertake. This willingness of agents to undertake their own investigations demonstrates that they are open to acquiring new knowledge, and if suitably convinced by the information, they can flex and reconstruct their own internal structures accordingly.

The next chapter (Chapter 9) examines the central theme of control systems in place at the UoN and discusses the relevant sub-themes that arose out of the main theme of control systems.

Chapter 9 Control Systems (CSs)

9.1 Introduction

The previous chapters have examined the external structures facing employees (Chapters 6 and 7) and employee knowledgeability (Chapter 8). This chapter investigates the organisational context of the employee and how the immediate environment impacts on the employee, in particular the control systems (CSs). It unpacks the relationship of the employee with the organisation. This chapter considers the CSs within the University of Nottingham (UoN) from four aspects that have emerged from the data. These aspects form the sub-themes of this chapter and they are illustrated in the diagram (Figure 9.1) below.

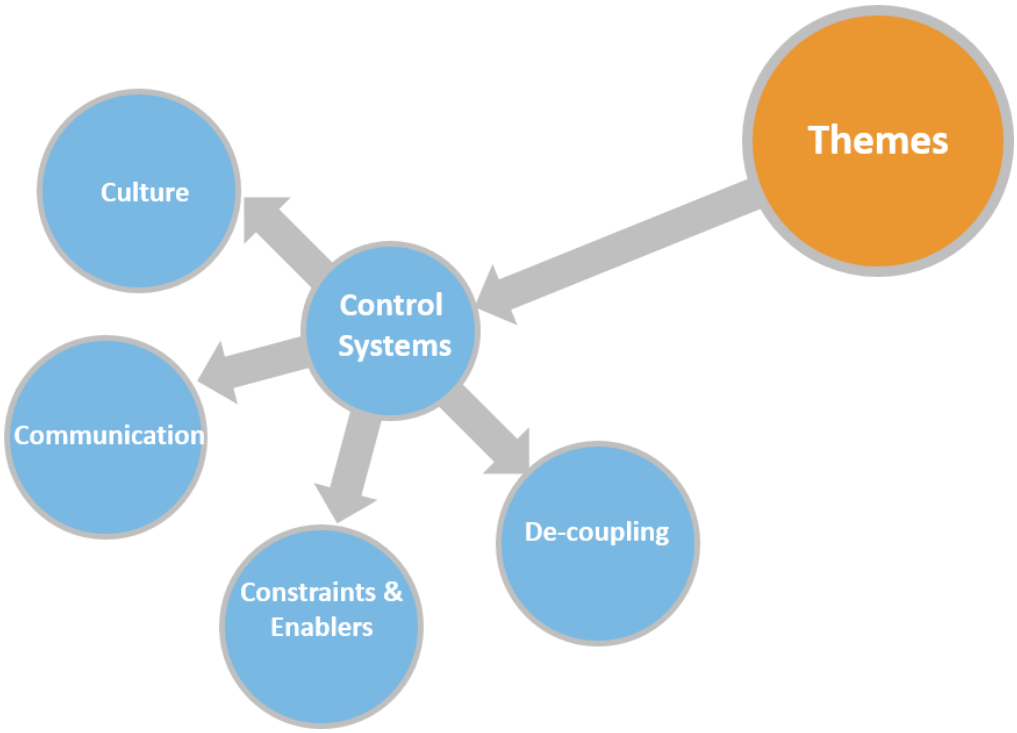


Figure 9.1: The overall theme of CSs emerging from the data and subsequent sub-themes.

Section 9.2 examines some of the daily processes of which an agent-in-focus (AiF) is a part, and how easily, or not, the AiF can demonstrate sustainability behaviours within these through the 'de-coupled' CSs that exist from the AiFs perspective. The next section, 9.3, examines the constraints and potential

enablers AiFs encounter when trying to make decisions and choices in their activities at work, that is, in terms of an agent's conduct. The next two sections on communication (section 9.4) and culture (section 9.5) discuss the context in which the systems and constraints/enablers are embedded, and therefore the immediate environment within which the AiF is located. Section 9.6 provides a chapter summary.

9.2 De-coupling

An AiF in the policy shaper interviewee group was confused about how sustainability decisions are made at the UoN and how sustainability information and protocols are disseminated to employees. Specific areas that support a 'de-coupled' impression of the current systems are evidenced in the quotes below.

> ***How are decisions about sustainability made in the UoN?***
>
> *I think I would be struggling to answer that, I'm fearing I'm on one of the groups that's making them. I think it's not entirely clear er I think there is becoming a kind of greater clarity around that. Er I think a lot of it has been invested in the Estates Department in the past and in many ways that kind of feels a bit of a kind of old-fashioned approach. … So I think although it is becoming a bit more kind of owned by the University centrally I think over time those decisions have been er led possibly by a group that it doesn't feel quite right. And then I am not therefore sure how it's linked down to individual decisions that are being made at a different levels in the University. So how departments and faculties are making decisions … it doesn't feel like there is a filtering down of all that information. Er yeah … I feel it does feel quite disjointed. (PO6)*

Whilst PO6 recognises that he/she is part of the group that shares responsibility for sustainability decision making, PO6 comments that there is no systematic method of decision making in the University. The loose arrangement could mean that there is little interlinking of strategic, tactical and operational level control when it comes to sustainability. The concluding sentence sums up PO6's feelings, in that it all feels "quite disjointed". Although there exist external sustainability reporting, sustainability research groups, a sustainability committee and employee sustainability initiatives, the AiF still feels that activities are fragmented. The AiF is unsure how the levels of the organisation, strategic, tactical and operational work all link together to deliver on the

University's sustainability agenda. The organisation may benefit from formal and informal sustainability control mechanisms that may help in the implementation of the organisation's sustainability strategy/policies (Riccaboni and Leone, 2010), though these aspects may be more forthcoming as the new strategy (see Chapter 5) is embedded into the organisation. The AiF notes that the ownership is becoming a little more central, which could be because the information provision is becoming systematic – and it may involve the central management accounting function of the organisation.

This disjointed feeling is commented on by AiF AC5 (below), as not only are the policy makers (see PO6 above) cognisant of the unstructured way sustainability decisions are made, but so are other employee groups.

> *I don't think the University itself generally has a collective mind around sustainability, I think it's a buzz word, whenever they use it it's a buzz word.*
>
> ***It doesn't have a collective mind about it?***
> *No, not as a strategy, not as a vision, not as a mission, it's not a goal. It's something the University in general does but again it relies on individuals. I think the closest it's getting to being part of the University is that there is now a PVC [Pro Vice Chancellor] for EDI [Equality Diversity and Inclusion] so maybe things are going to change. But as I said the recent strategy wasn't very er I didn't find it very inspiring in terms of you know no broad vision of where we should be. (AC5)*

For this AiF, the whole sustainability narrative in the University seems a tokenistic gesture, as AC5 observes sustainability is used as a "buzz word", which corresponds to the feelings of PO1 in section 9.4 (below) (see also Chapter 7, section 7.4). The comments by AiFs imply that several employees are unsure what this word means when used by the University. AC5 suggests that the University does not have a "collective mind around sustainability", implying that the University itself does not understand what it means by sustainability. This suggests that, if employees are unsure of the meaning behind sustainability when used by the University, then it will be very difficult for employees to exhibit expected behaviours/actions to support sustainability, because they do not understand what is required of them. This links back to Merchant and Van der Stede's (2007) object of control framework, in which

they suggested that a lack of direction from an organisation, that is, the employer, may be a factor in undesired employee behaviours. The conjuncturally–specific internal structure of an employee is confused in respect of sustainability, hence employee action/conduct with regard to sustainability may too be confused. A different understanding of sustainability within agents, relative to the University's understanding in different contexts, may be creating a barrier to greater sustainability engagement on the part of employees. Clearer communication from the University around sustainability values and expectations would assist with an employee's understanding of what he/she should do.

This also fits in with Palmer and Finlay's (2003) observations regarding how what is done and seen by individuals is prompted by thoughts in their minds. A clarification by the UoN of what is meant by sustainability at an individual employee (micro) level and how that feeds into organisational (meso) and global (macro) levels would enable a better understanding of sustainability for an employee. This would promote a more cohesive and shared vision, helping employees to see their impact on sustainability issues and the individual connections between all the three levels of abstraction: micro, meso and macro.

From AC5's perspective, the 'new' University strategy was not "inspiring", therefore as an external structure present with the conjuncturally–specific domain of the AiF, the new strategy is unlikely to influence more sustainability engagement within the AiF. This suggests that simply being aware of new goals and rules in the new strategy is not enough to influence changes in an employee's behaviour. This perspective is contrasted with PO2's below (see section 9.5), as PO2 is more positive and optimistic in his/her observations about the changes the new strategy may bring. What may assist the UoN is to link the organisation's macro level strategy goals to employees' individual micro objectives through the performance and appraisal system used by the organisation. As part of the management control system, these two aspects (performance and appraisal) form central components of incorporating sustainability strategies into an organisation (Riccabone and Leone, 2010). In this way, potentially, AC5 would feel a greater affinity with the overall strategy, as the AiF would have a clearer idea (or direction, as per Merchant and Van der

Stede, 2007) of his/her own individual part in the collective delivery of the vision.

Not all AiFs are convinced about the integrity of and motivation behind the sustainability policies that are deployed within the University. The comment below suggests that there are other benefits too.

> *Er and I think around then, possibly for other reasons, I mean when institutions er profess to be thinking and enacting policies in the name of sustainability, there's often another benefit there. So it was around the same time, I think, they pulled all the printers out of the offices. (AC10)*

The removal of personal printers from offices would also deliver cost savings for the UoN, also a reduction in printer ink used, in printer maintenance and in paper used. If a communal, central printer is put in place, then not all users will want to walk to the printer, wait in the printing queue and then wait for their items to be printed, as this is less convenient than having a personal printer in an individual's office. Though the reduction in resources used can have a positive economic benefit for the organisation, as observed by the AiF (AC10), it can also positively impact on the environment, as less energy is used and less residual waste is produced (Hertwich et al., 2019). The observation from AC10 implies that the 'bigger picture' around sustainability, that is, of measured consumption and reduction of waste/cost saving may be unrecognised by him/her.

9.3 Constraints and enablers

The AiFs were able to identify constraints and potential enablers of their sustainability decision making and subsequent actions.

9.3.1 Constraints

Prominent constraints to emerge from the data were the internal processes that AiFs encounter when trying to execute their daily duties, as the comment below demonstrates.

And then again it's er internal processes because for example er for procuring specific items you have got approved suppliers. So even though it might be more sustainable or cheaper or other things that you look at, to go for a different supplier, unfortunately the internal process only gives you this one specific approved supplier. It's still possible to add a new supplier on the list but it's a whole new process and its very time consuming in how you go about it. So I still need to find out how you go about it because I am not sure at the moment, we are only using the approved suppliers. It's still right for any organisation to have internal processes, it's probably just to look at how flexible they can be with things like that. So I think these are the main obstacles. (AD11)

From the perspective of the AiF the approved supplier list impedes the AiF from selecting a cheaper or a more sustainable option. Another potential issue is that the AiF is not aware of the 'fuller' picture of how and why certain suppliers are selected. There may already be sustainability credentials incorporated into the list of preferred suppliers. The time consuming nature of getting a new supplier on to the 'approved supplier list' implies that not many additional suppliers are added, even though they may have, from the AiF's view, more sustainable credentials and be more cost effective. A way that the UoN could help employees to implement more sustainability engagement, would be to assign sustainability-related components to the selection of approved suppliers. Alternatively, it could convey the sustainability credentials of the established suppliers more clearly to the AiFs so that they have a fuller picture.

The time-consuming nature of adding new suppliers is referenced in a different way by AD7 (below). This AiF explains that it is difficult to be sustainable when it comes to procurement, in particular, for catering.

And it's quite hard to be environmentally friendly I think you know they don't make things easy. I think a lot of, of angst sometimes is at work so you are forced down routes where you can't really do that much about it. So things like catering, you know we are forced to use suppliers that are not very good, they are very expensive, they waste a lot because they are not very good. And you can actually go somewhere and get it a lot better a lot cheaper, a lot easier but you are not allowed to. And that I find really frustrating. (AD7)

Comments made by AD7 (above) imply that the UoN has systems and procedures in place that perhaps, unintentionally, work against sustainability principles, for example, in terms of optimising resources and reducing waste.

This leads to feelings of frustration for the AiF, and perhaps more pertinently, of feeling powerless to 'act otherwise'. In this instance the AiF is subjected to an "irresistible causal force" (Stones, 2005, p. 111) that cannot be resisted by the actor. Therefore the practice of 'what has always been done' is repeated, and there is no change in the outcome as the action of the AiF remains the same. Having said this, what the AiF may not be aware of is how catering has changed in other ways to accommodate sustainability, for example, catering at University Executive Board (UEB) meetings is meat free (see Chapter 6 section 6.2). If this knowledge of other meso level areas, where the UoN is demonstrating sustainability behaviours, was communicated to the AiF, it might alleviate some of the frustrations that AD7 is feeling, by increasing the agent's knowledgeability. In addition, the resistance to an irresistible causal force lies in an agent possessing an adequate amount of three elements: power, knowledge and critical distance (Stones, 2005). It is clear from the comments above that AD7 complies with the approved supplier processes because he/she has inadequate levels of each element. This is in contrast with AD12's degree of possession of these three elements (see Chapter 6, section 6.4), in order to push back on set structures and cultivate new structures that align with the employee's own values and beliefs. The comparison of AD7 and AD12 demonstrates the variability in an "agent's ability to regulate, modulate, deflect or erase" (Stones, 2005, p. 115) the pressure and demand of external forces, though both agents are in the same administration and support category of employee, that is, AD.

Procurement processes were a particular constraint for AD7 (below) and the limited ability to search out more sustainable suppliers.

> ***Are there any obstacles you have encountered or foresee encountering when trying to make different decisions/choices?***
>
> *Yes there are (laughs), procurement. Procurement is a big one er this, they make it so hard for you to use anybody else not on their suppliers' list. (AD7)*
>
> ***Who is 'they'?***
>
> *So whether it is procurement that sort of oversees finance or finance works procurement I don't know. But obviously putting something*

through there is about there are literally about four or five forms, long forms that have to be filled in by the supplier for you to use them as a preferred supplier. They then have to be on the list before you can start using them … So it is difficult to get new suppliers in and … you know as I say it's … the difference that the amount of money it is incredible because of the scale that we have to do things on. But it's . . I think it's that ability to go and look for people that are sustainable and use those sorts of things. (AD7)

AD7 is unclear about the department that has overall responsibility for the establishment of the procurement process, which again links back to the point above regarding lack of information on the part of the AiF. Though insufficient knowledge on the part of the agent may make the agent less likely to pursue a change in the process, this also suggests a weak understanding of how the procurement processes within the UoN have incorporated sustainability. The AiF also signals that more flexibility in this area may have economic benefits to the organisation, from which currently the UoN is not benefiting, owing to the amounts ordered from the supplier/s.

Another area in which the internal systems do not seem to include sustainability dimensions is that of travel. The comment below indicates that employees are encouraged to take the more cost-effective option rather than a more sustainable one.

Well often, we're encouraged to take the cheapest option, you know. So if you consider getting to Europe, the cheapest option is flying, generally. And yet, increasingly, a lot of people are wanting to go by rail, which is perfectly viable, but our policy and systems don't facilitate that. (PO2)

Another constraint identified by the AiFs is the provision of sustainability information to employees in terms of constraining their ability to act in a sustainable way. This aspect is also linked to the theme of Knowledge (see Chapter 8). AD2 did not know what is happening at the UoN in relation to sustainability, and AC6 was unclear as to what individuals could do to contribute to sustainability.

Well when you said to me: 'What has happened at the University sustainability wise?' There must have been directives or er … amendments or er initiatives throughout and then I don't know an awful

lot about them. As I say there must be a group that could say 'this is what we have done towards being more green, this is what we have done this year or this is what we are going to do next year'. Er unless emails are sent out regularly I don't know how regular they are sent out, I don't remember seeing an awful lot of sustainability emails to be honest. (AD2)

... Well one is er information ... about ... sustainability itself er so about the area of you know strategies and so two is about more definite you know actions what other people have done. Er ... what the University's initiatives are er ... and therefore how I could er ... you know fit in that framework as well as how one could change the framework. Because I suppose knowing more about what other people are doing you start thinking more about er ... what I could do. But yeah hmm, food for thought yeah. (AC6)

One of the sustainability information systems that the University has in place is the monthly sustainability newsletter that employees can request to receive, although none of the participants interviewed mentioned that he/she had signed up to the newsletter. This demonstrates that employees, whilst having an appetite for more sustainability information, do not know that it is there to access, have not found out how to access it or are simply just not interested. Better communication or advertising of the newsletter, however, may support sharing sustainability practices and new developments. In fact, AC6 highlights that, if he/she knew "more about what other people are doing", it would enable him/her to think about his/her own behaviour and actions. This also demonstrates one of Knowles et al.'s (2012, p. 3, pp. 63–67) principles of adult learning, namely the "readiness to learn". This implies that better sharing and communication of sustainability activities in the organisation would help employees to appraise and support their own sustainability engagement. This highlights the significance of Agents-in-Context (AiCs) for AiFs as a whole, and learning about what other employees are doing and how they engage with the sustainability agenda. Paillé et al. (2016) found that having supportive peers at work does promote helping eco-behaviour amongst co-workers, so sharing knowledge amongst colleagues at the UoN would assist in producing more sustainability engagement from employees. In addition, the policy shapers who were interviewed, and several who were part of the Sustainability Committee (SC), were confused as to the frequency of the newsletter (see below). This

suggests that policy shapers are unclear about the mechanisms that exist for information exchange within the UoN. Overall, from the perspective of the AiFs interviewed, the CSs in place seem to be incongruent with the overall message of sustainability the UoN is sending, and at times the CSs are themselves creating a barrier for those who want to make more sustainability-aligned choices, and behave in more sustainable ways.

9.3.2 Enablers

The findings have also uncovered potential enablers that would help the AiFs to deliver better sustainability behaviours and decision making. The first enabler is to embed sustainability into all the decision making of the university, as suggested by PO2 below.

> *I think there's an argument that every decision made as an institution, whether that be a procurement decision, a policy decision or a strategic decision, is subject to a sustainability assessment, in the same way that it would be subject to a financial assessment. And that could result in exactly the same decision being made that isn't necessarily supporting the sustainability element, but it's an informed decision. And I think that would help to marry and to get a better understanding that, you know, sometimes sustainability has to take precedent. And also, the fact that just because it's sustainable doesn't mean it's expensive. (PO2)*

The above comment is complemented by the observation from PO6 below, that there is a gap in engagement from staff at senior levels. If this were to be remedied, then perhaps more organisational staff would also engage in more sustainable behaviours. This is supported by the findings of Collier and Esteban (2007, p. 29) who suggest that the "tone from the top" is a key factor when attempting to instil sustainability commitment within employees.

> *... but then I have not seen kind of messaging or that kind of information from ... elsewhere in the University where that kind of sustainability theme needs to feed into more strategic long-term decisions that are made. Er I think I hear a lot about people talking about things like food and er and use of single-use plastics and stuff around that. I am not sure that people are engaging at a higher strategic level. (PO6)*

The second enabler is the work that the Nottingham University Business School (NUBS) Social and Environmental Responsibility Group (SERG)

committee is doing. This is driving through change and fostering learning for employees who may otherwise not know about sustainability.

> *Those small little gestures and initiatives for people I think are wonderful, they are key. We forget about those sometimes and I think that's what initiatives like the SERG group and others are doing they are stimulating that. And that has broader ripple effects as well because those staff members will go home and they may introduce it to their family members and their friends. So it has a broader ripple effect too. (AC12)*

Sustainability change and learning are being recognised as being led by committees, such as SERG and by particular individuals who have a passion for sustainability. This supports comments made by other AiFs regarding the "push" they have seen from colleagues and staff (see Chapter 8, section 8.3, PO12 and section 8.4, PO2; Chapter 7, section 7.2, AC2). Many of the participants commented that from their perspective it is SERG that is the particular driving force behind changes in NUBS concerning sustainability.

Individual employees are making a significant contribution to sustainability via the curriculum taught and the management of the organisation, as shown in the comments below.

> ***Can you tell me about a time when you learnt about sustainability? How did it occur? How do you get to understand/learn about sustainability? At work? Outside of work?***
>
> *It's probably both, yeah television and then er we have got people who are passionate in the School there is X and er X and X they are ... very interested in that bringing that sort of thing into teaching and into the running of the School, yes various places.*
>
> ***What was it about sustainability that you learnt at work? Can you give me an example?***
>
> *Those people, I suppose I work with the SERG group … so you learn about people's ideas and what is happening. (AD6)*

In addition, AD6 identifies that it is through working with SERG that he/she has learnt about sustainability and developments in the organisation. Part

of AD6's internal structure is being informed and developed by what he/she encounters in the work environment. This informal learning forms part of the tacit knowledge exchange of an organisation, which is important when trying to manage sustainability (Boiral, 2002). It also highlights the influence on employees of other agents situated in their conjuncturally–specific domain that is the importance of AiCs. Again, the SERG committee is active in enabling sustainability change within NUBS and in helping some individuals to learn about sustainability by proxy. Learning through other channels, such as the media and in particular television are explored in Chapter 10. Interestingly, this employee (AD6) does not mention any initiatives run by the University or any other activities within his/her local environment that has developed his/her sustainability knowledge.

9.4 Communication

A prominent sub-theme that arose was that of communication. In particular, it was the policy group AiFs who felt the lack of communication to employees about sustainability. This supports the perceptions of AiFs at tactical and operational levels (see section 9.3.1 above), who are unaware of the sustainability focus that may exist, possibly because they are lacking in information. Below are quotes from three policy group AiFs. All three agents identify deficiencies in the way sustainability information is communicated to employees. Though these areas may currently appear as barriers to sustainability engagement, they provide a significant opportunity for the UoN to develop and improve its method of communication to employees about sustainability.

> **How is sustainability information and protocol disseminated to employees at the UoN?**
>
> *Well I don't think it's, there's very much of it, and I don't think we do it that brilliantly. I think there's stuff that comes out of SERG that is good, er, but again, you know, SERG is one group within the Business School, but I don't think there's probably enough that comes through the management of perhaps the University. So maybe it's an area that we can improve really. (PO1)*

Though PO1 identifies that there is not "enough that comes through the management" in terms of sustainability information, the question it prompts is 'why does that matter?'. There does not seem to be an identifiable risk associated with the absence of the information, or rather, the risk from not having the information is one that the policy makers and staff are willing to bear (see above, section 9.2, for AC5's comments in this regard). The advent of the new strategy, however, may change the overall approach to sustainability information, as the sustainability strategy is translated into tactical and operational goals over time.

Below are two responses from PO10 and PO12 that provide some insight into the current mechanisms for sustainability communication to employees.

> *Hmm … er …. I am not sure to be honest er I imagine that there is, you know there are those sort of daily newsletter type things that we get on our web pages if we close web browsers down and open them up again. Which seem to keep changing their name so that is why I am struggling. Er there are messages that are sent out centrally that people may or may not read er. Things that we would try to disseminate through senior leaders within the University, the idea being that messages that are delivered locally are more likely to be read than one that comes from the centre. But I don't think we have got an effective, a really effective mechanism. (PO10)*

> *Piecemeal at the moment, the newsletter comes out doesn't it, the green newsletter or the sustainability newsletter by email, I am not sure how many people read it. I am not a big fan of email communication, I think it's very ineffective, top down things from management you know we need to start having a much more open debate I think about it. That's a top down is part of that but it's only part of it. There is so much the colleagues in the University have to add and so much expertise and I think there needs to be a much more open dialogue about what we should be doing as an organisation. (PO12)*

The above responses demonstrate that the frequency of the UoN's monthly sustainability newsletter is not really something that the policy shapers know about. What is interesting about all three comments is that they are all made by policy influencers, although the AiFs have varying degrees of agency that can influence how efficiently communications to employees are made. None of the three policy influencers recognised that they themselves would form part of the 'communication mechanism' that the UoN has, to bring about change

when it comes to sustainability. The AiFs do not exercise any of their agency for sustainability, for example, by instigating "a much more open dialogue" (PO12), as there is no change in sustainability communication for the University. If senior managers were to utilise more efficiently various committees or groups, such as SERG, for sustainability input, or commission particular research reports to be made to them, this might result in the feeling of dialogue being more open. Furthermore, there does not seem to be any measurement of how many people are reading the sustainability newsletter or have signed up to receive it. This information would be relatively easy to track if policy shapers requested it, but the comments indicate that there is limited clarity about who is responsible for sustainability.

The other potential reason for the paucity of sustainability communication could be the weak influence of individuals' own habitus when it comes to sustainability. Although their responses to the importance of sustainability suggest that sustainability is "very important" and a "top" priority (see quotes below), these AiFs seem unable to activate their agency to change the current systems (in particular, see Chapter 8, section 8.3, PO12).

Do you think it [sustainability] is important?

> *Very important, yes. Yes, I think it's a word that's thrown around a lot now. Er, in fact, you see evidence of it being popped in every third sentence, to try and make an argument more convincing. And people put it in, in a tokenistic way I think, you know, they'll just like, they'll just pop it in there. And actually, that becomes meaningless really, if you're just putting it on to be kind of, I don't know, to try and convince your audience. Because I think it's actually about practical outcomes quite often, it's about slight adjustments you make, but it's also about the culture of an organisation. (PO1)*

Though PO1 comments that sustainability is "[v]ery important", the AiF implies that sustainability can be used in "tokenistic" ways to garner legitimacy. This supports the overall impression of a disjointed and unsystematic approach to sustainability currently within the UoN. PO1 goes on to highlight the importance of "practical outcomes", that is, employee action and conduct when it comes to sustainability, rather than just the 'talking about it'. The AiF also

recognises the effects of organisational culture and how culture (see section 9.5 below) is an important component of being able to deliver sustainability.

To what degree do you think sustainability is important?

Er ….towards the top er I wouldn't say it guides every one of my decisions but it is something that I would consider against you know there is a whole range of things that I would be doing that I would consider you know er …. OK how do I get to work and back, I drive in a car on my own because I don't feel that I have got a realistic alternative from where I live and with the sort of job I do and the hours that I keep. (PO10)

It is interesting that PO10's consideration of the importance of sustainability comes from personal examples rather than any that are related to the institution. This may indicate that for this AiF the framing of sustainability is linked to individual (micro) actions rather than impacts on sustainability that could be delivered at meso and macro levels. This may affect the decisions that the AiF may take when considering sustainability, that is, to mobilise an individual's responsibility rather than that of the University's or other meso and micro level structures.

Do you think it [sustainability] is important?

Absolutely it's important because of the finite resources … a number of new er renewable sources of energy have been developed. A good example is wind turbines which as you know a classic example of sustainable energy er. But the wind turbine is full of copper and the copper comes from mining. And actually if you look at wind turbines from a full life cycle approach the energy, we will never pay back the energy it took to build the wind turbine because of the amount of copper in it. (PO12)

Perhaps the internal structure of the policy maker (PO12) is under-developed when it comes to sustainability in a personal rather than work context, that is, habitus, and therefore the policy maker has insufficient knowledge to make suitable contributions if in fact an "open debate" (PO12) were to take place. Furthermore, PO12 has an already established argument against the sustainable nature of wind turbines, because the AiF observes "we will never

pay back the energy it took to build the wind turbine because of the amount of copper in it". This reveals further the "natural attitude" (Stones, 2005, p. 88) of the employee towards sustainability (see also Chapter 8, section 8.3). The discussions within the findings' chapters so far signal that PO12, though supportive of sustainability in the context of work, has not fully engaged with sustainability on a personal level (see below), though again, guilt on the part of the AiF (PO12) has crept in to his/her consciousness, just as for PO11, and aspects surrounding his/her dietary choices (see Chapter 6, section 6.2).

> *I guess we've become more sustainable at home … relatively recently we separate the bottles out and the newspapers and things like that and … recycle those separately. I wouldn't have done that traditionally er until a couple of years ago. And I guess the things that influence you is how easy it is to engage in that type of activity. And if it was difficult to recycle the bottles and [I] didn't have a separate bin to put it in I probably wouldn't bother to be honest. (PO12)*

Behaviours and practices that emanate from the agent's home life, such as recycling, have impacted on the AiF "relatively recently". This seems strange, as many local councils and authorities have been promoting household recycling and had a recycling waste collection for several years. For PO12, convenience is a significant consideration, and if sustainability is not convenient, then PO12 is unlikely to be influenced to exhibit sustainability behaviours. The AiF continues to explain his/her rationale for particular unsustainable and inconvenient decisions.

> *I still drive a car that has got a [very big] litre engine. I guess I balance that in my own mind because I am spending all my life developing new technology which is making in some cases a significant impact on energy efficiency … I know there are more sustainable alternatives … I didn't have to buy [X] … I could have bought an electric car … But I didn't buy an electric car because it's just a hassle because there are not enough places to plug it in and when I need to drive somewhere I don't want to wait for an hour in the car park to charge it back up. Technology I don't think is at a mature enough state to justify that choice for me. (PO12)*

Although convenience is important in delivering change in the agent, the comments (below) indicate that macro and meso level forces are working in a more subtle way on PO12 and the AiF's habitus is gradually moving from an

'unconscious' to a 'conscious' state.

> *I do think about it more now than I would do, I do feel slightly guilty driving around in my car. (PO12)*

The feelings of guilt noted by PO12 support an employee's sense of the 'right thing to do' (see Chapter 8, section 8.2). Another interesting point raised by the AiF is the contribution that technology could make to the overall goal of sustainability. This perspective is supported by aspects in the literature review calling for new technology and innovation, reinforcing the 'wise man' labelling of humans (see Chapter 2, section 2.3.4) as beings able to innovate sustainability supporting technologies and thus broaden consumer choice.

For one AiF the communication is not necessarily the problem: it is that the content in the communication is sending "mixed messages" (see below):

> *... I think that individually there is probably lots and lots of sporadic individual behaviour that doesn't get captured. Er …. I think there are, and I think that's the same at the top as well I think there are lots of initiatives er …. so if we think about sustainability from an economic point of view obviously universities across the board in the UK are being hit by you know pension … contributions increasing and then student fees being reduced, so there is obviously a big gap financially. So how do you sustainably overcome that gap er and one of the initiatives they are launching is it's essentially around continuous growth, continuous improvement. Er and er and looking at how you can implement er lean initiatives. But I think the problem is that there is so many different initiatives that are happening … So I think there are lots of activities and I think that's the issue, I think it needs to … and it's easy for me to say isn't it, but I think as a university it needs to decide what its ….. you know where are we going, how are we going to get there? Because I think again as a university haven't we announced that we are going to be carbon neutral by a certain date. Well that's great but again if you are not careful you just give it a, how are you going to actually achieve that. And how does everything pull together to ensure that you do that because it is sustainability around being carbon neutral and that's an environment. But equally you have got you know you have got economic considerations around you have got a massive gap in your budget er. So how you know I don't think you can distinguish between the two I think you have got to as an organisation you have got to think about how you achieve both of those and how you do it together. Because at the minute I think there is mixed messages and it just it filters down and then it just you know it's like fairy dust and it just all gets lost. (AC7)*

For AC7, the University is sending "mixed messages" and the 'bigger picture' of how it all fits together is getting lost at the operational levels of the organisations like "fairy dust". This suggests that, although there is a degree of strategic mobilisation to achieve sustainability, some sustainability messages are currently lost on their way to the operational levels of the organisation. AC7 identifies that some of the practicalities of "how are we going to get there" are missing, which links into observations by PO1 that highlight the need for "practical outcomes" rather than an organisational narrative that is peppered with sustainability language.

Moreover, some of the communication channels along which these messages are sent are not working optimally, so information is not reaching intended employee groups. By the same token, according to this AiF, individual pockets of sustainability research and progress are not being captured and communicated to other parts of the organisations. This employee identifies that one of the reasons for this muddled operational activity is because there is too much going on rather than there being a collective vision and mission, thus giving the impression of a disjointed/inconsistent approach to sustainability (see section 9.2 above).

9.5 Culture

There appears to be some confusion in addressing questions about the prevailing sustainability culture within the UoN, the answer being heavily dependent on the AiF interviewed, as evidenced by the four comments below.

> *Er, I mean, obviously, working here, where we have the whole sustainability kind of culture … but I think I was already aware of it anyway, before I came here … but I don't think that that necessarily made me any different, I think I probably already was aware before I came here. (AD10)*

AD10 comments that, although he/she is situated in a culture of sustainability, he/she does not think it has had any effect on him/her. This particular agent has worked at the University for over seven years, and within that time could not identify particular areas of his/her conduct that have changed because of the University's culture. This contrasts with AD12's perspective,

who suggests there has been a noticeable culture change within his/her positional context:

> *... nobody ever used their own mug, you just went to the staffroom and you got a cup and you poured yourself a coffee, whereas, now, it's just engrained in the culture that you either take your own mug or there's a mug already there. (AD12)*

It is interesting that what seemed to appeal to several AiFs was to be told what to do when it comes to sustainability:

> *Er, I think it's more imposed. I think it's like, I mean it doesn't matter because I'm quite happy to buy into it, er, but I'm not sure we were led anywhere. I think it was more, well this is what we're now going to do and this is, you know, as part of the sustainability remit, this is what's now going to happen, rather than leading us there. It was kind of, we were told. Er, but that's no bad thing, to be honest, because sometimes, I think, people need a kick up the backside and get told what to do instead of, you know, being cajoled. You know, sometimes you have to just be strong and say, 'no, this is how it's going to be done in future'. (AD10)*

Perhaps sustainability is too low down on an employee's 'list of priorities' to begin to think about and act upon, until, that is, something particular brings a key issue home to him/her. Owing to this constraint, employees need to be firmly directed with reference to sustainability because if left to their own thoughts and devices, the prospect of fixing the challenges that sustainability poses seems too unimportant and peripheral.

Though the comments above (AD10, AD12) imply that there is a sustainability culture present in the University, one of the policy shapers (PO2) makes the following observations about the current culture:

> *... I think we are at a stage where we're, I hope that we see a significant change in sustainability agenda within the institution with the, certainly, looking at the proposed content of the emerging University strategy. Er, you know, there's some clear ambition there around carbon neutrality. Er, what that means is quite a different, yes, it's quite interesting. I guess, for me, if we could get a much better understanding of the breadth of work being done around this agenda, to be able to truly inform a position of where we are, to then start working to change culture. Because policy's great, we can do loads of stuff around policy, we can put loads of recycling bins in, we can use loads of local suppliers, we*

> *can look to the circular economy, but actually, if our community of 35,000 aren't with us, we're just wasting time and effort. And it's about, how do we get that community that actually, there is a culture, when you go to the University of Nottingham, that sustainability is a priority? And that's something we need to move to. Because I'd love to get to a position where you could almost walk up to any member of staff and say, can you name the four values of Nottingham? And I don't know whether it may be an international, well-being, and it would be great if, you know, a sustainable University, so that people, you know, buy into that and it becomes a part of who they are. (PO2)*

PO2 feels that a sustainability culture is yet to be established within the University and there is "significant change" to be made. There is as yet little 'buy in' from people, and a shift towards sustainability is required. The interviews were conducted at a point in time when a new University strategy was due to emerge, so this could be something that might develop once the new strategy is fully adopted and plans are in place for its mobilisation. It is interesting that the AiF uses inclusive language, for example, "our community of 35,000" and not 'we have 35,000 employees' needing to be involved in delivering a more sustainability focused culture. This supports Brinkhurst et al. (2011), who note that, if changes in sustainability need to be realised for higher education (HE) organisations, then employees are critical in delivering it. In addition, Daily et al. (2009, p. 245) identified that "the success of important environmental programs may hinge on employee behaviour that is beyond the scope of formal reward and performance evaluation systems". The agent recognises that employee action/conduct in relation to sustainability originates from an employee's individual characteristics and not from the process of the UoN investing in more recycling bins for campuses. The comment from PO2 also suggests that the AiF feels that a change is needed within people in terms of "who they are", that is, a change in an employee's habitus as well as overall culture. For the present, however, the AiF feels that the community that makes up the UoN is yet to demonstrate that sustainability is a priority and that a culture of sustainability is suitably embedded within it. This links in with comments made by AC7 above in relation to the mechanics behind how policies and the vision will be operationalised.

The last comment on culture is from PO9 who discusses an institutional weakness in the organisation's ability to support academics to behave more sustainably:

> *To be honest a lot of individuals know that they shouldn't be printing and they know that there is no policy that says you must print. However you must give them confidence, they must be backed by institutional structure and culture to say, to fall back on to say yes, yeah, we are not supposed to print. Because look you and I who are teaching we will not want to do a little thing that would upset, whatever upset means to students. (PO9)*

From PO9's point of reference, what is missing is the endorsement from the UoN to support staff who want to be more sustainable, which is not provided by the current culture. The observation above implies that there is a pressure around student satisfaction and keeping students happy, which is why academic staff print lecture notes, correspondingly to Woodall et al.'s (2012) suggestion of students behaving like customers. If students are not kept happy, this may result in academic staff being negatively scored in their SET/SEM performance evaluations (see also Chapter 6, section 6.4). The negative scoring can have a bearing on promotion opportunities and pay, hence this is something that an academic would actively avoid. The powerful platform that students have to appraise staff reinforces the conciliatory behaviour of academic staff towards students, focusing their attention on consumer dimensions rather than on pedagogic innovation and maintaining academic quality (Naidoo and Jamieson, 2005). In addition, the absence of a formal University wide policy as regards printing and of an accepted informal culture of minimised printing behaviour act as barriers to sustainability engagement when it comes to printing behaviour. Even in the absence of formalised controls, if informal clan controls existed (Ouchi, 1979), they might give academics more support and the mobilisation of agency to minimise printing. An academic, as PO9 recognises, is subject to two contextual forces, student evaluations and the gap that exists in institutional culture, neither of which support the minimisation of printing from PO9's perspective.

The AiFs give differing accounts of the prevailing sustainability culture: some identify that it already exists, while others suggest that a culture that

supports sustainability needs to be established. Furthermore, this apparently fragmented culture supports the disparate view of the communication systems and channels systems currently in use. It also suggests that the informal CSs for a sustainability culture are not yet present throughout the whole organisation, and signals some weaknesses in formalised control systems and reporting.

9.6 Summary

Employees observe a de-coupled and fragmented approach to sustainability by the CSs of the organisation. Given its inconsistency, this internal approach – thus a potential barrier (RQ3) – suggests that sustainability is yet to be fully embedded within the internal structure of the organisation, as opposed to routine and published external reporting for sustainability (see Chapter 5, sections 5.3, 5.4). This may change over time because sustainability is now a component part of the new strategy. At the time the data were gathered, however, the organisation was in a state of change and therefore, potentially, mechanisms that have now been put in place to support and evaluate sustainability may not have been obvious to interview participants (RQ4).

Internal processes featured significantly in the observations of certain employees. In particular, the choice of suppliers on approved supplier lists (RQ3) enabled only limited sustainability actions when procuring items such as catering (RQ1). Though stringent controls are required in an organisation (especially in one as complex as the UoN), to combat potential fraud and other financial misbehaviour, from the viewpoint of the AiFs, an element of sustainability autonomy on the part of the employee would better support sustainability outcomes. What the AiFs have potentially overlooked, however, is that there may already be a sustainability focus built in to the overall procurement process at a meso level and that sustainability may be one of the many factors in appointing a supplier. What the comments of the AiFs suggest is that these processes are not evident to the AiF, possibly resulting from the limited information exchange between the organisational (meso) and individual (micro) levels.

Other internal areas of the organisation also emerged as limiting behaviour, an example being, the expected mode of travel – whether the UoN

supports the most economical form of transport or the most green and sustainable. At the date of writing, in the Covid pandemic, travel seems to be very far from many people's minds, but as time passes, travel may return to pre-Covid levels. As with the confusion surrounding the printing policy (see Chapter 6, section 6.4), communication from the organisation regarding travel expectations may assist an employee in making a 'greener' travel choice (RQ3).

A weakness in the provision of sustainability information and communication may act as a barrier to sustainability engagement (RQ3), because sharing and learning about how other colleagues and peers are implementing their sustainability engagement cannot take place. There were also some potential enablers (RQ3) identified by the AiFs, such as sustainability assessment criteria for all institutional level decisions and the involvement of strategic level staff that could in future lead to more sustainability-engaged employees.

Weaknesses in organisational communication surrounding sustainability information provision for staff may currently result in employees being unable to implement sustainability engagement (RQ1), because employees do not understand what is required of them. One employee highlighted that sustainability can be used in "a tokenistic way" (PO1) to add credibility in discussions, although some of the practicalities of sustainability are overlooked. The use of sustainability in this way increases employee confusion within the organisation and ultimately creates a barrier (RQ3) (see Chapter 8, section 8.3, 8.4 and Chapter 7, section 7.4).

Comments from the PO (AiF) group signal that members do not rely on the current systems of the organisation for information regarding sustainability. Management accountants in terms of information provision within the organisation are not mentioned. There appears to be little knowledge about the sustainability systems that have been established and the information inputs and outputs of the processes (RQ4). Decision making for sustainability requires appropriate information, but currently there appears to be a disjointed approach.

One of the University's mechanisms for sustainability information distribution is the monthly sustainability newsletter that employees can ask to receive. However, none of the academics or administration staff interviewed

mentioned that they had signed up to receive the newsletter. This shows that employees, whilst signalling an appetite for more sustainability information in this research, do not seem to pursue it actively at present. There seems to be weak organisational measurement of employees' sustainability engagement, though there are routine external sustainability reports published (see Chapter 5, sections 5.3–5.4 for more information). In fact, the overall picture suggests that, although there are pockets of good research and practice, these are isolated and, according to some employees, do not receive the attention they deserve.

There is confusion surrounding the prevailing internal culture at the UoN. A fragmented culture therefore may result in failing to influence employees to engage more with sustainability (RQ3). In the longer term, however, as tactical and operational mechanisms and protocols are established to support strategic objectives related to sustainability, a more pervasive sustainability culture may emerge within the organisation. This meso level, emergent culture may be further supported by both micro and macro structures: a sustained micro level push from colleagues and students on one side and macro pressure and force of external regulation and global sustainability consciousness on the other (RQ2).

Overall, the CSs in place seem to be incongruent with the overall message of sustainability the UoN is sending out, and at times the CSs are themselves perceived as creating a barrier for those employees who want to make more sustainability aligned choices and behave in more sustainable ways. CSs (as structures) that could exert pressure on employees to behave in more sustainable ways are missing (RQ4). At present, there is little effective measurement of employee sustainability engagement, at an organisational level.

The next findings' chapter explores the part media has played in the lives of the UoN employees and the aspects of media that have contributed in answering the thesis RQs.

Chapter 10 Media

10.1 Introduction

Chapters 6 and 7 considered contextual factors and structures that impact on employee behaviour. This chapter highlights some of the consequences that arise from gaps in knowledge (Chapter 8) and some of the ways in which organisational control systems (Chapter 9) could incorporate media to fill the gaps and deliver positive employee sustainability engagement.

This final findings' chapter explores the role of media that emerged from the data gathered. It explores the media forces that cause employees to engage with sustainability, and highlights some of the enablers of the engagement. It also provides information on some of the barriers to engagement, such as the lack of awareness of an agent of the link between micro, meso and macro levels of sustainability.

Whilst the chapter discusses media as a central data theme in section 10.2, it focuses particularly on the dominant sub-themes of Images (section 10.3), *Blue Planet II* (section 10.4) and Sir David Attenborough (section 10.5). The over-arching theme of media and its relationship with the sub-themes is illustrated in the diagram below (Figure 10.1). The three sub-themes of media are interrelated, and though they have been separated in this chapter to provide a narrative account of the findings, in practice, it has been very difficult to distinguish where one sub-theme ends and another begins.

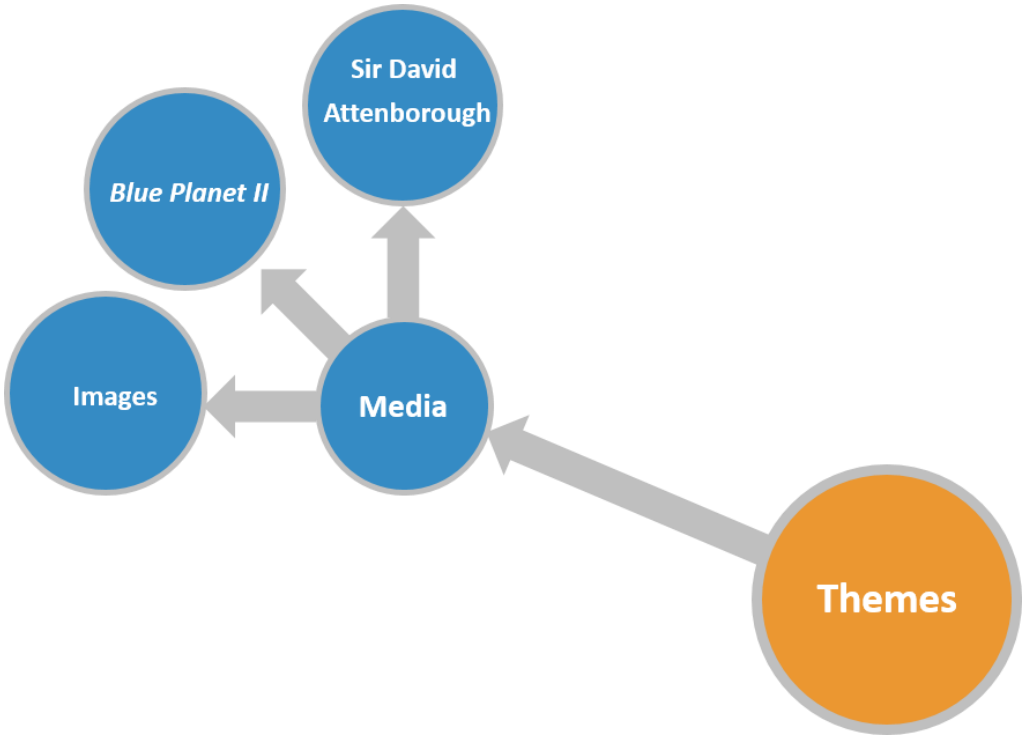


Figure 10.1: The overall theme of media emerging and subsequent sub-themes.

10.2 Media

The most significant influence on Agents-in-Focus (AiFs) that emerged from the data was the media. The media has a marked impact on how the AiFs perceive sustainability issues and appears to be the main source of sustainability information for an AiF. The observations below from all three employee groups evidence this point.

> *But I think it's the media whether through traditional news sources documentaries, etc., that are probably the leading provider. (AC8)*

> *I think it's mostly obviously information that we get from all kinds of social media and in general looking at newspapers and magazines what you see on TV. (AD11)*

> *Er through the news er lots of I suspect via the news via social media, er ….. other stuff that I would read I suppose but mainly through those channels. (PO6)*

The AiFs feel pressure and guilt when encountering particular elements of social media (see Images, section 10.3, AD2 below). Within the context of

the agent, the external structure of media is expressed via the sub-themes of images, *Blue Planet II* and Sir David Attenborough below. The various external forces of the media have played an important role in the sustainability engagement of the UoN employees.

10.3 Images

As noted, the way that sustainability is communicated through the use of images seemed to have the most significant and memorable influence on the AiFs. O'Neil and Nicholson-Cole (2009) suggest that fear-inducing images can provide an initial 'hook' to attract a person's attention, but this may not lead to a change in behaviour. This could be true of AC7 (cited below), but what the AiF also reveals is that he/she has a better understanding of the "consequence" of behaviour as opposed to being unaware of the consequences.

> *So it is shocking images but it's also about you know we don't .... you know, you know ... we don't go swimming in the oceans so I suppose if those things aren't brought to your attention you don't know there is a load of plastic in the sea because you don't go and see it, do you? So it's extremely easy to ignore, well not ignore but you are living in you know you are living in a world where you don't know about it. So I suppose it's knowledge isn't it, it's knowledge, it's understanding of what are the consequences of .... the behaviours that you are undertaking. (AC7)*

The comment made by AC7 implies that the images provide information and evidence of the consequences of human action and behaviour. Before seeing the image, AC7 comments that "you are living in a world where you don't know about it". The image has provided feedback to the AiF of the consequences of human existence. This suggests that images are used instead of first-hand experiences for an AiF when trying to understand sustainability. AC7's comments can be contrasted with those of PO2 (in Chapter 8 section 8.2) who has personally witnessed deforestation occurring in Tasmania. In this instance, images serve as a proxy for AC7 because he/she is not "swimming in the oceans" and cannot see the volume of plastic.

In addition to being able to see the impact on the oceans, what also impacted on one AiF was the fact that the plastic shown in the programme in question had originated from some of the local authorities in the UK.

> *I think that programme, for instance, like that shocking image of all that plastic, er, being shipped, with like labels on from the UK and bags from the local authorities being shipped. That really kind of struck me, I mean that was a real powerful image. (PO1)*

These images that the AiF (PO1) saw in the programme imply that the UK, and by extension the AiF who resides in the UK, are both culpable for the plastic being shipped. The AiF states that it is a significant discovery for him/her and one that "was a real powerful image". This could signal that that once an AiF has made this discovery about plastic originating from the UK, it is difficult to 'undiscover' it and expunge it from the AiF's memory. This suggests that the work of O'Neill et al. (2013) could be developed further to include images that provide not only salience but also efficacy. This AiF was moved not only by the image of the plastic but also by the fact that his/her own daily life in the UK was adding to the problem. Therefore the AiF could see the impact on the plastic issue of his/her own personal daily life. This connection between the plastic in the image (from the UK) and the AiF provides a very powerful link that makes the global issues become local issues for the AiF. This has provided the agent with evidence that demonstrates how his/her own micro actions and conduct contribute to macro problems and issues. This 'new' knowledge potentially produces different practices: when the agent is next in a position to dispose of plastic, the agent may think twice about how to dispose of it – or perhaps whether to buy it in the first place. In reference to AC7's comment that "you are living in a world where you don't know about it", perhaps knowing about sustainability not only enhances knowledge generally but also actually changes an agent's view of his/her world. The acquisition of new knowledge can facilitate a new interpretation of the world around the agent, one where macro, meso and micro levels are more connected. The strength of the interconnections between the levels may be a force that can influence sustainability engagement in an employee. This also supports the notions of an interconnected world based on

a systems theory ontology that recognises the Earth as forming the ultimate "system of systems" (Boulding, 1956, p. 202).

This visual representation has 'shock value' (AC7), and although not easy to see or watch, seems to have the most dramatic and lasting effect on the AiF. The visual impact of the images is commented upon by AD2 (see below) who goes so far as to say it is the "horrifying" element within the images that makes the AiF "think" and then that leads to the "effect" on the AiF. This sub-theme is also linked to how AiFs learn, and how their internal structures – in particular, their habitus – are augmented and shaped by these images.

> *I think it's just the communication they produce, you know it just makes you feel really guilty about the fact that you are not really contributing to making changes and making you know our life not our life, the planet I think, cleaner and a liveable place. I think I am sure that they know how to er produce this information and how to find an approach to people which is great, so they know how to do it. But I think it's just everything depends on the way this information is kind of put forward to you. So I think that's like I said looking at pictures, seeing videos and also this creates a horrifying image in your head and then obviously that makes you think. So I think it's mostly visual information that I received that actually had such a great effect on me rather than actually just knowing that that is happening. So actually seeing it. (AD2)*

For AD2 (above), seeing the images creates feelings of guilt and perhaps is a reminder of why it is so very important that you do 'your bit' to contribute to a better environment. This supports O'Neil et al. (2013, p. 414), who note that "imagery has the power to engage at an affective, emotional level". The response of guilt is not linked solely to the theme of media but also appears in other ways too, such as in dietary choices (Chapter 6, section 6.2), the purchase of hot drinks in 'single-use' cups (Chapter 6, section 6.3), shopping habits (Chapter 7, section 7.4) and the choice of transport (Chapter 9, section 9.4). These feelings of guilt link back to discussions surrounding an agent's sense of the 'right thing to do' (Chapter 8, section 8.2) and the use of images suggests that this is one mode of orientating a person's moral compass. Images could play a significant part in employees engaging with sustainability at the UoN, although the objective would not be to use images to evoke guilt as the driving force, but to appeal in an overt manner to an agent's sense of right and wrong to

encourage him/her to make a decision that supports sustainability. Meaningful images could form part of future poster campaigns around the University campuses to promote sustainability campaigns or to support sustainability awareness. This would also help to clarify the University's position on what it means by sustainability (see Chapter 9, section 9.2).

While the AiF does imply that there is a sense of manipulation going on, in the phrase "I am sure that they know how to er produce this information and how to find an approach to people". The AiF freely acknowledges and knows that the images being seen are there for a reason – but still follows the comment up with "which is great". This signals that the agent is very aware of why and how the images are being used but is still supportive of the use, even though the images can be "horrifying". The questioning of the trustworthiness of what is viewed, read and accessed in the media is considered in Chapter 8, section 8.4.

The ability to see the impact in the wider context, outside of the University, seems to have the most significant influence on the AiFs and those images remain within their habitus and inform how they behave going forward. This may also relate back to the recognition and reinforcement of the connections between the micro, meso and macro levels of activity. The sense of a biocentric view also emerges, in that humans have to live within the planetary boundaries and in harmony with other non-human life. For AD2, for instance, a visual representation is far more impactful on him/her as opposed to other methods of communication. This visual method of communication seemed to be the optimal mode in terms of impact on the AiFs. The impactful nature of images on the person who views the image is, as Doyle (2007) suggests, one of the ways in which Greenpeace over the years has communicated and still communicates its environmental messages. Perhaps what is shocking for viewers of images is how nature has been affected by man's behaviour and what was once pristine and unspoilt is now polluted and peppered with plastic debris. This issue and others are considered in the section below.

10.4 *Blue Planet II*

The case for the BBC programme, *Blue Planet II*, as a conduit for information via the medium of television is made by AC8 (below), and is supported by many

AiF comments made earlier that much of their knowledge, on the subject of sustainability, was derived from this source.

What has influenced your thinking about sustainability?

> *Er …. I think it's information provision right so whether that's something simple like a 'Blue Planet' Attenborough information provision or news updates on certain things. Er you know the regular climate summits things like that that you kind of bring it back to your attention. But I think it's the media whether through traditional news sources documentaries, etc., that are probably the leading provider. (AC8)*

Television programmes such as these can be watched together by households that are comprised of different generations. This vicarious/indirect experience, especially for children who live in urban areas, can support a biophilic relationship with nature in them (Soga et al., 2016). According to Khan (2002), the establishment of this relationship in childhood is essential to ensure that, when the child becomes an adult, the relationship with nature has already been established and an estrangement from nature then becomes difficult for the adult. This seems a logical proposition and would form part of an adult's "phenomenological and hermeneutic inheritance" (Stones, 2005, p. 4), that is, a store of knowledge that can be drawn upon for a decision in the present, when the child is an adult. The power of watching programmes as part of childhood and family memories has already been highlighted by AC12 in Chapter 7, section 7.3.

The *Blue Planet II* series not only provided an insight into the natural world of oceans but also an education about how humans are affecting the natural world. The above comment by AC8 supports the mission of the BBC to "inform, educate and entertain" (BBC, 2020c). Again, the programme promotes a more biocentric view of life on planet Earth when the connections between human and non-human life are highlighted, and also the interconnection between macro, meso and micro decision making. The incorporation of macro level activities as an influence on AiFs, such as climate summits that are arranged and reported in the media, was also commented on, in addition to the *Blue Planet* programmes. AC8 was one of only two participants who mentioned the role of world summits in reference to the media. This may signal that, though climate

summits such as the Conference of the Parties (COP) (see Chapter 2 sections 2.3 and 2.4.3) are publicised and attract media coverage, for the AiFs climate summits provide little influence on their sustainability thinking. This could be due to the perceived distance between an employee and the macro level of the summit talks themselves, as AiFs may unconsciously disassociate themselves from any responsibility or action. This is an area that the UoN might develop and promote in the future and draw out the relationships between the three levels, so that employees are able to see how they contribute to meso and macro level sustainability solutions, that is, the active promotion of association with sustainability. This may also support a more cohesive impression of the University's approach to sustainability (see Chapter 9) – one that links an individual and the University together and also links to wider societal concerns and issues (Shapiro, 2005) in the context of sustainability.

The impact on an AiF of the *Blue Planet* programmes was also commented on by AD10, as shown below.

> *… the 'Blue Planet' programmes, things like that, which are wonderful to watch, but then they always have something at the end saying what's happening in the oceans. You know, all this plastic and this is creating problems to all these beautiful animals that we've shown you and the fantastic wildlife that there is there, and this is all the damage we're now causing them. Er, and that has an impact because you may have watched something on television and it's like, 'Oh that's wonderful', and then they show you this five-minute snippet at the end going, yes, it is wonderful, but look what we, as human beings, are doing to that. Er, and that does have an impact actually, I think. (AD10)*

What is worth noting about this comment above is that the AiF is able to separate the "wonderful" entertainment of the spectacle that he/she is seeing from the recognition of the impact on the planet humans are having. As discussed in the literature review (Chapter 2), the change that humankind has brought about to the natural world during the Anthropocene epoch is shown by programmes such as the *Blue Planet II* series. Although some scholars have suggested the sanitisation of nature (Austin, 2007; Mabey, 2005; Macdonald 2006), where environmental issues related to human activity are removed when viewing nature, these findings suggest that audiences are not as naïve as they think. The comment above resonates with the traction that the Making of

Documentary (MOD) snippets have attracted throughout their use and the overall aim of the programme to show how other life is being affected by humans. For AD10, the snippet at the end of the main programme has had an impact on how he/she thinks about human impact on the natural world. As it is part of the BBC's vision to disseminate information and provide a means of learning to viewers, in arranging the *Blue Planet II* programme as it has, the BBC is fulfilling this didactic remit (BBC, 2020c). Furthermore, as Gouyon (2019, p. 15) observes, "[w]ildlife film-making is the art of making nature visible", and because a film maker has a degree of agency to portray nature as he/she interprets it (see Burgess and Unwin, 1984), the film maker may choose to include the exploitative nature of humans (Lovelock and Lovelock, 2000) and highlight mankind's treatment of nature. This works very effectively within the *Blue Planet II* series because Sir David Attenborough, who is the presenter of the series, is an established and "trusted television naturalist" (Gouyon, 2011, p. 41), so who better to hold a mirror up to humankind's anthropocentric behaviours than Sir David?

The impact of the *Blue Planet II* series extended beyond the viewers themselves. The comments from AD8 below suggest that, although this AiF deliberately did not watch the programme, he/she was very aware of the messages that the programme contained.

> *I can't think of any sort of specific memories or times. I suppose, you know, pollution wise, the 'Blue Planet'. That was a bit of an eye opener, to put it mildly.*
>
> ***Are there any particular things from 'Blue Planet'?***
>
> *Well, to be honest, I didn't watch it. So I chose not to watch it because I always find these things, you know that there's going to be moments in it that are going to be upsetting. And so I just, you know, thought, I don't even really want to go there. But it was unavoidable, it was everywhere, you know. So, you know, seeing images on the news, people talking about it in the office. So it was almost second-hand really that it came about. And I think it is a bit of an ostrich in the, you know, sticking your head in the sand, a little bit, and I do go out of my way to avoid sort of seeing things like that, which I know are going to be upsetting. But they are there and I think even if you, you can't avoid them completely. So you know it's happening, you know things are going on, but I don't think there's specific triggers. (AD8)*

What is interesting in particular is how the AiF found the *Blue Planet II* conversation "unavoidable" because it was "everywhere". This suggests that this particular series had an incredible reach that also included non-viewers. This is supported by Ruddick (2017), who notes that the *Blue Planet II* programme was the most watched programme of 2017. Therefore, in the case of AD8, the position–practice relationships in which the AiF is embedded (with the other agents in context, AiCs) are the factors affecting the AiF (AD8). It is AD8's AiCs that are, indirectly, conveying the media information to AD8, though AD8 chose not to watch the programme. This is an interesting point to note about *Blue Planet II* and how the programme may have supported an impact on the tacit knowledge flows of the organisation (see Boiral, 2002). As an external structure, the *Blue Planet II* series has applied a considerable force, and has noticeably enabled a degree of engagement from employees, even if they themselves had not watched the programme, as in the case of AD 8. Not only has *Blue Planet II* facilitated the individual learning of the viewer but it has also supported social exchanges within the AD8's positional domain, as AD8 has been unable to escape hearing about *Blue Planet II* because it was "everywhere".

This AiF is very aware of what he/she finds "upsetting" and goes "out of [his/her] way to avoid sort of seeing things like that". This suggests that AiFs have the ability to disassociate themselves from things that are likely to be difficult to watch, which supports O'Neil and Nicholson-Cole (2009), who note that some images can evoke feelings of helplessness for viewers when trying to assess their own feelings about issues being conveyed in the image. This suggests that individuals could feel little, or, no sense, of agency towards activities at a macro level, because they are not cognisant of how their micro, individual, actions, contribute to macro level phenomena.

The influence of *Blue Planet II* may have stretched beyond the AiFs themselves within the UoN, as it may have had an impact on the University's processes and ways of working. The observation from PO2 below indicates that the Vice-Chancellor was also possibly affected by the power of the *Blue Planet II* programme. The Vice-Chancellor, as a policy influencer at the UoN, has potentially utilised his/her ability "to do otherwise" (Stones, 2005, p. 109) by initiating the WasteNott initiative, emphasising the Vice-Chancellor's own

hermeneutic frame of reference. This comment by PO2 also demonstrates the appetite that the UoN has for the issues surrounding sustainability, that is, 'buy in' from the bottom levels of the organisation to be able to support and deploy the initiative. There is a possibility that the external (macro) force of *Blue Planet II* has had a ripple effect within the context of the Vice-Chancellor, and from here it has catalysed the WasteNott initiative, from the perspective of PO2. For some employees, such as PO2, their conjuncturally–specific domains have potentially been shaped directly by the Vice-Chancellor's instigation of the new initiative. This also has a direct link back to Collier and Esteban (2007, p. 29), who suggested that the "tone from the top" is an essential criterion for embedding sustainability within an organisation.

> *There's a lot more buy in around this agenda from the top. You know, the whole WasteNott campaign came, effectively, from the Vice-Chancellor. You know, she had an interest, like lots of people, she saw 'Blue Planet' and wasn't comfortable with that, and so that's where WasteNott developed. (PO2)*

The *Blue Planet* programmes have galvanised public interest not only in the natural world but also in how humans interact and impact on the natural world. PO2's perception of the origins of the WasteNott initiative suggest that the Vice-Chancellor has implemented her own sustainability engagement via establishing an organisational sustainability initiative.

A person who is recognised as having spent much of his life examining and investigating the natural world is Sir David Attenborough. His influence and the perception of him as a 'trusted' commentator comprise the final sub-theme considered in this chapter (below).

10.5 Sir David Attenborough

AiFs referred to Sir David Attenborough as having a significant influence on their sustainability knowledge. Sir David is perceived as being a legitimate spokesperson when it comes to commentating on care for the natural world and its stewardship. This resonates with comments made by scholars as detailed in Chapter 2, namely those of Fry (2006), Gouyon (2011) and Morgan (2013).

It is difficult to determine from AD7's comment below whether it is nature programmes per se or because Sir David presents them that he/she watches the programmes. What is clear, though, is that the information coming to light in these programmes makes the AiF think. As AD7 explains (below), what was initially hidden, and remained hidden, for a long time, is now being revealed. In particular, the AiF refers to the issues surrounding plastic. This comment is interesting because in "making nature visible" (Gouyon, 2019, p. 15), Sir David has also made the 'nature of man' visible. In fact, this points to Sir David's own capabilities "to do otherwise" (Stones, 2005, p. 109) and draw on his own internal structures to attempt to re-cast the internal structures of the viewers of his programmes by revealing humankind's nature. The comments from AD7 support the influence of Sir David on the viewers of his programmes and of his interpretation of nature that is conveyed.

Though this chapter is predominantly concerned with the theme of media, the quote below illustrates how closely the themes within sustainability are knitted together. The issue of plastic has been revealed to the AiF (for more information and discussion regarding plastic see Chapter 6):

> *Er I think sort of nature programmes so say things like David Attenborough programmes which I really love watching. I think some of those are really powerful when you see what's happening with the environment and er all this stuff about plastic. You always sort of knew it but I think it's becoming a lot more stark in terms of you know where it's hidden you know lots of hidden things that you never really knew were there and you wouldn't assume were in this stuff. (AD7)*

The comment above from AD7 supports the effect of the MOD snippets that follow at the end of some of the natural history programmes. It also suggests that the programmes do impart information and there is a degree of didactic learning present, supporting the claims made by Louson (2018) and the aims of the BBC (BBC, 2020c). Again, this illustrates how learning and knowledge are also legitimate considerations when it comes to issues of sustainability (for more information on learning and knowledge, see discussions in Chapter 8). For AD7, what seems to be important in the relaying of the information is that what was hidden before in terms of the environment is now coming to light. In fact, what is coming to light is the nature of man, that is, the nature of the viewing audience

themselves as well as wildlife. The programmes in which Sir David is involved do usually have a teaching and learning dimension to them and this seems to resonate with the audiences who watch his programmes. The increase in sustainability knowledge of an agent is important because it enables the agent to draw on new information when making decisions and choices. The assimilation of new information may cause a disturbance in the already established internal structures of the AiF, providing 'food for thought' and, importantly, the potential for new structures to be constructed within the agent. This may result in new patterns of conduct and outcome when it comes to sustainability engagement.

Sir David is perceived by PO10 as raising the "public consciousness" when it comes to sustainability. This is not surprising as Gouyon (2011, p. 41) notes that he is a "trusted television naturalist". Individuals such as Greta Thunberg, as well as Sir David and others, such as the British Royal Family (BBC, 2020e), are seen as part of the global critical mass that is mobilising a worldwide culture change when it comes to sustainability, by social media platforms.

The issue of sustainability has global implications, hence, a solution must also be found on a global scale. Part of the reason for the rise in consciousness is the media, according to PO10. Though the AiF has not expanded on what constitutes this media, it does suggest that collectively the media has had a marked impact on the deployment and communication of sustainability messages. The media, as an external structure, acts as a considerable influence on the AiFs. An aspect of media that, perhaps, supports its potency is its real time characteristics and ability to be accessed 'on the move' by audiences via a mobile device. This also means that the media's characteristics lend themselves to being captured and recorded and 'consumed' when it suits the viewer.

> *[W]e have an opportunity and you know it coincides also with the raising of public consciousness in this area which David Attenborough can take some credit for, which Greta Thunberg can take some credit for. Which other media commentators can take credit for too and that's fantastic. It means that now is the time that we can start to lead this culture change whereas maybe a few years ago it would have been really hard to do that. (PO10)*

For AiF AC7, the causes and programmes in which Sir David is involved automatically means that they are credible. The AiF comments on that agency, that is, that the audience will then stop using plastic because it has had an endorsement from Sir David.

> *And so I suppose it's that knowledge isn't it, and I think I, we are in a fortunate position that I get to hear conversations like that, lots of people see the David Attenborough stuff and they go right, 'Plastic we shouldn't do it'. (AC7)*

The comment above is very interesting because it suggests that Sir David's work has given him, in the eyes of the public, significant legitimacy: he is indeed viewed as a "public intellectual" (Morgan, 2013, p. 148) whose views are respected and trusted. The comment also reveals that Sir David is an enabler in terms of being able to engage the viewing audience in re-thinking their use of plastic. Indeed, perhaps Sir David is able to spark reflections and reflexivity in audiences that make the viewer reconsider his/her world views in relation to sustainability. This contributes in part to understanding what enables sustainability engagement in the UoN employees. Furthermore, AC7 is able to listen to conversations around him/her that relate to the impact on individuals (AiCs) of Sir David, which may also reaffirm AC7's belief in the impact on individuals from the media.

10.6 Summary

The media was one of the key areas that participants commented on and felt was a significant provider of their sustainability information. The media informed the UoN employee about sustainability in three key ways: (i) through the use of images in media communication; (ii) by the airing of the *Blue Planet II* television programme; and (iii) by the legitimacy and trust evoked by Sir David Attenborough. What was interesting was how very few interviewees mentioned any of the UoN initiatives such as the SDGs/WasteNott campaign or PRME when it came to influencing their sustainability thoughts and practices (RQ4). This indicates that more could be done through the use of media to reinforce internal initiatives by employing devices such as images, video clips or 'soundbites' of key messages for employees.

Images enable the impact of human behaviour on the Earth to be seen, and once it is seen, it cannot be unseen. These images can often be shocking, but they seem to provide a force that causes employee engagement with sustainability (RQ2). This also signals that, when employees are unaware of how their behaviours impact at meso and macro levels, new practices are prevented from taking shape (RQ3). Therefore, if more, direct information linking an individual to meso and macro level sustainability concerns were available to change an AiF's world view, then better practices might arise. This could be an aspect that the UoN may wish to consider in its future sustainability campaigns and initiatives (RQ4).

Another key theme to emerge was the power of visual information in the form of pictures or videos, which mode of communication may deliver a greater awareness in employees. It may also help in establishing clarity for employees in terms of what is meant by sustainability in the context of the University.

The BBC's *Blue Planet II* programme has had a considerable impact on AiFs. Programmes such as this series, in partnership with the BBC, have been a key provider of sustainability information. The visual spectacle of seeing the damage caused by human behaviour acts as an enabler of sustainable behaviour (RQ3), because audiences can see how their behaviours are directly impacting on the world at meso and macro levels. The media is able to connect instantly all levels of the micro, meso and macro (RQ2). One of the hidden barriers that this research has discovered is that many employees are unaware of the direct impact that their behaviour is having at macro/global levels (RQ3). It is perhaps because of this absence of knowledge that employees behave currently in the way that they do.

For AiFs within this research project, Sir David Attenborough is synonymous with sustainability. Sir David acts as a force for both engagement (RQ2) and an enabler of engagement (RQ3). His years of experience have perfected the art of blending "spectacle to generate awe and wonder in viewers" (Louson, 2018, p. 17) and "convey[ing] the truth" (Burgess and Unwin, 1984, p. 103). Sir David's credibility, that has been forged over a lifetime is respected by audiences, has enabled him to hold his viewing audiences to account, and to make them think about the impact on nature of mankind's behaviours (RQ3).

The sustainability engagement of the AiFs was anchored predominantly in the external forces of Images, *Blue Planet II* and Sir David Attenborough in the media. The images that seemed to elicit the most reflection and, possibly, behavioural change were shocking images that had a relevance to daily life for the individuals who were viewing the images.

This chapter has explored the forces that cause employees to engage with sustainability, and very closely related to this are the enablers of the engagement. It has provided information on some of the barriers to engagement, such as the lack of awareness of an agent of the link between micro, meso and macro levels of sustainability. This could potentially be one of the areas the UoN could improve, as a better understanding for agents of how different levels of life are connected may generate more positive sustainability engagement in employees.

Chapter 11 Discussion and conclusions

11.1 Introduction

The previous chapters (Chapters 6–10) have detailed the findings of the thesis. This final chapter draws the thesis together and identifies the overall contributions and the implications of this research. It links back to the four research questions and evaluates the extent to which they have been answered. In addition, it identifies areas of further work and development that future researchers may wish to undertake.

11.2 Summary of the key findings of the thesis

This research has made previously invisible aspects of employee sustainability behaviour, visible. The four research questions of the thesis (below) have all been answered.

1. How do employees implement sustainability engagement?
2. What are the forces that generate employee engagement?
3. What are the barriers to and enablers of sustainability engagement and why do they affect sustainability engagement?
4. How effective is the measurement of sustainability at an organisational level?

The thesis has illuminated how employees implement their sustainability engagement (research question (RQ) 1), for instance, the minimisation of food, plastic and paper waste. It has highlighted several forces that motivate and elicit positive employee behaviour, for example, the concern for nature and wildlife (RQ2). Several barriers to and enablers of sustainability engagement have been identified and how they affect sustainability engagement (RQ3), with one significant enabler being identified in this research as childhood memories. Finally, the effectiveness of sustainability measurement in the research organisation has been investigated and the related control systems therein uncovered (RQ4). In unpacking these elements, the thesis has answered all four individual RQs comprehensively. However, the illumination of the forces (RQ2), and barriers and enablers (RQ3), that generate employee engagement

constitute a significant proportion of the overall thesis, relative to RQ1 and RQ4. Further evaluation of the extent to which the thesis has responded to the research questions is detailed in section 11.3 below.

11.3 Response to the research questions

The thesis has demonstrated the complex nature of an individual and how he/she negotiates the external and internal pressures that act on him/her. Although an individual is unique and has a particular way of seeing his/her reality, this research has highlighted sustainability engagement commonalities within those individual realities. These patterns signal plausible aspects/factors that organisations could incorporate within their control systems (CSs) and management control systems (MCSs) to elicit more sustainability engagement from their employees and expedite realising an organisation's sustainability deliverables. In essence, incorporating these aspects would enhance the effectiveness of the MCSs.

Interviewee responses to RQ1 highlighted that employees try to minimise food, plastic and paper waste. Surplus food is re-directed so that it is not wasted and the type and volume of food that is sourced for meetings is also mindfully purchased. Although 'single-use' plastic cups have been replaced with ceramic cups, and employees support the initiative, the full sustainability implications and rationale of this initiative have not been published and consideration of sustainability efficacy has been left to the 'experts'. The use of paper in printing was a key concern of participants, and currently there seems to be confusion among staff regarding printing protocols and sustainability priorities. This is further exacerbated because printing is the point at which two other big issues intersect: the issue of managing student expectations of having printed handouts and the measurement of staff performance via student surveys. If students are dissatisfied because they do not receive printed handouts, this may be reflected in survey feedback and impact adversely on staff members. Furthermore, requests for large volumes of printing go unchallenged by administrative staff because the latter perceive themselves as being there to assist (RQ3 – barrier). Nevertheless, if employees felt strongly about an issue, they were prepared to instigate incremental changes over several cycles of a

process, to bring about the intended sustainability change. This ability to 'push back', though not recognised by operational staff themselves, is a characteristic that has been noted by senior staff and policy shapers (RQ3 – enabler).

Many employees felt that the University should contribute to the pursuit of sustainability and that it has a societal duty to discharge. Linked to this perspective is how employees feel they implement sustainability engagement. Should they choose to, then academics (ACs) feel that they have more capability for sustainability engagement within their local context via their research discipline (RQ3 – enabler). Both policy shapers (POs) and administration and support staff (ADs) feel that they have limited scope for sustainability engagement within their respective contexts (RQ3 – barrier). Interestingly, one employee felt that at work he/she 'held back' from sharing his/her sustainability views. This suggests that the employee feels uncomfortable sharing within his/her local environment. Informal ways of sharing are important for sharing tacit knowledge in an organisation and adding to the culture of an organisation. There were also a few employees who felt that sustainability initiatives were veiled attempts at delivering other organisational benefits, for example, a reduction in printing costs (RQ3 – barrier).

Many employees are concerned about nature and wildlife (see Chapter 7), and this concern acts as a significant motivating force (RQ2) via the internal structures of an individual to generate sustainability engagement, which can also impact on an employee's dietary choices and preferences. There is a strong interest in protecting biodiversity and preventing an "estrangement of people from nature" (Miller, 2005, p. 430), although what appears to be missing for employees is the knowledge of how they, as individuals, can help (RQ3 – barrier). Sustainability issues are perceived by employees at a global, macro, level. Thus it is difficult for an individual to understand what his/her micro action can contribute to the macro challenge or rather how his/her action is connected to the macro problem. However, if change of behaviour is required at macro levels then the constituent parts of that behaviour change is the micro level behaviours and it is at these, micro/individual levels that the change must begin.

Employees do not always see how sustainability considerations are incorporated into established organisational procedures and protocols and because of this are at times frustrated. Being unaware of how sustainability is incorporated into internal processes may contribute to an employee's perception of a fragmented organisational approach to sustainability via the control systems (CSs). This runs the risk of sustainability not being entirely embedded within the culture of the organisation and the possibility of informal controls influencing employee behaviour in the longer term being lost (RQ3 – barrier). It also means that employees may not fully understand their work contexts and because of this may be confused about the conduct and behaviour expected of them. At the time the research was conducted, there was an appearance of a weak sustainability information framework at the University of Nottingham (UoN) (RQ4), and much of the information regarding sustainability and how sustainability may be supported by the UoN was derived from the media. By not pursuing a formalised approach to collecting appropriate sustainability information, the University is opening itself up to potential areas of risk, not least from the fact that information from the media is used to inform its employees and policy shapers.

11.4 Main contributions of the thesis

The contributions of the thesis have been synthesised into four elements, which are: creation of new knowledge; assessment of the theoretical framework/methodology; critical evaluation of the University of Nottingham's (UoN's) policies and management control system (MCS) design; recommendations for practice at the UoN, implications for other higher education institutions (HEIs) and further avenues that could be explored by researchers and theorists. These four elements are discussed below.

11.5 Creation of new knowledge

Some of findings of this thesis are consistent with Slack et al.'s (2015) study of employee engagement with corporate social responsibility (CSR), but with reference to sustainability, such as the perceived weakness in embedding sustainability within the organisation and the fragmented approach in

organisational (sustainability) culture. Slack et al. (2015) avoided employees who were connected to the CSR departments as well as avoiding manager level employees. This thesis incorporated both these overlooked elements within the research, by including employees who may have had a professional connection to sustainability and those who were in non-managerial positions.

Epstein et al.'s (2015) study investigated how positive (financial) stakeholder reactions were realised, via the incorporation of social and environmental aspects in manager decision making. However, Epstein et al. (2015) captured a limited view of the terrain and structures facing employees on two counts. First, the stakeholders were amalgamated, the specific nature of each of the stakeholders and how each type of stakeholder was affected/reacted was not investigated or unpacked in detail. This research has considered several stakeholders, such as society, students, employees and nature. Second, the workforce in the four organisations Epstein et al. (2015) studied was comprised entirely of managers, although all four would have other 'types' of employee, for example, operational employees who make sustainability decisions on a daily basis. This research has considered all types of employees and their sustainability decisions in the research organisation.

This thesis extends and develops the work of Slack et al. (2015) and Epstein et al. (2015) in that it illuminates hitherto unseen (and unusual) anchors and foundations of sustainability behaviour, within the different types of employees and hierarchies. These are discussed below. In answering the RQs, this thesis has responded to several calls for research that were identified in the literature review. For instance, Maas et al. (2019) called for more investigation into how organisations approach sustainability, and in particular, Vaivio (2008) highlighted the gap in examining hybrid organisations, such as educational organisations. Berry et al. (2009) and Nixon and Burns (2012) suggested that further research should be carried out to investigate how MCSs work in practice. Heinicke and Guenther (2020) combined both these positions, observing that management controls (MCs) within higher education institutions (HEIs) had received little attention. Furthermore, within the sustainability management accounting literature Ghosh et al. (2019) identified that there was very little

research available from an employee's perspective. The research that is contained within this thesis has responded to all these calls in the literature.

This study's findings have highlighted some surprising findings within employees' hermeneutic frames, such as the importance of childhood memories and the impact on employees of the media. It has also highlighted the complexity of a social actor and the force that invisible structures (both internal and external) apply. Now that these structures and forces have been uncovered in this thesis, they provide important avenues for future research. The findings of this research were captured as a snapshot. However, structures, forces and social actors are in a constant relationship and at any specific point in time, and social actors are an embodiment of all their lived experiences. Future studies will need to unpack carefully the experiences that form the foundations of the invisible structures which actors draw upon to reach their decisions. The illumination of those structures and experiences will provide further information/understanding about why and how the agent is motivated to act. Knowing this would mean that control systems could be designed to incorporate these sustainability motivators, and thus stimulate better sustainability behaviour and action in an organisation.

This research has highlighted that current organisational MCSs could have a more sophisticated role to play in organisations, by locating and drawing out employee sustainability anchors. Though employees are aware of some sustainability controls, at the UoN there is not a comprehensive and collective view of the MCSs as they relate to sustainability. These aspects could be further developed by the UoN in the future. In fact, MCSs could be designed to reflect and operationalise an employee's own personal control system/habitus/ internal structures of control. A more intelligent, nuanced system of sustainability control that could incorporate enablers identified in this research may deliver more positive sustainability engagement. In essence, a more sophisticated MCS that shares and promotes aspects of an employee's personal control systems and structures is more likely to deliver sustainability action and results.

11.6 Assessment of the theoretical framework/ methodology

The choice of SST (Stones, 1996, 2005, 2015) as the research framework has enabled critical structures that impact on employee sustainability engagement to be unveiled. SST has not been previously used to examine pro-environmental behaviours (PEBs), but it has proved useful in unpacking the subjective–objective structuration journey that an individual travels when considering aspects of sustainability. Its use has revealed the forces that generate employee engagement and any barriers that are present within an agent's positional or dispositional structures. SST has the flexibility to take direction from the 'purpose' of the research being undertaken. Its utility is found in how the theory can focus on depth and detail, depending on the scale of view (micro, meso or macro) and the category of evidence the researcher wants to highlight, that is, hermeneutical (subjective), external (objective) and the degree of contextualisation.

The qualities of SST as mentioned above, have led to the innovative conceptualisation of an agent-in-focus (AiF) cluster approach, this being a departure from previous research. The justification of the AiF using the floater/hot-air balloon conceptualisation has provided breadth of perspective when considering the three types of AiF. This has also meant that there is an alignment between the scale of the AiF view, the data obtained and the analysis undertaken (see Chapter 3). However, the price paid for the breadth of perspective is the temporary veiling of detail, although this is accessible by the ability to 'float down' and land from time to time, thereby preserving the granular details of reality (Stones, 1996). This evolution in the interpretation and application of the theory opens the door for future researchers to build on this floater AiF position, and potentially, further develop its use.

The methodological approach (see Chapter 4) that was adopted enabled the successful unlocking of employee thoughts and the sharing of their realities. The detailed hermeneutical analysis within the thesis, although very time consuming and labour intensive, yielded insightful responses to the four RQs. The evidence suggests that, though an agent has his/her own unique way of interpreting the world, there are commonalities. These common structures could be investigated as future avenues of research, the most obvious being to

determine whether these structures are also present in other organisations. This research has also evidenced that, although agents may be embedded in similar contextual fields, agents' interpretation of their world can reveal new and exciting insights into how they perceive their world. The investigation of an actor's world/hermeneutical frame, at first glance, appears deceptively simple: however, it is a complex activity. The researcher needs to be prepared to investigate the unique granular details of a social actor's interpretation of reality, but also be able to collate the similarities within perspectives. This research's time horizon was cross-sectional, although future projects may benefit from a longitudinal study. Adopting a longitudinal approach may enable the tracking of how structures are shaped for social actors. This would provide a rich and dynamic understanding of how their individual worlds are constructed, deconstructed and reconstructed.

The abductive approach to theory within the research has ensured that equal attention was given to the empirics and to the chosen theoretical framework in the study. This has meant that the researcher has moved 'back and forth' between the data and theory to arrive at conclusions that reflect and align with both the empirics and the theoretical framework (TF) of the research. The use of methodological brackets (conduct and context), as a part of SST (Stones, 2005, 2015) in this research, directly responded to Feeney and Pierce's (2016, p. 1173) recommendation of using brackets in "larger, more complex organisations with looser boundaries and a greater number of organisational actors". Furthermore, the adoption of a case study approach has supported the importance of contextual factors, and resonated with the use of methodological brackets of context within SST and the importance of context in management accounting research (Ezzamel and Hart, 1987).

This research has evidenced that structuration processes related to sustainability are dynamic. The behaviours of social actors are predicated on the force of particular structures at particular times. In the broader sense of SST (the relationship between structures and agency, that is, the ability to do 'otherwise'), employee behaviour is not random or without thought. In fact, the agency of an agent is dependent on (sometimes surprising) invisible structures that may or may not have been discovered. So, perhaps the bigger question this

research has highlighted is that, if agency is to be understood, it is the hidden 'structures' of an agent that need to be revealed. Furthermore, understanding the prioritisation of the structures of social actors, in time-space decision making would enable further insights into the hidden structures. As Coad and Glyptis (2014) have suggested, SST still has utility within accounting and control research, and this thesis is a testament to the unfolding relevance and currency of SST as a theoretical lens.

Selected realities of the challenges that humankind is facing are reflected back to individuals via the external structure of the media, in particular through the use of images. The findings have shown that the media is a compelling force that can influence the construction, deconstruction and reconstruction of an individual's internal structures. It has also been shown to be a significant enabler of sustainability engagement within the UoN employee, through the provision of sustainability information and social media. Although, at times, there is scepticism about the motivations behind the various forms of media and a perceived sense of manipulation, nevertheless, the participants all highlighted the media as a significant influencer in terms of sustainability. The participants also highlighted the media as the main source of their sustainability information, learning and scholarship. Media can now be accessed via mobile devices and programmes watched at the convenience of the audience, which has added to the growth in the consumption of sustainability resources via the different forms of media. It had also contributed to the ability of individuals/employees to undertake self-directed sustainability learning depending on the topics and aspects that interest them.

The media and its characteristics need to be unravelled in future studies: in particular investigations into the objective and subjective nature of contextual fields would help in understanding the hermeneutical frames of social actors. The separate examination of the rhetoric of media text relative to its content would be a useful place to begin. The media is a force that is able to colonise the future of social actors, that is, pre-populate an agent's knowledge about the future before the future has arrived. This characteristic makes the media a very influential force/structure, because the decision making of social actors can be based, in part, on this sedimented past knowledge. However, owing to the biases

within the media information, the information does not/cannot tell the 'whole story', hence, the social actor is likely to make a less than optimum decision, because he/she has not been furnished with 'all' the relevant information.

Childhood memories were a significant force that influenced conservation and mindful usage of resources, especially for those employees who had spent time outdoors or growing up with parents or grandparents who had experienced the Second World War. Children of school age were also having an effect on their parents, as children often talked about topics at home and the behaviour of parents was at times also changed. Some employees considered the natural inheritance that the current generation would be leaving to future generations, regardless of whether the participant had children of his/her own. This suggests that some employees recognise the relationship of humans to one another across time and space and how we are connected to one other regardless of a biological relationship, that is, we are one humanity. These findings anchored within a specific time need to be examined in future studies. As a social actor is the embodiment of all his/her lived experiences at any point in time and space, to unpack the prevailing structures a significant study may be needed that exceeds the time constraints inherent in a thesis. Social actors and their actions may need to be studied over an entire lifetime, in order to understand how some structures are created and whether structures are weighted equally within the hermeneutic frames of the social actor. This may reveal foundational structures that once formed, for example in childhood, cannot then be deconstructed and reconstructed easily in adult life. Overall, this suggests that structures of time past and future can be incorporated into employee thinking and decision making in the present.

11.7 Critical evaluation of the UoN's policies and MCS design

The UoN is a large and complex organisation and like many organisations it has worked hard to bring sustainability to the forefront of its priorities. One of the ways this is demonstrated is through the creation of the new University strategy. The significant sustainability aspect of the new strategy may assist in the emergence of a more perceptible sustainability culture, as currently employees are confused by organisational messages that are received. This is very much

needed, as the employees feel that the meaning of sustainability is currently unclear. Their confusions are outlined in Chapter 8 (for example, sustainability of student numbers, sustainability of finite resources, sustainability of nature and the natural environment) and may create a barrier to employees understanding their role in contributing to sustainability at the UoN. Such a barrier may also impede employee sustainability practices being shaped in the way senior managers of the organisation would like.

Overall, the current internal approach to sustainability is perceived to be fragmented. Although some initiatives, such as the introduction of ceramic cups in staff coffee rooms, seem to be working well, there was little mention of other significant organisational initiatives (the Sustainable Development Goals, Principles of Responsible Management Education, the Green Flag Awards – see Chapter 5 for further information). Policy shapers responsible for sustainability decision making indicated that at present there was little reliance on organisational systems for sustainability information and knowledge, as highlighted in Chapter 9. This suggests that internal systems, processes and sustainability information frameworks need to be fully established. Furthermore, more positive employee sustainability engagement could be secured through specific policy development, for example, of a printing policy.

Although the Social and Environmental Responsibility Group (SERG) has a significant influence on employee behaviour, sustainability control systems, either formal or informal, are currently absent from the UoN. This weakness in sustainability measurement and the perception of weak sustainability information provision, may be plausible reasons for the employees to view the organisational culture as disjointed.

Though the University has a team of management accountants, there seems to be under-utilisation of this resource in providing sustainability information to decision makers. Part of the issue seems to be that policy makers do not know what information they need, where to get it from or from whom to request it. The findings of this thesis suggest that there may be the possibility of securing employee sustainability engagement by means of organisational policies. However, the mechanisms through which this is delivered and measured, that is, the organisational control systems, need to incorporate the

internal structural anchors (positional and dispositional) of employee sustainability (highlighted in Chapters 6–10) to be able to leverage the desired behaviour. Furthermore, employee internal structures are dynamic and respond to changes in the prevailing contextual fields, hence, any MCSs that are established need reviewing periodically. Reviews are required so that MCSs are able to engage an employee appropriately, that is, the control systems maintain their ability to apply control. This would raise the effectiveness of employee sustainability measurement via MCSs from its current position.

11.8 Recommendations for practice at the UoN, implications for other HEIs and further avenues that could be explored by researchers and theorists

This research has illuminated previously hidden employee perceptions and actions of sustainability. In discovering these aspects, key factors that could potentially drive more positive employee sustainability engagement have been unlocked. These factors, amongst other things, have been incorporated into possible recommendations for practice at the UoN (see below), and senior organisational policy makers may want to pursue these as an agenda for sustainability action and change.

The confusion surrounding the printing policy may be alleviated if the University were to publish a printing policy setting out the circumstances in which printing be undertaken and by whom. This would help to provide clarity for both academics and administrative staff and also manage student expectations.

Currently, though operational employees may be unaware of their own influence and power, when they lobby for change, senior managers do feel the force of this. This should give employees a greater degree of confidence to highlight areas that require change and challenge aspects that could deliver better sustainability outcomes for the organisation. For the senior managers these new insights could inform and drive future strategy and University policies.

The evidence contained within this research strongly suggests that there is a need for better information and communication from the organisation to employees, on matters of sustainability. The UoN could be pivotal in increasing

the stock of sustainability knowledge that an employee possesses. Consequently, when the employee is choosing to act (or not), the employee having a deeper understanding (knowledge) of sustainability can make a more sustainability-informed decision.

Another key area would be for the University to define what it means by sustainability. In addition, information detailing how processes have already incorporated sustainability would help to alleviate some employee frustration and aid employee understanding. The media has had a significant impact on employees and the UoN may want to harness this mode of communication and information dissemination to employees in the future. Employees obtain much of their sustainability information and knowledge from the media. The University may benefit from using more social media to share sustainability events or aspects of research with employees. What seems to resonate with employees is being able to see the impact of anthropogenic behaviours on biodiversity via images. These images can assist an employee to connect to meso and macro level sustainability issues. These aspects could also be incorporated into the sustainability newsletter that is published by the University.

The introduction of sustainability measurement as part of the University's control systems would help the organisation to manage its pursuit of sustainability. Utilising the expertise of management accountants in the organisation, to incorporate sustainability information within established management accounting information/reporting practices, may enable better sustainability control. The University could look to its training and development programme to incorporate aspects of sustainability training. Not only would this enhance an employee's personal understanding of sustainability, but it would also 'signpost' a shared vision of organisational values that would help to promote a more cohesive culture of sustainability within the UoN. Further research may examine how some of the areas highlighted in this research could be harnessed to inform the development of control systems in other organisations.

As noted, this research was conducted during a phase of strategic change, so the logical area for future research would be to examine how the new strategy

is working with reference to sustainability. However, as a result of the impact of Covid-19 on the higher education (HE) sector and the UoN, operationalisation of the new strategy (or particular aspects) may have been delayed.

This research has explored aspects of connectivity between external structures and the internal motivations of an individual. This could be an aspect to investigate further in future research projects. This research has shown that an employee's thinking and reflection is important when it comes to sustainability. Internal structures are not fixed per se and can develop/be developed over time. The linkages to childhood memories and the creation of internal structures as a child could also prompt investigations into the design of primary, secondary and tertiary curricula and policy.

Using a different theoretical lens to view the same phenomenon may allow other researchers to develop different insights in approaching the challenges of managing and controlling sustainability within organisations. Future researchers may look to conduct similar studies in other large public organisations, which have little prior knowledge or interest in sustainability, or even, in organisations that appear hostile towards sustainability.

There are two significant implications for other HEIs that have arisen from this research. First, the establishment of organisational sustainability initiatives do not on their own mean employees will exhibit sustainability engagement. Second, more effective organisational measurement of sustainability via (structural) management control systems need to be developed within organisations if more positive employee actions (agency) with regard to sustainability are to be encouraged and evidenced.

This research has also signposted other areas that could be investigated in the future by researchers and theorists. One such area is the investigation of how internal structures form and change over time. This research has highlighted the powerful nature of a social actor's internal structure with regard to sustainability. Other avenues of research could examine potential hierarchies within the internal structures of an agent, or the longevity of the structures. These particular areas of research may also assist in the further development of SST (Stones, 1996, 2005, 2015) and extend the tools of methodological bracketing.

11.9 Limitations

As mentioned previously, this research was conducted during a transitionary phase of the organisation, that is, between the cessation of the old strategy and the beginning of the new strategy. This may have had an influence on the perception of the participants as to the strategic cohesiveness of the organisation. The number of participants in this study was an appropriate number given the time-bounded nature of the thesis, but the perspectives of the participants may not reflect all the perspectives and thoughts of the UoN employees. Furthermore, the UoN has more than one UK campus. This research was conducted at the Jubilee campus and University Park campus, but employee views and feelings may not be representative of the UoN employees at the other UK campuses. In addition to the Nottingham (UK) campus, the UoN has two sister university locations in China and Malaysia, and again, this research may not be representative of the views of UoN employees in these locations.

11.10 Final thoughts

Human beings are complicated, and only some of the ways that individuals negotiate internal and external pressures and their sustainability actions have emerged and been considered in this research. Stones and Jack (2016, p. 1149) suggested that "what's going on in the heads of people is never free floating", and undertaking this research has made visible some of the surprising anchors of sustainability action. It is hoped that these factors provide new possibilities and research agendas regarding their incorporation into control systems and processes, to encourage greater employee sustainability engagement.

The challenge that humans face is one that will affect all of us, and the solution is likely to require the commitment of all individuals and the support of organisational, societal and global structures. It is hoped that the conclusion of this research journey provides several starting positions for other researchers to continue the pursuit of sustainable living for all life on planet Earth.

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Appendix A Table of Interviews

Participant	Date of Interview	Job Title	Length of Interview
AC 1	16/07/2019	Associate Professor	00:33:22
AC 2	26/07/2019	Associate Professor	00:38:13
AC 3	30/07/2019	Assistant Professor	00:41:27
AC 4	02/08/2019	Associate Professor	00:53:33
AC 5	06/08/2019	Assistant Professor	00:43:53
AC 6	09/08/2019	Assistant Professor	01:05:21
AC 7	13/08/2019	Associate Professor	00:55:28
AC 8	16/08/2019	Assistant Professor	00:30:16
AC 9	20/08/2019	Assistant Professor	00:48:37
AC 10	22/08/2019	Associate Professor	00:58:07
AC 11	02/09/2019	Assistant Professor	00:40:37
AC 12	23/09/2019	Assistant Professor	00:55:38
AD 1	15/07/2019	Senior Administrator	00:34:17
AD 2	22/07/2019	Secretary	00:25:13
AD 3	25/07/2019	Administrative Assistant	00:45:44
AD 4	25/07/2019	Project Officer	00:46:29
AD 5	30/07/2019	Senior Administrator	00:35:22
AD 6	30/07/2019	Administrative Assistant	00:24:14
AD 7	30/07/2019	Manager	00:47:30
AD 8	06/08/2019	Manager	00:51:05
AD 9	06/08/2019	Administrative Assistant	00:45:25
AD 10	13/08/2019	Manager	00:49:49
AD 11	13/08/2019	Senior Administrator	00:32:41
AD 12	16/08/2019	Systems Officer	00:39:51
PO 1	30/07/2019	Manager	01:21:27
PO 2	09/08/2019	Manager	00:59:49
PO 3	13/08/2019	Dean	01:16:32

PO 4	16/08/2019	Officer at Students' Union	00:45:52
PO 5	20/08/2019	Associate Pro-Vice Chancellor	01:03:05
PO 6	20/08/2019	Senior Manager	00:48:30
PO 7	27/08/2019	Professor	00:44:15
PO 8	29/08/2019	Director	01:04:15
PO 9	30/08/2019	Associate Professor	00:59:44
PO 10	02/09/2019	Pro-Vice Chancellor	01:00:28
PO 11	23/09/2019	Pro-Vice Chancellor	01:00:51
PO 12	24/09/2019	Pro-Vice Chancellor	00:39:00

Appendix B Interview Questions for AC and AD

Thank you for agreeing to be interviewed as part of my research project: without you my research and the completion of my thesis would not be possible. Below is some participant information that I would like you to read before we begin the interview.

My research seeks to understand the actions that are taken, and why, by employees in an organisation, with reference to sustainability. This research uses the meaning of 'sustainable' as defined by The World Commission on Environment and Development (WCED). The WCED in its report, *Our Common Future* (1987, p. 24) posits that "[h]umanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs". Corporate responsibility includes activities that fall under the umbrella terms of sustainability and corporate social responsibility (CSR). As both terms have evolved, the delineation between them has blurred. Sustainability and CSR are often used synonymously, this study will use the term sustainability to include any concept that addresses the three perspectives of environment, economics and society. You, as an employee of the University of Nottingham (UoN) are best positioned to comment on your relationship with sustainability within the organisation. The entire interview will be anonymised both in terms of the thesis and within the participant group. The only information that could be published is that you are an employee of the UoN and, if appropriate, your job title. Any use of job title and or direct quotes would be used in such a way as not to reveal any individuals' identities. Publishing of this information has been sanctioned by the UoN's Ethics Committee – please see below. This research has been approved by the Ethics Committee at the UoN. If you have any questions or concerns regarding this research please contact Michelle Stirk on Michelle.Stirk@nottingham.ac.uk, in the first instance, or alternatively, my two supervisors who are Professor Jane Frecknall-Hughes (Jane.Frecknall-Hughes@nottingham.ac.uk) and Dr Lynda Taylor (Lynda.Taylor@nottingham.ac.uk). Subject to your agreement the interviews will be audio recorded to enable transcription of the interview and thereafter for the transcriptions to facilitate analyses. In addition, recording of the interviews provides the opportunity to revisit comments and ensure clarity of answers. Interviewees will be offered a copy of the transcript for them to check and agree that the interview has captured accurately their intended meaning, thereby ensuring mutual understanding for both the participant and researcher. Throughout the process data will be stored securely and where appropriate encrypted. Finally, a BIG thank you, for agreeing to be a participant and for your time.

	Questions	
Internal structure	What does sustainability mean to you? Do you think it is important? If yes why, if no why?	Habitus
	What has influenced your thinking of sustainability?	
	To what degree do you think sustainability is important? Do you share your views with anyone? If so how? Do others share their sustainability views with you? If so, how?	Agent conduct and context
	What do you think would influence you to change how you think about sustainability? Why would this particularly influence you?	

Internal structures cont.

Do you think there is any risk if you do not behave more sustainably?

Agent conduct and context

What is your current job title / role?

How long have you worked at the UoN?

Job role/context

Are you aware of any sustainability initiatives at the UoN? If yes, which ones have you heard about?

Do you take part in any of these initiatives? If yes why and how, if no why?

(How) Have sustainability initiatives/drives changed over time at the UoN?

Agent conduct and context

Agent practice /action

Can you think of a particular time that you acted in a sustainable way at work? Why was it important that you acted in that way?

What actions on a day to day basis (at work) do you perform that you feel contribute to sustainability on campus?

Is there a difference in how you feel when you make a more sustainable/less sustainable choice? Please will you give an example?

Constraints /enablers of action

Are there any obstacles you have encountered or foresee encountering when trying to make difference decisions / choices?

Does your role allow you to make more informed sustainability choices? What would enable you to make different decisions?

Sustainability scholarship

Can you tell me about a time when you learnt about sustainability? How did it occur? How do you get to understand/learn about sustainability? At work? Outside of work?

Can you tell me about a time when your actions have changed at work, to incorporate sustainability? What influenced/led to this change?

MGT Control/ system /influence

Who would you say are the main people/group responsible for delivering a more sustainable organisation (UoN)?

What influence do you think/feel that you have, on The UoN's sustainability policy? Would you like to have more/less?

That is all of my questions. Do you have any questions for me? Is there anything else you would like to say /add?

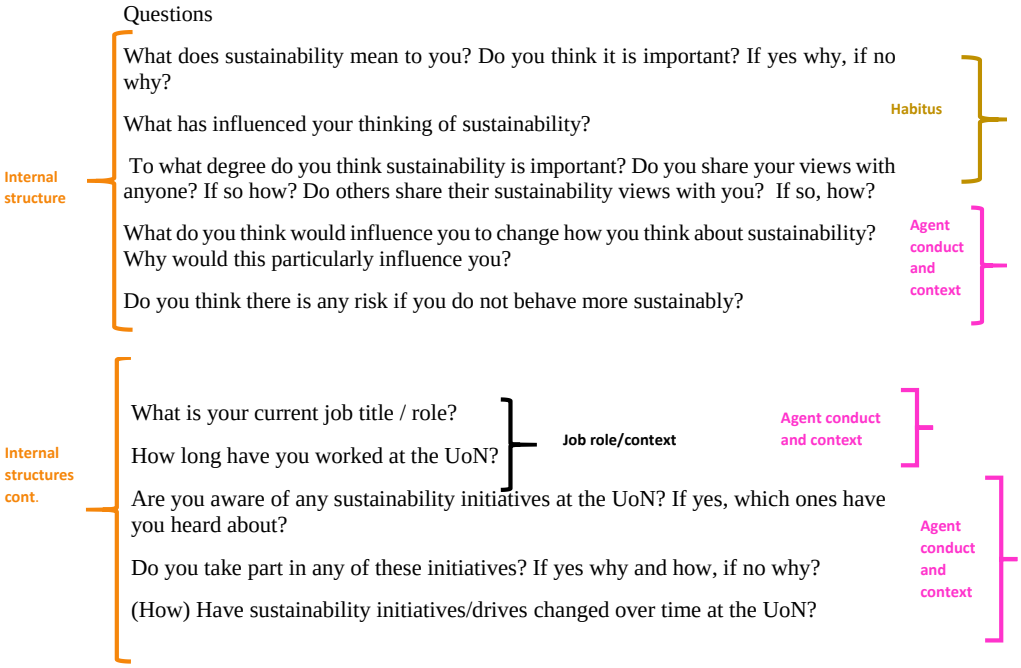
Can you suggest anyone else who may be interested in being an interview participant in this project?

Appendix C Interview Questions for POs

Thank you for agreeing to be interviewed as part of my research project: without you my research and the completion of my thesis would not be possible. Below is some participant information that I would like you to read before we begin the interview.

My research seeks to understand the actions that are taken, and why, by employees in an organisation, with reference to sustainability. This research uses the meaning of 'sustainable' as defined by The World Commission on Environment and Development (WCED). The WCED in its report, *Our Common Future* (1987, p. 24) posits that "[h]umanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs". Corporate responsibility includes activities that fall under the umbrella terms of sustainability and corporate social responsibility (CSR). As both terms have evolved, the delineation between them has blurred. Sustainability and CSR are often used synonymously, this study will use the term sustainability to include any concept that addresses the three perspectives of environment, economics and society. You, as an employee (and as a policy influencer) of the University of Nottingham (UoN) are best positioned to comment on your relationship with sustainability within the organisation. The entire interview will be anonymised both in terms of the thesis and within the participant group. The only information that could be published is that you are an employee of the UoN and, if appropriate, your job title. Any use of job title and or direct quotes would be used in such a way as not to reveal any individuals' identities. Publishing of this information has been sanctioned by the UoN's Ethics Committee – please see below.

This research has been approved by the Ethics Committee at the UoN. If you have any questions or concerns regarding this research please contact Michelle Stirk on Michelle.Stirk@nottingham.ac.uk, in the first instance, or alternatively, my two supervisors who are Professor Jane Frecknall-Hughes (Jane.Frecknall-Hughes@nottingham.ac.uk) and Dr Lynda Taylor (Lynda.Taylor@nottingham.ac.uk). Subject to your agreement the interviews will be audio recorded to enable transcription of the interview and thereafter for the transcriptions to facilitate analyses. In addition, recording of the interviews provides the opportunity to revisit comments and ensure clarity of answers. Interviewees will be offered a copy of the transcript for them to check and agree that the interview has captured accurately their intended meaning, thereby ensuring mutual understanding for both the participant and researcher. Throughout the process data will be stored securely and where appropriate encrypted. Finally, a BIG thank you, for agreeing to be a participant and for your time.



Agent practice /action

Can you think of a particular time that you acted in a sustainable way at work? Why was it important that you acted in that way?

What actions on a day to day basis (at work) do you perform that you feel contribute to sustainability on campus?

Is there a difference in how you feel when you make a more sustainable/less sustainable choice? Please will you give an example?

Constraints /enablers of action

Are there any obstacles you have encountered or foresee encountering when trying to make difference decisions / choices?

Does your role allow you to make more informed sustainability choices? What would enable you to make different decisions?

Sustainability scholarship

Can you tell me about a time when you learnt about sustainability? How did it occur? How do you get to understand/learn about sustainability? At work? Outside of work?

Can you tell me about a time when your actions have changed at work, to incorporate sustainability? What influenced/led to this change?

What informs your own personal knowledge of sustainability? (How) does this knowledge influence organisational policies?

Is sustainability important at the UoN? Why is it important? Why do you think the UoN should contribute to sustainability?

How are /were decisions about sustainability made in the UoN?

MGT Control/ system /influence

Who would you say are the main people/group responsible for delivering a more sustainable organisation (UoN)?

What influence do you think/feel that you have, on The UoN's sustainability policy? Would you like to have more/less?

How do policy influencers at the UoN learn about current issues in sustainability?

MGT Control/ system /influence

How is sustainability information and protocol disseminated to employees at the UoN?

What do you think are the support systems/mechanisms available to employees who want to act in a more sustainable way?

That is all of my questions. Do you have any questions for me? Is there anything else you would like to say /add?

Can you suggest anyone else who may be interested in being an interview participant in this project?

Appendix D Ethical Approval

Nottingham University Business School
UNITED KINGDOM · CHINA · MALAYSIA

NOTTINGHAMUNIVERSITYBUSINESSSCHOOL
RESEARCH ETHICS REVIEW CHECKLIST– STAFF AND DOCTORAL RESEARCH

Research ethics approval is required for every research project that involves human participants or their data, whether that project is externally funded or not. Research projects may not start without ethical approval.

Please complete this form electronically and email it to stella.fuller@nottingham.ac.uk along with any annexes, from your UoN email account. For advice and guidance on completing this form, please contact christopher.carter@nottingham.ac.uk

Research Project Title:	*Understanding the interactions between users and the management / sustainability control system in a Higher Education organisation and the impact on behaviour*

Staff research		**Student research**	**PhD**/ MBA / MSc/ Undergraduate	
Division	**Accounting**	Industrial Economics	Strategy & Business	Marketing
	Finance, Risk & Banking	OB/HRM	Haydn Green	Ops Management

Please tick the appropriate box. For student research, please highlight your programme above and enter your supervisor as a co-investigator below.

Principal Investigator	Michelle Stirk
Co-Investigators (and affiliation)	Supervisors: *Prof. Jane Frecknall-Hughes and Dr. Lynda Taylor*
Project Funder(s)	

Project start/finish dates	Autumn 2016/Autumn 2022 (PhD part –time basis)	**Date of Ethics Application**	27/08/18

Questions about the appropriate REC to review the application:		
Will the study involve recruitment of patients through the NHS or the use of NHS data or premises and/or equipment?	Y	**N**
Does the study involve participants age 16 or over who are unable to give informed consent? (e.g. people with learning disabilities)	Y	**N**

If the answer to either of these questions is 'yes', then you will need to seek approval through an NHS Research Ethics Committee the School Committee cannot review your project. Please contact the University's Research Governance and Ethics team, sponsor@nottingham.ac.uk(and cc christopher.carter@nottingham.ac.uk).

NUBS LREC cannot approve projects which involve: the administration of drugs, placebos etc. to research participants; tissue collection; the infliction of pain; or invasive, intrusive or harmful procedures. Please contact Adam and the Sponsor address as above for info.

Questions about involvement of researchers from outside NUBS:		
Are researchers from another school or institution involved in the project?	Y	**N**
If no, please move on to the next section. If yes, please answer either:		
a) If you are leading the project, does this application cover their involvement?	Y	N
b) If you are not leading has approval for your involvement been obtained?	Y	N

If a project is led from outside NUBS, ethical approval by the principal investigator's institution will normally be accepted instead of a NUBS REC review. In such cases, just complete this page and attach a letter

confirming ethical review. Similarly, NUBS REC will normally be willing to write to external project partners to confirm that we have reviewed the project. It would be up to their respective institutions to decide whether to accept our review or to carry out their own you should not assume agreement.

Please note that it is your responsibility to follow the University of Nottingham's Code of Practice on Ethical Standards and any relevant academic or professional guidelines in the conduct of your study. **This includes providing appropriate information sheets and consent forms, and ensuring confidentiality in the storage and use of data**.

Any significant change in the question, design or conduct over the course of the research should be notified to the School Research Ethics Officer (adam.golberg@nottingham.ac.uk) and may require a new application.

Brief summary of project goals:

This research is about how/whether users engage with sustainability initiatives developed by a higher education organisation. The higher education organisation that is to be used as the research site is the University of Nottingham. I would like to ask the ethics committee's permission to reveal the identity of the research organisation in the PhD. The University of Nottingham has been chosen for its particular sustainability credentials/initiatives. These sustainability initiatives provide the sustainability system interactions / sustainability scaffold that this research seeks to explore. The identity of the interviewees would be kept anonymous, and any use of job title and or direct quotes would be used in such a way as not to reveal or implicate any individuals.

By revealing the identity of the research organization I will be able to provide the essential context and background to the research which forms a significant part of why this organization was chosen. This would also mean that I would be able to identify the extensive sustainability initiatives/systems already in place at the university. Sustainability features significantly in both the organisation's overall strategy for 2015-2020 and in the Student's Union. For instance, the university has various research centres dedicated to the pursuit of sustainability and buildings that are deemed to operate in sustainable ways, more recently its Waste Nott campaign. Therefore, the University of Nottingham would be an appropriate organization in which to situate the research, as it has a keen interest in sustainability. Revealing the identity would add richness and clarity to the rationale and context for its choice.

The research seeks to draw out and understand how sustainability initiatives influence behaviour and action of the intended users. By talking to the audiences targeted by the initiatives, this research seeks to understand the extent to which the initiatives influence them and, if so, how. By understanding how and the extent to which users are influenced, this may signpost potential tensions that if remedied may result in better organisational sustainability engagement and therefore better delivery of organisational sustainability goals, target and objectives. It may also reveal aspects of initiatives that work well and should be developed further to stimulate more engagement in the initiatives. Potentially, this new knowledge has significant implications for both profit and not-for-profit organisations, as both types of organisations are moving towards (voluntarily or mandatorily) operating in more sustainable ways.

Brief description of research methods to be employed:

Research participants will be interviewed about how they interact with the management/sustainability systems within the organisation. The interviews will last between 45-60 minutes. It is the intention of the researcher to record the interviews (subject to interviewees granting permission). The interviews will be recorded to enable transcription of the interview and thereafter for the transcriptions to facilitate analyses. In addition, recording of the interviews provides the opportunity to revisit comments and ensure clarity of answers. Interviewees will be offered a copy of the transcript for them to check and agree that the interview has captured accurately their intended meaning, thereby ensuring mutual understanding for both the participant and researcher.

Questions about consent	**Y**	**N**
Does the research involve vulnerable groups: children, those with cognitive impairment, or those in unequal power relationships (e.g. students)	Y	**N**
Will the study require the co-operation of a gatekeeper for initial access to the groups or individuals to be recruited? (e.g. students at school, members of self-help group, residents of nursing home, employees)	Y	**N**
Will it be necessary for participants to take part in the study without their knowledge and/or full informed consent at the time? (e.g. covert observation)?	Y	**N**
Questions about confidentiality		
Will research involve the sharing of data or confidential information beyond the initial consent given? Will data collected be (or potentially be) used for any other purpose?	Y	**N**
Will the research involve administrative or secure data that requires permission from the appropriate authorities before use?	Y	**N**
Will any payments, compensation, expenses, or incentives be offered to participants?	Y	**N**
Questions about the potential for harm		
Will the study involve discussion of personal or sensitive topics (e.g. sexual activity, drug use, commercially or legally sensitive topics)?	Y	**N**
Could the study induce psychological stress or anxiety or cause harm or negative consequences beyond the risks encountered in normal life?	Y	**N**
Is there a possibility that the safety of the researcher may be in question beyond everyday risks (e.g. in some international research in trouble spots)?	Y	**N**
Location of the research		
Will any of the research take place outside the UK?	Y	**N**

If you have answered 'yes' to any of the questions above, please explain your reasons below, and any steps you will take to deal with the ethical issues raised. Please note that answering 'yes' will not in itself adversely affect the chances of approval. For guidance on completing this section of the form, please contact christopher.carter@nottingham.ac.uk

To what degree will individual research participants and organisations be anonymised in the research outputs? Please list any potentially-identifying characteristics that you may wish to use. Please attach a copy of your participant information sheet and/or consent form (where appropriate) as annexes.

The information provided will be anonymised and participants will not be referred to by name but as 'Interviewee 1, 2, 3, 4,' etc. If a job title is used the researcher will ensure that the interviewee cannot be identified by using the particular job title. On occasion direct quotes may be used but this will be anonymised and untraceable to the participant. The organisation/university research site will be identified to provide context and validity to the research. The university/research site has been chosen for its particular sustainability credentials/initiatives. These sustainability initiatives provide the sustainability system interactions that this research seeks to explore. Therefore it is essential that the research site chosen has sustainability systems/initiatives.

Useful links:

A link to the University of Nottingham Code of Research Conduct and Research Ethics(log in required) can be found at:
https://workspace.nottingham.ac.uk/display/ResEth/Code+of+Research+Conduct+and+Research+Ethics

UoN online course – Global research ethics and integrity (self-paced Moodle course)
http://moodle.nottingham.ac.uk/enrol/index.php?id=7141
ESRC Framework for Research Ethics
http://www.esrc.ac.uk/funding/guidance-for-applicants/research-ethics/

UK Research Integrity Office Code of Practice for Research
http://ukrio.org/publications/code-of-practice-for-research/

Stella Fuller
Wed 10/10/2018 10:39
To: Michelle Stirk
Cc: Christopher Carter

Dear Michelle
Project Title: Understanding the interactions between users and the management / sustainability control system in a Higher Education organisation and the impact on behaviour

I am writing to confirm a favourable ethical opinion for the above research on the basis of the documentation submitted. This opinion was given on 9th October 2018.

The following conditions apply to this favourable opinion:

1. The research must follow the protocol agreed and any changes will require prior NUBS REC approval.
2. When the research project has been completed you must submit a report stating that is has been completed using the agreed protocol. This can be done via e-mail.

For further information about the School's Research Ethics Committee or approval process, please contact the Research Ethics Officer, Chris Carter pszcc@exmail.nottingham.ac.uk or +44 (0)115 84 66062.
Good luck with your research

Stella

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