



**KNOWLEDGE MANAGEMENT WITHIN AND BETWEEN CONSERVATION ORGANISATIONS CLASSIFIED
AS GLOBAL, GLOBAL NORTH AND GLOBAL SOUTH.**

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Abstract

Traditionally Knowledge Management has been explored within for-profit Global North organisations. However, this research argues that Knowledge Management could be useful for conservation organisations, but first needs to establish how Knowledge Management is conceptualised within conservation organisations. To explore this, I have undertaken focused ethnography across three conservation organisations classed as Global, Global North and Global South, including interviews, participant observations, document analysis, research diary and providing feedback reports and presentations to each organisation. The aim was firstly to explore how each organisation conceptualised knowledge and Knowledge Management using the Knowledge Management discourse Framework. Secondly, to establish whether the terms Global, Global North and Global South influence the Knowledge Management or Knowledge Sharing, and finally exploring the influence of technology on Knowledge Sharing, whilst linking back to the Knowledge Management discourse Framework. Results found that Knowledge Management and Knowledge Sharing are perceived differently depending on the epistemological assumptions, with the organisations predominantly using a Neo-functionalist and Constructivist discourse. Moreover, the terms Global, Global North and Global South, whilst had been heard of, were not overly used within the organisations. Despite this, there were power tensions between the three organisations over what was classed as knowledge and how it should be managed and shared, based on their role within the partnership. With it being argued that the Global and GN organisations are influencing approaches to Knowledge Management and Knowledge Sharing within the GS. Finally, technological factors such as Online platforms, Digital Divide and Virtual working, can both facilitate and hinder the Knowledge Management and Knowledge Sharing within and between all three organisations. This research challenges, supports and highlights gaps within the current literature and it is hoped that this research provides a platform for future Knowledge Management and Knowledge Sharing research within the conservation sector.

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List of Abbreviations

Abbreviation	Definition
COP	Community of Practice
DAC	Development Assistance Committees
DD	Digital Divide
DWA	Document and Website Analysis
EK	Explicit knowledge
FE	Focused Ethnography
FS	Feedback Session
FFBS	Formal Feedback Session
GN	Global North
GS	Global South
KE	Knowledge Exchange
KM	Knowledge Management
KS	Knowledge Sharing
KT	Knowledge Transfer
NGO	Non-Governmental Organisations
ODA	Overseas Development Aid
OL	Organisational Learning
PFBS	Preliminary Feedback Session
PO	Participant Observation
RD	Researcher Diary
SDG	Sustainable Development Goals
SSI	Semi-structured Interviews
TA	Thematic Analysis
TK	Tacit knowledge
WSC	Weak Social Constructionist

Chapter 1 Introduction

1.0 Introduction:

This research explores the conceptualisation of Knowledge Management (KM) within and between three conservation organisations classed as Global, Global North (GN) and Global South (GS), working in partnership on a shared global project. This is important to the conservation sector as being a crisis discipline (Pullin *et al.*, 2004; Stirling and Burgman, 2021) and us being within the earth's sixth mass extinction (Leakey and Lewin, 1996; Wagler. 2018), there is currently a greater need for the management and sharing of knowledge within the sector, especially when organisations require this knowledge for long-term conservation strategies and decision making (Cooke *et al.*, 2016). Within this I specifically focus on how KM is conceptualised and undertaken across three partnered conservation organisations using the KM Discourse Framework (Schultze and Stabell, 2004) and KM strategies (Hansen, Nohria and Tierney, 1999), whether their partnership position and role as Global, GN or GS influences this conceptualisation of KM and finally, what, and how technological factors, shape the Knowledge Sharing (KS) within and between the organisations. These findings arguably challenge the current KM literature, and highlights areas of importance for future research.

This chapter introduces the research background (2.0) exploring KM as a concept and its application and importance within the conservation sector, the context of the GN and GS, alongside the partnership lens. I then provide a summary of the research and its development (3.0), including research origins and development before linking this to my three Research Questions (4.0) and contributions. Finally, I detail the structure of the thesis (5.0) including my two literature review chapters, the methodology, my three empirical chapters and finally my contributions and conclusions.

2.0 Research Background:

2.1 Knowledge Management:

KM has been developing over the last 40 years, becoming popular in the 1990's within both organisations and academic organisational research (Davenport, De Long and Beers, 1998; Wilson, 2002; Powell and Ambrosini, 2012). Within academic debates, KM was originally argued to be a new management fad (Scarborough, Swan, and Preston, 1999; Wilson, 2002), but with recent developments in understanding around the importance of knowledge as an organisational asset in creating and maintaining an organisations' competitive advantage (Kumar and Ganesh, 2011;

Venkitachalam and Willmott, 2016), KM has become a crucial tool for organisations to manage their knowledge (Alavi and Leidner, 2001; McKinlay, 2006; Zheng, Yang and McLean, 2010; Sohal *et al.*, 2018; Asiedu, Abah and Dei, 2022), within a globalised economy (Davenport and Prusak, 1998; Mårtensson, 2000; Coakes, Amar and Granados, 2010).

Underlying the debates on KM, are academic debates on what is classed as knowledge. There are several different perspectives on what classes as knowledge, based on an individual's underlying assumptions regarding ontology and epistemology (Burrell, and Morgan, 1979; Johnson and Duberley, 2000; Easterby-Smith *et al.*, 2015; Eriksson and Kovalainen, 2015). These assumptions guide an individual's values and philosophical position focused on knowledge, which subsequently influences their position on KM (Von Krogh, 1998; Sveiby, 2001; Moon, Adams, and Cooke, 2019). One perspective is that knowledge can be classed as Tacit (TK) or Explicit (EK) (Orange, Burke, and Boam, 2000; Scheepers, Venkitachalam and Gibbs, 2004; King, 2009; Venkitachalam and Willmott, 2016) with others arguing that knowledge can be a combination of both (Jasimuddin, Klein and Connell, 2005; Powell and Ambrosini, 2012). Alternatively, knowledge can also be based upon assumptions around *data*, *Information* and *knowledge* (Davenport and Prusak, 1998), whereby *Information* is a higher form of *data*, and *knowledge* a higher form of *Information* (Kinney, 1998; Mårtensson, 2000; Alavi and Leidner, 2001; Serban and Luan, 2002). This will be discussed further within Chapter 3.

Developing from these debates are further arguments around the conceptualisation of KM. There are several perspectives from which assumptions on KM can be presented from, as demonstrated by the KM Discourse Framework that this research uses as a lens (Schultze and Stabell, 2004). Within this framework, based upon Burrell, and Morgan, (1979) *Sociological paradigms*, KM can be conceptualised using a Neo-functionalist, Constructivist, Critical or Dialogic discourse. And within these four discourses, knowledge is described as a metaphor, as either an 'Asset', 'Mind', 'power', or 'Discipline' respectively. However, the dominant conceptualisations of KM within the literature focus on a Neo-functionalist and Constructivist discourse (Sveiby, 1996b; Allix, 2003; McKinlay, 2006). Objectivist ontology, stemming from a Neo-functionalist discourse, holds assumptions that knowledge is universal, objective, and external to individuals (Von Krogh, 1998). Under these assumptions, this EK could be classed as an object (Sveiby, 1996b), a process or a capability (Alavi and Leidner, 2001). On the other hand, through a Constructionist ontology, knowledge is assumed to be subjective, internal, and based upon individuals' experiences and interpretations (Burr, 2015).

Moreover, mirroring this conceptualisation of knowledge dichotomy, are debates around the KM strategies that an organisation could undertake when implementing KM within their organisations (Venkitachalam and Willmott, 2016; Bolisani, Padova and Scarso, 2020; Asiedu, Abah and Dei, 2022). These strategies, as established by Hansen, Nohria and Tierney, (1999), are classed as the Codification and Personalisation strategy. The Codification strategy focuses on the easy storage and dissemination of EK, predominantly using technology (Connell, Klein, and Powell, 2003; Venkitachalam and Willmott, 2017) and with an emphasis on the re-use of knowledge (Ng *et al*, 2012). The Personalisation strategy on the other hand places a greater focus on the management of people and the TK they hold (Sveiby and Simons, 2002). The aim of this strategy is to facilitate the communication between individuals (King, 2009), to ensure that the knowledge is shared (Venkitachalam and Willmott, 2016). Whilst originally, these two strategies were considered mutually exclusive, whereby an organisation should have at most an 80:20 split (Hansen, Nohria and Tierney, 1999), more current research exploring these strategies emphasises a greater overlap between them within organisations (Ng *et al.*, 2012; Bolisani, Padova and Scarso, 2020; Asiedu, Abah and Dei, 2022). More detail will be provided on this within Chapter 3.

Finally, across the KM literature, there is an understanding that there are several factors that can influence the conceptualisation, and implementation of KM and KS within organisations, including: Technology (Blair, 2002; Venkitachalam and Willmott, 2016), Organisational Culture (Chase, 1997; Zheng, Yang and McLean, 2010), Organisational Structure (Sharratt and Usoro, 2003; Zheng, Yang and McLean, 2010), Organisational Strategy (Jafari, Akhavan and Mortezaei, 2009; Venkitachalam and Willmott, 2016), Leadership and support from top management (Finn and Waring, 2006; Hume and Hume, 2008), and Organisational Processes (Orange, Burke and Boam, 2000; Wong, 2005; Corfield, Paton and Little, 2013). Whilst this is not an exhaustive list, it demonstrates the complexities of undertaking KM within dynamic organisations.

In summary, organisations' assumptions around knowledge, influence their conceptualisation and subsequent approach to KM and KS, whereby its application is also influenced by several different factors across the organisation. Due to its recent popularity and benefits recognised by organisations (Mårtensson, 2000; Serban and Luan, 2002; King, 2009; Zheng, Yang and McLean, 2010), there has been much research into KM within the for-profit (Szulanski, 1996; Salojärvi, Furu and Sveiby, 2005; Chong, Chong and Gan, 2011; Venkitachalam and Willmott, 2016) and non-profit sector (Lettieri, Borga and Savoldelli, 2004; Smith and Lumba, 2008; Corfield, Paton and Little, 2013).

2.2 Conservation in Crisis:

The earth is entering its sixth mass extinction (Leakey, and Lewin, 1996), which Wagler, (2018) describes as “an ongoing current event where a large number of living species are threatened with extinction or are going extinct because of the environmentally destructive activities of humans” A conservative estimate of 198 vertebrate species have gone extinct since 1900 (Ceballos *et al.*, 2015), and in 2022 the Living Planet Report (LPR. 2022), presented that there had been a 69% decline in relative abundance of the monitored wildlife populations within the 48 years between 1970 and 2018. Whilst arguing that extinction is a natural process, the rate of this current extinction event is at least 100 times greater than previous background levels of extinctions (Pimm *et al.*, 1995). This is having a devastating impact on the planet, both directly and indirectly from climate change (Pecl *et al.*, 2017), the spread of diseases (Wake and Vredenburg, 2008), loss of habitat (Lande, 1998) and pollution (White *et al.*, 2012). Consequently, individuals, organisations and countries worldwide have taken steps to counter this extinction event (Balmford *et al.*, 2003; Berkes, 2007; Rands *et al.*, 2010; Barnosky *et al.*, 2011; Bennett *et al.*, 2017). This includes the creation and establishment of international, national, and local targets, such as the ‘Sustainable Development Goals’ (SDG) (SDGS. 2015) and laws such as and the *Climate Change Act, 2008* as well as conservation projects on species, habitats, and sustainable development. However, all these conservation research and projects are being undertaken with limitations around funding (Ferraro and Pattanayak, 2006; Waldron *et al.*, 2013) and resources (Kapos *et al.*, 2008). Add this to the time constraints of most conservation projects (Martin *et al.*, 2012; Cook *et al.*, 2013; Cooke *et al.*, 2016) and it is no wonder conservation has been described as a crisis discipline (Pullin *et al.*, 2004; Soulé, 2007; Stirling and Burgman, 2021). One approach that has been suggested to aid conservationists is greater awareness and understanding around KM, but more specifically to conservation is the sharing of knowledge (Raymond *et al.*, 2010; Fazey *et al.*, 2012; Cvitanovic *et al.*, 2015; Nguyen, Young and Cooke, 2016). The importance of KM and KS can be seen within the case study of the Iberian Lynx (*Lynx pardinus*) recovery programme.

The Iberian lynx’s conservation success resulted from an abundance of knowledge on the species ecology (Palomares *et al.*, 2011; Simon *et al.*, 2012) used to make timely and well evidenced decisions. The project used a multidisciplinary approach, involving both the Spanish and Portuguese Governments (Vargas *et al.*, 2008), plus a variety of international, national, and regional stakeholders including Non-Governmental Organisations (NGOs), universities, and landowners (Palomares *et al.*, 2011). This support provided generous funding of at least €60 million (Palomares *et al.*, 2011; Simon *et al.*, 2012) supporting 19 projects since 1986 (Palomares *et al.*, 2011). These

projects included improving habitat quality, restocking prey, arranging landowner agreements, public engagement, patrolling, decreasing road collisions and disease (Roy and Upadhyay, 2015), increasing genetic diversity and a successful reintroduction program (Simon *et al.*, 2012). The population is now increasing and as of the last IUCN assessment, there are 156 wild Iberian lynxes (IUCN. 2014). Moreover, according to the World Wildlife Foundation, as of 2020 there are now up to 1111 wild lynxes (WWF, 2021). Despite this recent increase, the Iberian lynx was known to be declining since 1965, but no action was taken until 1980 (Simon *et al.*, 2012) by which point 80% of the population had gone extinct (Vargas *et al.*, 2008), decreasing down from 1100 to 93 individuals by 2002 (Simon *et al.*, 2012) 8% of the original population. Additionally, Palomares *et al.*, 2011 suggested that there was limited monitoring and evaluation of the conservation efforts, and although this has been rebutted by Simon *et al.*, 2012, it could explain how after 30 years' and up to €94 million, the Iberian lynx recovery has been challenging and non-linear. Finally, Fordham discloses that despite all the conservation work undertaken, climate change knowledge has not been incorporated into the recovery plan, suggesting that if it is not considered, then the Iberian lynx will be extinct within 50 years (Fordham *et al.*, 2013).

This case study demonstrates that an abundance of knowledge, international collaborations and funding are essential for conservation success, with this knowledge being shared across the project and its stakeholders, for it to be of use. However, the project was compromised by inaction and a lack of foresight in expanding future knowledge through monitoring and evaluation and climate consideration. From the literature and this case study, it is evident that knowledge can be key to successful conservation projects (Sutherland *et al.*, 2004; Born, Boreux, and Lawes, 2009; Fazey *et al.*, 2012; Nguyen, Young and Cooke, 2016). However, it is also essential to have the right knowledge at the right time (Linklater, 2003) as well as knowing what to do with the knowledge (Fazey *et al.*, 2012).

Mirroring KM literature, there is a long-standing debate within conservation over whether systematic, *evidence-based knowledge* is more advantageous to conservationists than *experiential traditional knowledge* (Gadgil, Berkes and Folke, 1993; Pullin *et al.*, 2004; Sutherland *et al.*, 2004; Cvitanovic, McDonald and Hobday, 2016). Originally, *Evidence-based knowledge* that is considered standardised and controlled, with high accuracy and reliability (Pullin *et al.*, 2004; Roux, *et al.*, 2006) was the predominant knowledge considered within conservation work (Balmford and Cowling, 2006; Bennett *et al.*, 2016). However, over the years, conservationists have begun to understand that you cannot protect the natural system without engaging with the social system alongside, as they are

intricately linked (Salafsky *et al.*, 2002; Stem *et al.*, 2005; Berkes, 2007; Margoluis *et al.*, 2009; Cvitanovic *et al.*, 2015; Bennett *et al.*, 2016).

These key assumptions have been the grounding of two decades worth of conservation research, whereby the crucial inclusion of social science within conservation (Balmford and Cowling, 2006; Hulme, 2010; Nel *et al.*, 2015; Bennett *et al.*, 2016; Toomey, Knight and Barlow, 2017) has facilitated the drive for conservationists to become more understanding and efficient with the funding; resources and knowledge they currently possess. This includes the adoption of distinct management approaches (Black, Groombridge and Jones, 2013) the conceptualisation of monitoring and evaluation frameworks (Stem *et al.*, 2005; Black and Groombridge, 2010; Moore *et al.*, 2020) and finally, discussions on the most appropriate approach to knowledge and its management (Cash *et al.*, 2003; Berkes, 2009; Fazey *et al.*, 2012; Reed *et al.*, 2014)

However, as part of the conservation KM and Knowledge Exchange (KE) literature there are still issues of access and overload when it comes to knowledge. Firstly, there are instances where practitioners physically cannot get access to the published knowledge without paying for it (Cvitanovic *et al.*, 2014), which can be beyond some individuals' means, especially in the GS. To counter this, it has been suggested that open access and freely accessible publications would increase accessibility to wider audiences (Boreux, Born and Lawes, 2009; Wilson and Campbell, 2016). Moreover, documents and reports created by organisations can be difficult for external organisations or individuals to access (Kapos *et al.*, 2008). This can be the same for online data repositories, which Sánchez, and Morrison-Saunders, (2011) suggest having access to, can make a huge difference. Consequently Cash *et al.*, (2003) also suggest having alternative KE platforms such as more meetings and workshops as possible solutions to this inaccessibility, although this accessibility could be challenged depending on who is invited to the session. Moreover, Roux *et al.*, (2006) explains that as well as not having enough access to knowledge, there can be too much knowledge, leaving practitioners feeling overwhelmed, as they might not have the skills or the structure within their organisation to identify the relevant knowledge. Finally, due to the extended time it takes for research to be undertaken and published, countless papers are unfortunately out-of-date by the time the practitioners gain access to them (Linklater, 2003). It is suggested that it takes between 3.5-4 years for conservation science to be published (Fazey, Fazey and Fazey, 2005; Cvitanovic *et al.*, 2014). Obviously, this makes research incompatible with current conservation problems that are time critical (Martin *et al.*, 2012; Cook *et al.*, 2013).

From the case study and the KM and KE literature above, it is evident that knowledge is crucial for conservation, but it is not being managed or shared sufficiently (Boreux, Born and Lawes, 2009) with wider audiences (Rands *et al.*, 2010). As such, it is predicted that there is much that the conservation sector could benefit from KM and KS. Cvitanovic, McDonald and Hobday, (2016) pg. 869 suggests that *“Successfully responding to modern day conservation challenges will require improved KE among scientists and decision makers to enable learning and evidence-based decision making”*. This is supported by Fazey *et al.*, (2012), pg. 19 in that the *“Accumulation of knowledge and Information is not enough; the effectiveness of environmental management depends greatly on how knowledge is exchanged, with whom it is exchanged and how it is used”*. As such, research, and development around KM but particularly KS is crucial to the long-term success of the conservation sector. Moreover, it has been suggested that within the conservation sector, knowledge and KM is crucial for gaining access to future funding and business opportunities (Reed *et al.*, 2014), reducing the cost of repeatedly developing solutions to problems (Sánchez and Morrison-Saunders, 2011), and increasing opportunities for conservationists to learn from one another (Salafsky *et al.*, 2002) which is especially important if we are to prevent practitioners taking no action due to uncertainty (Cook *et al.*, 2013) like with the Iberian Lynx.

In summary, conservation is struggling to reduce the rate of the current extinction event, with one barrier being the limited funding, resources, and mismanagement of knowledge. In the same manner that KM has provided benefits for for-profit organisations, there is the ambition that KM and KS could facilitate global conservation efforts. Whilst there is no specific way this will be achieved, as suggested by Cvitanovic, McDonald and Hobday, (2016) and Fazey *et al.*, (2012) in the quotes above, that through the increase in KM but particularly KS, there will be an improvement in learning and decision making, as the appropriate knowledge is shared more widely to those who need it. Whilst this is an oversimplified aspiration for the conservation sector, the application of KM between specific partnered organisations might be useful.

2.3 Organisational Partnerships and the GN/GS:

The other aspect of conservation which is relevant to this research are the partnerships between organisations, which can be between public and private sectors, as well as Governments (Trauger, Tilt and Hatcher, 1995) local and national NGOs, and other donors such as universities (Berkes, 2007). For this research, partnerships are defined as *“A voluntary collaboration of individuals, organisations, or both to achieve a common goal, on a specific project within a definite time”* (Trauger, Tilt and Hatcher, 1995), Pg. 114. This definition was chosen because, as I will detail later in

this chapter, this research focuses on the KM and KS within and between 3 organisations that are working together on a shared project within the projects time frame and so it was deemed suitable for this research. There has been an increase in the number of partnerships over several decades (Smith *et al.*, 2007) for many reasons. First and foremost, the limited funding and resources within conservation (Ferraro and Pattanayak, 2006; Kapos *et al.*, 2008; Waldron *et al.*, 2013) has been a driving factor for more partnerships (Smith *et al.*, 2007; Lannon and Walsh, 2020) as through partnerships different people come together where knowledge can be shared but also co-produced (Nel *et al.* 2015; Johnson *et al.*, 2022). Secondly, is the complexity of conservation. Nature encompasses species, habitat, communities, population, ecosystem, and biomes, and what's more, all these levels are interconnected in complex manners that transverse multiple areas of research, even within the conservation sector (Berkes, 2007). And it is because of this complexity that partnerships are desired, as nature is too vast and intricate for one person or organisation to manage alone (Trauger, Tilt and Hatcher, 1995; Kark *et al.*, 2015). Additionally, more broadly speaking, through partnerships, organisations can use scarce resources more effectively (Kark *et al.* 2015) and build up capacity within other organisations and countries (Johnson *et al.*, 2022). Plus, by using both insider and outsider knowledge, there can be better-informed decision-making, with a greater chance to influence policy (Vermeulen and Sheil, 2007). Furthermore, with the increase in globalisation within the past few decades, there is the drive for organisations to work at the global level (Kark *et al.* 2015), bringing people together to overcome global issues which are affecting both the GN and GS (Mercer, 2002; Townsend and Townsend, 2004; Johnson *et al.*, 2022) with partnerships being a possible approach (Edwards, Hulme, and Wallace, 1999; Kark *et al.* 2015). More detail and examples of these partnerships will be discussed at the end of Chapter 3.

Within conservation and other non-profit sectors, organisational partnerships are particularly found between organisations situated within the GN and those within the GS (Johnson *et al.*, 2022). The terms GN and GS have a complex history, starting with terms such as the '*Third world*' (Rigg, 2015), evolving from the impact of the collapse of the Soviet Union (Eriksen, 2015) to the term '*South*' being recognised and popularised in the Brandt report from Germany (Dirlik, 2007; Lees, 2021). Whilst the origins of these terms are fascinating, it is beyond the scope of this research to explore its full history. However, a detailed description is provided by Dirlik, 2007; Rigg, 2007. Currently, the terms GN and GS are defined by the Overseas Development Aid (ODA) recipients list (OECD, 2023). These GS countries receive developmental aid from the Development Assistance Committees (DAC) and by default, the GN are those countries that do not receive ODA, with the list being updated

every three years. Currently, according to the ODA recipients list in 2022-2023, there were 74 countries in the GN and 121 countries in the GS.

Before I continue, I would like to justify the use of these terms in my research. I acknowledge that there are issues around the appropriateness of the terms GN/GS, with them potentially being politically loaded (Wolvers, 2015, Martins. 2020) whether individuals understand the history or not. Additionally, it is suggested that the terms are oversimplified (McFarlane, 2006; Eriksen. 2015) and involve grouping together 121 countries all with different and complex social, economic, and political structures (Schwarz. 2015). Additionally, whilst it is predominantly based around the economics of each country (please see below), it is omitting key qualities of each of the countries, all which contribute to creating the countries and cultures we know today (Magallanes. 2015; Martins. 2020). Despite these challenges of the terms GN/GS, this research will be using them to distinguish between the partnered organisations. This is because it is a regulated and up-to-date standard supported by the World Bank and United Nations. Moreover, it is currently popular within conservation (Mahajan, Ojwang and Ahmadia. 2023), KM (Lannon and Walsh. 2020) and the development sector, with this research attempting to bridge the gap further to the conservation sector (Brockington *et al.* 2010).

Furthermore, despite common misconception, the distinction between GN and GS is not one of geography (Wolvers, 2015, Martins. 2020) but more in relation to the geopolitical nature (Dados and Connell, 2012; Lees, 2021) and the economy (Rigg. 2015; Lees. 2021). However, whilst centring around the economy, there are several fundamental differences between those countries classed as GN and GS (Mahajan, Ojwang and Ahmadia, 2023). The GN tends to be wealthier (Magallanes. 2015; Wolvers, 2015) be more stable regarding politics and the economy (Eriksen. 2015; Martins. 2020) and be more technologically advanced than the GS (Odeh, 2010). In contrast, the GS, tends to include countries with a lower income, that are both politically and culturally marginalised (Dados and Connell, 2012) and has unequally distributed infrastructure (Reidpath and Allotey, 2019). It is also reported that these GS countries are more socially disadvantaged, have poorer education and are overall less developed than their GN counterparts (Odeh, 2010; Reidpath and Allotey, 2019).

And it is these differences between the GN and GS that are part of the fundamental reason for the partnerships between GN and GS organisations. As established, organisations within the GN are wealthier, more technologically advanced and have overall more capacity to aid others. However, for conservation, it is the GS where most of the conservation work is being undertaken (Johnson *et*

al., 2022). For example, of the 25 original biodiversity hotspots (areas with the highest number of endemic species, containing 44% of plant species and 35% of vertebrate species across 1.4% of the earth's surface) (Myers *et al.*, 2000; Myers, 2003) the majority are based in the GS. Meaning that by focusing conservation efforts on these areas, conservationists can protect the most species for the least cost. Whilst not all conservationists use this system for where to undertake conservation work, it cannot be argued that the GS holds greater biodiversity levels than the GN undertaken (Johnson *et al.*, 2022), and as such if species are to be protected, the work needs to be undertaken where they are endemic. However, biodiversity is not limited to the borders of each country and nearly always spread over large spatial areas and across multiple boundaries (Kark *et al.*, 2015). Hence the importance of partnerships between GN and GS conservation organisations.

However, it is not that simple and there is a complex history of these partnerships within the past century, particularly between the GN and GS (Martins. 2020). Originally, GN organisations were providing funding, physical support, and technical assistance to newly developed GS organisations (Lewis, 1998; Vasconcelos *et al.* 2005; Mahajan, Ojwang, and Ahmadi, 2023). Unsurprisingly, this framework supported an unequal balance of power, causing the GS organisations dependence on the GN organisations for financial support (Derkzen, Franklin and Bock. 2008; Reith, 2010, Martins. 2020). This North-South resource paradigm (Malhotra, 2000) caused many GS organisations to change their own objectives to fit the GN organisations just to maintain their financial support (Edwards, Hulme, and Wallace, 1999; Lister, 2000). Furthermore, there were issues with the language used to communicate (usually English), with it being controlled by the GN organisations, placing the GS organisations at a disadvantage (Reith, 2010; Mahajan, Ojwang and Ahmadi. 2023). Moreover, there were time scale issues. GN organisations would require results in a short period of time, and whilst these milestones were unobtainable, due to needing financial resources the GS organisations would agree to the time scale (Martins. 2020), which, when it was not met, reinforced the lack of trust in the relationship and supported the GN organisations its controlling nature (Reith, 2010). However, in the 1980's there was an increase in funding and support for GS organisations causing a revision in GS organisations identity, as well as increasing the scope of their work (Mawdsley, Townsend and Porter, 2005). GS organisations now had the funding to hire more, middle class employees, and whilst the benefits to the GS organisations were extensive, it is argued that members of poorer communities and their agenda were no longer being represented (Mercer, 2002). Likewise, due to changes in governance, politics, and the increase in direct funding to GS organisations (Edwards, Hulme, and Wallace, 1999; Lewis and Sobhan, 1999) GN organisations changed their position to a partnership approach, providing technical support and capacity building

(Lewis, 1998; Saeed, Reichling, and Wulf, 2008; Lannon and Walsh, 2020). Because of this, as suggested by Lewis (2000), the GN organisations are struggling to adapt to the changing partnership dynamics, as the relationship is no longer donor-recipient but an equal partnership (Lewis, 1998). However, this could also be seen as an opportunity for greater accountability and genuine partnership formation (Edwards, Hulme, and Wallace, 1999; Malhotra, 2000), between the GN and GS. Overall, whichever way it is looked at, it is predicted that the partnership dynamic will change between organisations situated within the GN and GS.

2.4 Power

Despite partnerships between organisations being extremely common within the conservation sector, due to the GN-GS dynamic, issues around power are frequent (Derkzen, Franklin and Bock. 2008; Martins. 2020). However, across the wider KM literature, considerations of power within KM are limited (Gordan and Grant. 2004; Heizmann and Olsson. 2015; Engstrand and Enberg, 2020). But there are some considerations of power within the KM and wider literature, with these distinct forms of power being viewed differently depending on the assumptions of the individual (Feder, 2014) i.e., Power as a Resource or Power as a network of relations (Heizmann, Fee, and Gray. 2018; Engstrand and Enberg. 2020). This is supported by Foucault in his writings around power and knowledge, which are mutually constituted (Heizmann. 2011), and linked to the ongoing relations between people, institutions, and their associated discourses (Alvesson and Deetz. 2000), which is unsurprising as organisations are sites of multiple and sometimes competing discourses (Olsson, 2007). As part of this, it is the understanding that power is constantly being reformed and re-enforced within people and organisations (Olsson, 2010). As such by having an understanding around the power dynamics within people and organisations, through their associated discourses, there can be a better understanding around how this might legitimise certain assumptions around knowledge that constrain those under different discourses (Heizmann. 2011). This is important to this research with the power dynamics between my three organisations in relation to their roles and partnership, it will aid our understanding of the influence on legitimising KM discourses and practises.

This research will be exploring power using different approaches to knowledge, presented by two different research groups, that have strong overlap. Firstly, Gordon and Grant, (2004), have classified three ways that power can be viewed in relation to KM: *Power as Entity*, *Power as Strategy* and *Power as knowledge*. Additionally, Heizmann and Olsson, (2015) view power either *As a Resource* or through the *Power is knowledge lens*.

Firstly, *Power as Entity*, (Gordon and Grant, 2004) whereby power is referred to as a ‘thing’, that somebody has or does not have, that can be exercised over others (Kelly, 2007). This is the more traditional view of power with Dahl’s, (1957) definition of power being “A has power over B to the extent that A can get B to do something that B would not otherwise do” (pg. 202-203). Building on this, *Power as a Resource* (Heizmann and Olsson, 2015) have similar assumptions, whereby power is an entity that people come to possess and can influence other with either rewards or punishment. This power is overt, which alongside knowledge can provide choice and influence for the individual or organisation (Pfeffer, 1992; Alvesson and Deetz, 2000; Kelly, 2007; Heizmann, 2011). Moreover, it has several other definitions depending on the chosen literature. i.e., Legitimate power (French and Raven, 1959) or the 1st dimension of power (Lukes, 2021). Finally, this aligns well with assumptions from the Dualism half of the KM Discourse Framework (Schultze and Stabell, 2004) in that there are singular truths to knowledge, that power like knowledge is overt and something that can be used by an individual or organisation for their benefit. A detailed overview of the KM Discourse Framework will be provided within Chapter 3. However, it should be noted that within both these views of power, they fail to recognise the people that underpin knowledge practice as well as there being challenging perspectives on the singular verse’s multiple interpretations of reality.

The other views of power which this research is interested in (*Power as Strategy* or *Power as Knowledge*), centres around power as it enables and drives the production of new knowledge and truths, which is strongly based upon history and cultural contexts (Gordon and Grant, 2004). Heizmann and Olsson, (2015) build upon this with learnings with a Foucauldian lens, in suggesting that power is co-produced through social interactions between people and is useful in exploring how certain discourses become dominant and others do not. This is a more nuanced view of power in comparison and can be seen within the taken for granted assumptions people have within their own realities which is more covert and harder to see. This perspective of power aligns well with the Constructionist discourses and its relativistic ontological views (Schultze and Stabell, 2004), as well as with my Weak Social Constructionist (WSC) position (Taylor, 2018), which I discuss more in Chapter 2. This is due to the belief that power relations are linked to perception and meanings (Alvesson and Deetz, 2000) both of which are subjective to individuals and consequently, there can be plurality to both reality and knowledge (Gordon and Grant, 2004).

Within both frameworks of power (*Power as Entity/ Power as Strategy* or *Power As a Resource/ Power is knowledge lens*) it can be both positive and negative depending on how it can be utilised

(Feder, 2014; Heyes, 2014) and whether it is being used on something you agree or disagree with (Pfeffer, 1992). Whilst I acknowledge, there is a more knowledge focused approach to power, whereby '*Knowledge is Power*' or '*Power is Knowledge*' (Gordon and Grant, 2004), this is not something that I will be ignoring, but neither will I be specifically focusing on it. This is due to this research centring on knowledge and KM, and as such I am not exploring how knowledge can be used as a form of power (i.e., more knowledge equals more influence and control), but how power is intricately linked with knowledge in terms of how discourses are created established, i.e. using a Foucauldian lens. This is building upon Foucault's work, whereby power, and knowledge cannot be explored in isolation but should be considered within the wider context (social, historical, political) and associated discourses (Olsson, 2007), which is considered strongly in the case of the three organisations partnerships, as I will detail throughout this research. Finally, Derksen, Franklin and Bock. (2008), suggest a different perspective around power, whereby observed power struggles can be indicative of a relatively low level of inequality, meaning that observed issues around power means that one side is not in total domination. This will be kept in mind when discussing power across my three Organisations in Chapter 6.

3.0 Research Questions, Organisational Participants, and my Contributions to knowledge:

From the previous research background, it has been demonstrated that conservation is a crisis discipline (Soulé, 2007; Stirling and Burgman, 2021), that has limited resources, funding, (Ferraro and Pattanayak, 2006; Waldron *et al.*, 2013) and resources (Kapos *et al.*, 2008) and mismanagement of knowledge (Roux *et al.*, 2006; Cvitanovic *et al.*, 2014). There are several issues within the conservation sector surrounding its inaccessibility, out of date and indecision around knowledge that negatively impacts conservation work (Linklater, 2003; Boreux, Born and Lawes, 2009). As such it has been suggested by several researchers that KM and specifically KS might be a useful tool for conservationists to use for the better management and sharing of their knowledge (Fazey *et al.*, 2012; Cvitanovic, McDonald and Hobday, 2016). However, KM is complex, with several debates running concurrently within the literature, from its definition, philosophical assumptions, strategy, and appropriateness of frameworks within organisations (Alavi and Leidner, 2001). As such, this research will be exploring the applicability of KM within the conservation sector, starting with 1. *How is Knowledge Management conceptualised within and between conservation organisations and what impact does this have on their project partnership?* The other approach that conservationists are using to stem this current extinction event are partnerships. Due to the nature of conservation work and the location of biodiversity across the planet (Myers *et al.*, 2000) these partnerships tend to be between the GN and GS. However, due to the political and economic differences between

these two groups of countries, power and geo-politics are strongly influencing partnerships (Gordon and Grant, 2004; Odeh, 2010; Heizmann and Olsson, 2015). As such, this research would like to explore to *what extent*, and 2. *To what extent, and how does the classification of Global, Global North and Global South shape Knowledge Sharing processes within and between conservation organisations?*, due to the complexities of KM and conservation, as well as the global pandemic and its ongoing influence on organisations this research is exploring specifically, 3. *How do technological factors and the associated discourses facilitate and constrain the KS within and between conservation organisations?* Overall, this research aims to explore KM within and between conservation organisations, classed as Global, GN and GS, with a specific focus on KS and how this impacts their partnership.

To address these three research questions, I undertook FE across three partnered conservation organisations, classed as Global, GN and GS, working in partnership across a shared global project. This 10+ yearlong running project focuses on a global issue, working across 70+ countries worldwide. The aim of the project is to enhance management and utilisation of this global conservation issue, with benefits for biodiversity, and society. As part of this, there are several databases of data, information and knowledge that have been created and are interoperable at different levels (global, regional, national etc.) It is the aim that through the compilation of these databases, countries will be able to make better decision making around the conservation issue as well as the project providing tools and capacity development tailored to the specific countries. As I will detail more in Chapter 4, this project has several other organisations involved, but this research predominantly focuses on three and their partnership and roles within the project. Organisation 1, my GN organisation, is a science organisation, who are coordinating the global project in its day-to-day management, as well as building and maintaining the Main database for the project and providing technical support to the other partners. Organisation 2 classed as my Global organisation, is based in the GN but works with over 100 countries worldwide both within this project and in their other projects. Their focus is on biodiversity knowledge and ensuring that those making decisions have the most appropriate and sufficient knowledge available to them. For the project, they were consulted in to provide expertise and technical support on the day-to-day management of the Main database and Sub-database. This involved extensive liaising with GS organisations. Finally, Organisation 3, my GS organisation is a regionally focused organisation collaborating with over 20 countries both within its region and worldwide. This organisation focuses on the multi-disciplinary knowledge, with the aim to protect and increase the sustainability within its region. Within the project Organisation 3 acts as a boundary organisation to its region, and as such actively engage with Organisations 1 and 2

in providing data, information, and knowledge in relation to the conservation issue of focus.

These three organisations were chosen for several reasons which I have detailed in Chapter 4, but predominantly due to them matching the criteria for the research (being located within either GN or GS, focusing on a shared global project, who were in current partnership with one another, and the shared project is working towards both 15 and 17 of the Sustainable Development Goals).

Additionally, both the project and the partnership were well established, which as I detail later might have influenced the research, but from a practical perspective, there was going to be sufficient data collected for the PhD. More detail around the project, databases, each organisation and their roles and partnerships can be found within Chapter 4.

Overall, to address my three research questions, across my three organisations I gathered data from **44 Participants**, including **34 interviews**, **27 meetings**, **7 feedback sessions**, and **19 documents**. Plus, the final **Joint feedback session** – overall **88 pieces of data**. From this data, my findings are making contributions across the theoretical, methodological, and practical levels. More specifically, this research has theoretical contributions through the answering of the three research questions, methodological contribution through the evaluation of Focused Ethnography (FE) and practical contributions through the envisaged impact on the three organisations and the SDG.

3.1 Theoretical contribution – Research Question 1:

This research contributes to the KM debates surrounding the applicability of the KM Discourse Framework within a conservation context. Through this research I challenge the suitability of the KM Discourse Framework in terms of its four discourses and their relevance to conservation, as well as the rigidity of the framework, limiting the movement between discourses as seen within the organisations. This contradicts other KM literature on KM strategies which have developed to provide flexibility between the two dominant strategies. Overall, this is used to highlight the limitations of KM frameworks when applied to real organisations, as they do not encapsulate the complex, dynamic processes within or consider the specific context influenced by several different factors.

3.2 Theoretical contribution – Research Question 2:

This research challenges the current KM literature and its dominant focus on KM within GN countries and organisations. There is very limited KM research having been undertaken within GS countries or organisations and even less undertaken through a GN-GS partnership lens. My research

argues that the partnerships and organisational roles within the shared project influences the organisation's conceptualisation and approach to KM, which brings into question the applicability of KM and its assumptions on GS organisations. Moreover, there is a lack of consideration for aspects of power and geo-political relations, within KM research that should be considered both within the KM literature, but more specifically within the non-profit and conservation sectors due to their reliance on global partnerships.

3.3 Theoretical contribution – Research Question 3:

Moreover this research challenges the current KM and conservation KM literature regarding the lack of consideration for access to technology when undertaking KM within organisations. Due to the extensive research on KM within the GN, there is an underlying assumption that technology is of high quality and available to all organisations undertaking KM, and it is the application of this technology that can facilitate or hinder the KM. Whereas, within the GS, access to high quality technology (i.e., internet connection and speed), is not guaranteed which could be a fundamental challenge to GS organisations undertaking KM. As such this research highlights the needs for current debates around technology within KM to be extended to incorporate context more aligned with the GS.

3.4 Methodological contribution:

This research is undertaken using FE as its main method. As part of this, FE has not yet been used within a conservation context or in a virtual manner. As such this research enriches the current FE literature by exploring the benefits and challenges that come from undertaking FE using a virtual approach (online synchronous meetings and interviews), such as lower costs and time implications for travel vs difficulty building a rapport with participants. Additionally, this research also evaluates FE appropriateness for use within the conservation context, whereby a quick turnaround of knowledge is critical.

3.5 Practical contributions:

As presented in my final chapter, this research was well received across all three organisations, with the feedback from participants expressing their interest and its usefulness across the organisations. Additionally, this research contributes to the SDG 17 – Partnerships for the Goal (*specifically 17.6 knowledge sharing and cooperation for access to science, technology, and innovation*) through its engagement with KS across the three partnered organisations. Additionally, through the shared

project of the partnered organisations, this research is also contributing to SDG 15 - Life on land (SDGS. 2015). These contributions are discussed in more detail within Chapter 8.

4.0 Structure of Thesis:

This thesis contains eight chapters including this introduction. In Chapter 2, I explore the theoretical basis for understanding knowledge using Burrell, and Morgan, (1979) *Sociological paradigms*, by firstly exploring the different dimensions of the framework including both the *Subjective-Objective* dimensions (ontology, epistemology, human nature, and methodology), and the *Radical-change* dimensions, discussing this in relation to my own assumptions before going on to critically analyse the frameworks bringing in arguments from Willmott, 1993 and Deetz, 1996. I then use this as a basis to identify and justify my own position, detailing my process to find my position through the considerations of Critical Realism and Pragmatism before settling on as a WSC position.

Chapter 3 contains the bulk of my literature review, which I have split into several parts. Firstly, I introduce KM as a topic, providing details on its origins in academia's and organisations, as well as its development to modern day KM. Within this I provide an overview of what KM entails, including knowledge Creation, knowledge Storage and Retrieval, Knowledge Sharing, and knowledge Application, before I bring in the KM Discourse Framework (Schultze and Stabell, 2004). Within this I contrast and explore the different dimensions, *Duality vs Dualism* and *Consensus and Dissensus* before exploring the four discourses in detail: *Neo-functionalist*, *Constructivist*, *Critical* and *Dialogic*. I related each of these discourses to the wider literature around knowledge including definitions of knowledge using these discourses assumptions. At this point I discuss how each of the discourses can be used to view and undertake KM, discussing this in relation to the wider literature around KM in the management sector. Finally, I link this to the different classifications of knowledge within the literature – *data*, *information* and *knowledge* and TK and EK before drawing this together in combination with my own assumptions and relating this back to my research. The second half of this chapter focuses on KS, making a clear distinction from Knowledge Transfer (KT) and KE, alongside providing details on the different approaches to sharing knowledge, based upon different assumptions. Moreover, I provide detail on the limitations around KS being undertaken within organisations. Finally, in the last part of this chapter, I provide some examples of KM being undertaken in both the private sector alongside the 3rd sector, specifically the Conservation sector, as well as factors that can influence the KS within organisations.

In Chapter 4 I provide a description and rationalisation of each stage of my methodology. This will include: (1) Sampling Strategy for both the organisations and the individuals, as well as providing an

overview of my, (2) Organisations including the Global, GN and GS and the shared project and their Partnership. This section will be useful in exploring how my research came together, why these organisations were chosen, as well as the data collection process. Next is my (3) Philosophy (a reminder of my WSC approach, and how it relates to my methodology), before expanding on my abductive approach to theory development. (4) After that is my Research Design using a Qualitative approach. Following on from this is my (5) Research Strategy of FE will be discussed in comparison to Traditional Ethnography, justifying its use and adaptation via virtual means, before detailing the (6) Research Methods used to collect the data (Interviews, Participant Observation, Document and Website Analysis, Feedback sessions and Researcher Diary). Penultimately, my (7) Research Analysis including Thematic Analysis and its links to the above research. Finally, I provide further details surrounding the ethical considerations, and research quality. It is aimed that within this chapter, each stage described above will not only be linked back to the research itself, but will be linked to the other methodological sections, demonstrating how they are connected within the research context, thus establishing a strong and cohesive research methodology.

In Chapter 5, I answer my first research question of *How is Knowledge Management conceptualised within and between conservation organisations and what impact does this have on their project partnership?* I do this by exploring the conceptualisation of the knowledge and KM across my three conservation organisations using the KM Discourse Framework (Schultze and Stabell, 2004), specifically the Neo-functionalist and Constructionist discourses. This involves exploring the awareness and use of the term KM, in both a written and spoken format and what KM strategies were identifiable. I did this for Organisation 1 (GN), then 2 (Global) and finally 3 (GS). For each of these sections I brought in quotes from the observed meetings and interviews to allow my participants' voice to come through and see what language they used when discussing KM. Finally at the end of this chapter, I provide a comparison between the three organisations, discuss their conceptualisation in relation to the literature and answer the question of what this means for the organisation's partnership.

In Chapter 6, I answer my second research question of *To what extent, and how does the classification of Global, Global North and Global South shape Knowledge Sharing processes within and between conservation organisations?* I do this by first analysing the data for whether my participants are aware of or use the terms GN and GS. This was through extensive analysis of the documents, observations in meetings and through direct questioning within the interviews. After this I go on to explore how the organisations conceptualise knowledge and how this might be influencing each other, particularly Organisation 1 and 2 on Organisation 3. This is based around

asking the question '*what is classed as knowledge*' within the shared project, and so influences the approaches to KM based around the assumptions and the discourses. I then take this argument one step further and argue that my organisation's conceptualisation of KM is based around their roles and power dynamics within the partnership. This is supported with quotes from my participants as well as links to the literature around different forms of power between organisations and the GN and GS partnerships.

In Chapter 7, I answer my final research question of *How do technological factors and the associated discourses facilitate and constrain the KS within and between conservation organisations?* Within this chapter I focus on the technological aspects that became significant themes, separated into '*Online Platforms*', the '*Digital Divide*' and '*Virtual working*'. Within these factors, I discuss each of my organisations, use quotes and observations taken from the meetings and interviews, demonstrating the different manners that these factors can both facilitate and constrain the KS within and between the organisations. This I again link to the Neo-functionalist and Constructivist discourses, as well as the Critical discourse when discussing the *Digital Divide*. Finally, I then do a comparison across all three organisations and link this to the wider literature to demonstrate that technology as a tool can be helpful and hinder the sharing of knowledge both within and between conservation organisations.

Finally, in Chapter 8 I demonstrate how my research findings have contributed to knowledge across the wider literature. Through exploring my theoretical contributions, I address each of my research questions, providing a summary of the main research findings and demonstrating their contributions and impact to both the KM literature as well as the conservation KM literature. Additionally, within my methodological contributions, I reflect upon the use of FE in the conservation sector and in a virtual manner, addressing issues of its applicability and adding to the FE literature. Furthermore, I discuss the contributions of my research across my three organisations, and the SDG before ending on five areas of future research based upon my findings.

Chapter 2 Theory and knowledge

1.0 Introduction:

Within this chapter I am going to explore the philosophical basis of this research. This will start with an overview of Burrell, and Morgan, (1979) influential '*Sociological Paradigms*', discussing the framework, my position within it, as well as providing critique along the thoughts of (Willmott, 1993; Deetz, 1996; Hassard and Cox, 2013; and Chia. 2019) and the incommensurability and pluralism of paradigms. Stemming from this, I will then be detailing the ontological and epistemological approach of WSC, and how this differs from Constructionism, as well as Strong Social Constructionism. The aim of this chapter is to present a justified theoretical position and be clear how my theoretical position has influenced my views, which I will then extend to knowledge and KM within Chapter 3.

2.0 Burrell and Morgan's' Sociological Paradigms:

Before we explore Burrell, and Morgan, (1979) *Sociological Paradigms*, I first want to explain why I have included it in my research. It is well established within theory development and Organisational Studies that the assumptions around *ontology, epistemology, human nature, axiology* influence the research approach (Morgan, Smircich, and Morgan, 1980; Marshall, Kelder and Perry, 2005; Moon *et al.*, 2019; Park, Konge and Artino Jr, 2020). As such, it is crucial to understand my theoretical position, how I fit within existing frameworks, and how this influences my approach. This is particularly important as my research focuses on KM and KS, which is strongly influenced by my epistemological position (Willmott, 1993). I have chosen Burrell, and Morgan, (1979) *Sociological Paradigms* because it is well known to have had major impacts on theory development (Willmott, 1993; Deetz, 1996; Scherer. 1998; Hassard and Cox, 2013; Shepard and Challenger. 2013) and is still being used in recent papers and textbooks (Easterby-Smith *et al.*, 2015; Burrell and Morgan, 2017; Günbayi and Sorm, 2018). Moreover, it takes a critical approach to epistemology, and the dominant Functionalist perspective (Kakkuri-Knuuttila, Lukka and Kuorikoski, 2008; Karataş-Özkan and Murphy, 2010; Shepard and Challenger. 2013), which is extremely relevant within KM (Allix, 2003; McKinlay, 2006) and within the conservation sector (Stem *et al.*, 2005; Berkes, 2007; Moon *et al.* 2019) regarding the dominant approaches to research. Now just because it is a prominent narrative within social science does not mean that it should be incorporated into my research. However, more specific to its theory development, is the fact that it is focused on organisational studies and analysis, given its full title of *Sociological Paradigms and Organisational Analysis*. This is particularly useful as my research is focused around three different organisations, each with different perspectives around knowledge and KM. Moreover, the KM discourse framework that this research

uses as a lens (Schultze and Stabell, 2004), and will be discussed more in the following chapter, is based upon Burrell, and Morgan, (1979) *Sociological Paradigms*.

Finally, I want to acknowledge that Burrell and Morgans, (1979) *Sociological Paradigms* are not without criticism as I will detail below, nor that they are the only framework that I could have used for exploring my ontological position. Proceeding from Burrell and Morgan in (1979), Morgan, Smircich, and Morgan, (1980) presented their own framework to be considered within qualitative research with a scale across the Subjectivist to Objectivist approaches that can be used in Social Science. Within this scale were details of assumptions of *ontology, human nature, epistemology, research methods* and *metaphors* – the resemblance can be seen with Burrell and Morgan, (1979), *Sociological Paradigms*. Building on this, Guba, and Lincoln in (1994) created their own framework exploring the basic understandings of *Positivism, Post positivism, Critical Theory* and *Constructionism* across *Ontology, Epistemology* and *Methodology*. Within their table, the similarities and differences are identified across the different paradigms, with them taking this one step further to explore how each of these paradigms would address practical issues such as: *Inquiry aim, Nature of knowledge, knowledge Accumulation, Goodness of quality Criteria, Values, Ethics, Voice, Training, and Hegemony*. Furthermore, within 2011 they revised this table and added another paradigm of *Cooperative* after the research undertaken by Heron and Reason, (1997). Finally, Cunliffe (2011), building upon Morgan, Smircich, and Morgan, (1980), also addresses the paradigm debates however, instead of focusing on specific paradigms and their assumptions, they used the assumptions around *Objective, Subjective* and *Intersubjective* and worked through a set of assumptions to create a scale around the approaches that can be used when undertaking social research. Despite reading most of these papers throughout the early stages of my research and again more recently, I did not feel that any of these frameworks aligned with my assumptions, nor with the KM literature that I was exploring. This ill alignment stemmed from the rigidity that these frameworks presented within their tables and scales, and coming from a natural science background, I found it challenging to find a consistent theoretical position. None of these frameworks aligned with my assumptions and it was only after re-reading Burrell and Morgan (1979), at a later date, and exploring the wider literature discussions around incommensurability and pluralism, did I deem this framework a suitable starting point to discuss the complexities, differences and importance of understanding and ascertaining one's theoretical position (Willmott, 1993) and how this influences their approach to research.

Burrell, and Morgan, (1979) created a 2x2 matrix framework based on a horizontal axis of *Subjective-Objective*, and a vertical axis of *Regulation-Radical change*. Within the *Subjective-Objective* dimension, there are four assumptions which in making explicit help place the researcher on this continuum. They are *Ontology, Epistemology, Human nature, and Methodology*. Identifying yourself against these four assumptions helps you understand your theoretical position and whether you view social research as *Objective or Subjective*. Then there is the vertical axis of *Regulation-Radical change*. As a researcher you are either concerned with understanding organisations and society through its underlying unity and cohesiveness or through conflict and contradictions within the structure. Once you have found your position along both the horizontal and vertical axis you will fit into one of four paradigms. Interpretivist (*Subjective and Regulation*), Functionalist (*Objective and Regulation*), Radical Structuralist (*Objective and Radical Change*) or Radical Humanist (*Subjective and Radical change*). (See Figure 1).

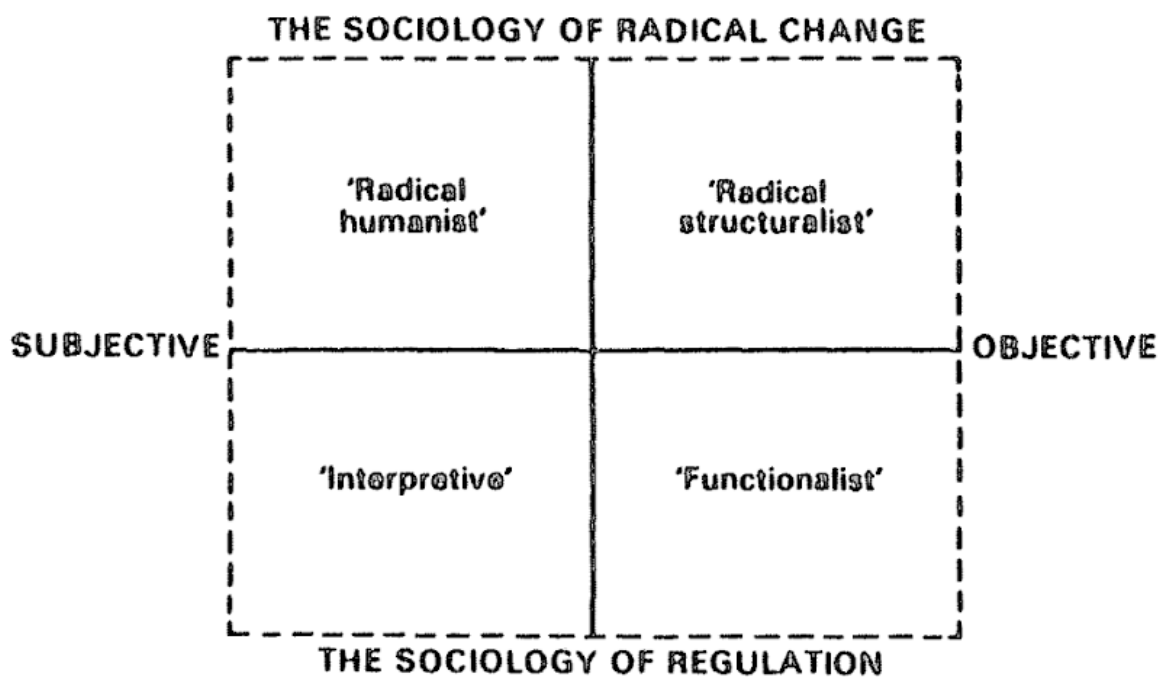


Figure 1: Diagram taken from Burrell, and Morgan, (1979) *Sociological Paradigms* presenting the horizontal axis of *Subjective-Objective* and the vertical axis of *Regulation-Radical change*, resulting in one or four paradigms.

In the following section I will be providing a brief overview of these two dimensions *Objective-Subjective* and *Regulation-Radical change*, alongside my own interpretation of these paradigms and their link to my own philosophical position and my research.

2.1 Objective-Subjective:

Within this framework, the *Objective-Subjective* dimension is made up of decisions around four key assumptions; *Ontology, Epistemology, Human Nature, and Methodology*. According to Burrell, and Morgan, (1979), within *Ontology*, you either hold a Nominalism perspective (Subjective) or a Realism perspective (Objective). Nominalism holds that the social world is constructed by individuals (Burr, 2015), whereby there is no real structure to the world outside of the reality constructed by humans (Marshall, Kelder and Perry, 2005; Cunliffe. 2011 Easterby-Smith *et al.* 2021), and as such there are many realities, based on many different constructions of reality (Karataş-Özkan and Murphy, 2010). Realism holds the social world is external and independent to humans (Peterson, Peterson, and Peterson, 2005; Easterby-Smith *et al.* 2021) and as such the world is made up of tangible and empirical structures and as such exists outside of human construction (Fopp, 2008; Cunliffe. 2011). Consequently, there is just one objective reality. Within *Epistemology* you either hold an Anti-positivism perspective (Subjective) or a Positivism perspective (Objective). Anti-positivism holds that the social world is relativistic and can and should only be understood from the perspective of the individual in question (Moon *et al.*, 2021). This means that knowledge and reality from an observer (rather than the participant) is rejected, resulting in subjective and individual knowledge (Bryman, 2016). On the other hand, a Positivist perspective, which is rooted in natural science (Deetz, 1996; Easterby-Smith *et al.* 2021) holds in objective knowledge which can be discovered through scientific reasoning, with the use of hypothesis and experiments (Fopp, 2008; Park, Konge and Artino Jr, 2020). Within *Human nature*, you hold either a Voluntarism perspective (Subjective), or a Determinism perspective (Objective). Within a Voluntarism perspective, humans are completely autonomous residing in their own free will (Sayer, 1997), without being controlled by any other forces or factors (Burr, 2015). A Deterministic perspective on the other hand, holds that humans are controlled, their lives predetermined from their birth by external forces (Delamater and Hyde, 1998; Cunliffe. 2011; Burr, 2015). Finally, within *Methodology* you hold either an Ideographic methodology (Subjective) or a Nomothetic methodology (Objective). Idiographic methods involve obtaining first-hand knowledge (as required by a subjective epistemology), by getting close to the participants and gaining their personal insider knowledge of the situation (Alvesson and Skoldberg, 2017). This is predominantly in the form of qualitative data which provides depth and detail from these personal insights and subjective experiences (Morgan, Smircich and Morgan, 1980; Cunliffe. 2011). Nomothetic methods involve more traditionally scientific methods (as required by an objective epistemology), such as using hypothesis, experiments, and scientific rigour in the form of quantitative data which can be standardised and generalised (Fopp, 2008; Burr, 2015; Park, Konge

and Artino Jr, 2020). Something to note, is that since the publication of *Sociological Paradigms* there has been subsequent discussions and challenges around the use of the terms and duality of objective-subjective (Deetz, 1996; Cunliffe 2011). These debates centre around the appropriateness and usefulness of these terms in information research and theoretical paradigms. This I will address in more detail in Chapter 3.

Across all four of these key assumptions, my position is central. As I will go on to explore further in the following section on Social Constructionism (Galbin, 2014), my ontological assumptions, are that when it comes to the natural world, that there is an external reality, independent from human construction. As such there is a material world beyond which humans have inscribed meaning (Dickens, 1996). However, when it comes to the social world, reality is socially constructed by individuals. Secondly, Epistemologically, knowledge is more subjective than objective, being socially constructed by individuals, rather than there being one objective reality, but as with ontology, there needs to be a material reality outside of human construction for there to be different interpretations of a socially constructed reality. Thirdly, regarding Human nature, my assumptions balance both Voluntarism and Determinism whereby individuals have free will up to a point before there are external forces constraining them. However, our lives are not all predetermined. Finally, undertaking a balanced approach to methodology, and using the methods that are most appropriate given the previous assumptions is key. Whilst I am aware that the above assumptions could lead me to several different theoretical positions, I describe below how I came to be a WSC, rather than other theoretical positions such as Critical Realism or a Pragmatism.

2.2 Regulation vs Radical Change:

Leading on to the *Regulation vs Radical Change* continuum, there are less assumptions and criteria providing guidance. And like the *Objective-Subjective* continuum, I again consider that my position is somewhat central, or at least not at either ends of the extremes. In terms of *Regulation*, I understand the views of exploring society in terms of its unity and cohesiveness based on my natural science background, where one takes a deductive approach (Gray, 2017) and would look for patterns and dominant themes to explain the data (Park, Konge and Artino Jr, 2020), uniting and minimising outliers and contradictions (Willmott, 1993), thus maintaining the status quo. However, in terms of *Radical Change*, I am also interested in trying to improve, in this case KM within conservation organisations to aid nature and society. This is also particularly relevant for the conservation sector, whereby up until recently the 'status quo' could be seen as exploitative and disadvantageous for nature (Peterson, Peterson, and Peterson, 2005), whereby nature is only valued in its societal and

economic benefits. So maybe a 'radical change' within conservation might be required. However, for this research, I am not looking to make a radical change, through big areas of conflict or contradiction (Deetz, 1996). Instead, I would like this research to help raise awareness of KM which might result in some small changes to the organisations and the conservation sectors, building upon prior research to produce change rather than through conflict. This goes back to the human nature continuum, where change and free will can occur, within the societal system, and that is the level of change that I am aiming for within my research.

To summarise the *Functionalist* paradigm, assume there is an objective reality and works towards the stability and maintenance of the status quo. The *Interpretivist* paradigm assumes that reality is socially constructed that is continuously being negotiated by individuals who like the Functionalist paradigm are not interested in changing the status quo. The *Radical Structuralist* paradigm has assumptions around an objective reality but is working towards changing this reality, whilst the *Radical Humanist* paradigm has ideological intentions of changing the socially constructed realities (Burrell and Morgan, 1979; Gioia and Pitre. 1990; Shepherd and Challenger. 2013; Chia. 2019). These four paradigms I will be exploring in more detail in relation to knowledge and KM within Chapter 3. However, within the following section, I will be critically analysing Burrell and Morgan, (1979) *Sociological Paradigms*, as well as linking to my own theoretical position of WSC.

3.0 Critiques of Sociological Paradigms:

The primary critique of Burrell and Morgans, (1979) *Sociological Paradigms*, and that which is most relevant to this research is the incommensurability of the paradigms to one another. This highlights Burrell and Morgans failure to address those researchers that do not fit within its four paradigms (Gioia and Pitre. 1990; Scherer. 1998; Kakkuri-Knuuttila, Lukka and Kuorikoski, 2008; Karataş-Özkan and Murphy, 2010; Chia. 2019), in addition to the inflexibility for the researcher to move across paradigms (Cunliffe, 2011, Shepard and Challenger. 2013; Moon, Adams, and Cooke, 2019). This can be limiting for researchers, as many are wanting to fit within a paradigm, thus legitimising their approach (Karataş-Özkan and Murphy, 2010), with Deetz, (1996) suggesting that if you don't fit within a paradigm, you feel lost and struggle to speak up. Willmott, (1993) takes it a step further and suggests that not only does it impact the research and researcher, but it also restricts the analysis and development of organisation studies theory development (Gioia and Pitre. 1990; Alvesson and Deetz, 2000). This criticism of Burrell and Morgans, (1979) *Sociological Paradigms* has been extensively discussed within the research, with Cunliffe. (2011) providing a summary of the debates and authors of this within the organisational studies literature.

Off the back of this criticism of being restricted to these four paradigms, has been the suggestion of 'Pluralism' within paradigms. This has been defined by Willmott, (1993), Pg. 702, as "a strategy... that looks for limited theoretical reconciliation where it is feasible... but without seeking to encompass all forms of analysis within the grasp of one totalising approach". This provides an opportunity for paradigms and the associated assumptions to be discussed and reconciled where appropriate. This is complimented by the multi-paradigm perspective where there is a continued dialogue between paradigms (Scherer. 1998), as well as metaparadigm perspective (Gioia and Pitre. 1990), whereby topics are researched across multiple paradigms to achieve a more comprehensive view. For example, Gioia and Pitre, (1990) use the example of exploring organisational structure four different ways using the different paradigms from Burrell and Morgan, (1979). There are many debates within the Organisation studies literature around pluralism and incommensurability, and it is not the aim of this research to revisit them all only to highlight that this has been extensively explored (Gioia and Pitre. 1990; Scherer. 1998; Shepard and Challenger. 2013), without much of a conclusion (Chia. 2019).

This could possibly be because authors seem confused by what they want. For example, within (Deetz, 1996) he discusses the issue of incommensurability of the paradigms, and how it is a big issue, but later discusses multi-perspectivism and suggests that this can lead to shallow readings and how there is greater value of sticking within one paradigm. This is confusing for the reader as it is understandable to need to have alignment in theoretical position and approach to research (Moon *et al.*, 2019) but regarding theory development, if everyone used the dominant paradigm for research, there would be a lack of critical lens and thus limited debates and problematisation and so would limit the theory development within organisation studies. Furthermore, Cunliffe, 2011 is supporting pluralism saying, "each has something different to offer and together they can provide a more fully developed understanding of the complexities of organisations and organisational life" (666pg). However, within their framework across the Objective, Subjective and Intersubjective problematics they do not suggest how this can be done. Moreover, I agree with Moon *et al.*, 2021 who suggest that integrated research is necessary for complex socio-ecological issues, such as those taking place within the conservation sector (Balmford and Cowling, 2006; Young *et al.*, 2014), and as such more should be being done to bring together different paradigms, especially when the research topic crosses disciplines. Others such as (Gioia and Pitre. 1990; Willmott, 1993; Scherer. 1998 and Hassard and Cox, 2013) suggest that this pluralism, as mentioned above, is more about a slight overlap between paradigms and finding some level of reconciliation around the constructed borders

rather than attempting to fit one within the other. This seems more along the lines of Kuhn as cited by (Willmott, 1993), who explores the continuity between paradigms, seeing them as on a continuum rather than mutually exclusive and rival approaches to theory development. Overall, even after 40 years of debates, I would suggest that Burrell, and Morgan, (1979) are over-ambitious in their claims of all research fitting within their paradigms, and narrow-minded in thinking that all research even should.

In conclusion, I do not comfortably fit within any of the four paradigms. This has been summarised within **Table 1**, demonstrating that I both agree and disagree with all paradigms on their various fundamental assumptions. However, whilst I do not fit within any of the four paradigms, engaging with this literature encourages reflection on my own theoretical position, what my assumptions are around ontology and epistemology and how this is influencing my research.

	Support	Do not support
Functionalist	Material reality Patterns to understand behaviour Pragmatic and problem-orientated	Natural science approaches are not suitable for social science research Universal laws for social science
Interpretivist	Subjective constructed multiple realities Order and consensus	No objective material reality Strong relativism Only first hand and qualitative data
Radical Structuralist	Material reality Tangible contradiction and conflict	Deterministic Solely focused on power
Radical Humanist	Subjective constructed multiple realities Emancipation and overcoming limitations Focus on cognition and consciousness	Deconstructing society

Table 1: Summary of aspects I support and do not support for Burrell and Morgan’s four paradigms: Functionalist, Interpretivist, Radical Structuralist, and Radical Humanist. Summarised from (Burrell, and Morgan, 1979).

4.0 My Theoretical Position:

Based on a relatively central position across both continuums, I am in the centre of Burrell and

Morgan's four paradigms and do not comfortably or naturally fit into any of the four paradigms (Coakes, Amar, and Granados, 2010). Before I go on to detail my position of WSC within the following section, I wanted to emphasise two points: Firstly, is that identifying my own position was an iterative process ongoing for much of the, and secondly that prior to WSC I strongly considered a position of Critical Realism and Pragmatism or even a combination of the two – Pragmatic Critical Realist.

Throughout the beginning of my research, I explored my own theoretical position across much of the management and organisational literature reading papers and exploring frameworks such as Burrell and Morgan. (1979); Guba and Lincoln. (1994); Saunders, Lewis, and Thornhill. (2007); Cunliffe (2011); Moon and Blackman, (2014); Bryman, (2016) and Gray (2017). And across each of these publications and frameworks, I found that I did not comfortably fit within any, which drove me to explore newer theoretical positions such as Critical Realism, and Pragmatism.

Critical Realism was identified as an option as it provided a position which balanced my own assumptions between an objective and subjective reality as described above with a Realist (and stratified) Ontology and a Relativist Epistemology, (Easterby-Smith et al. 2012; Fletcher. 2017; Vincent and O'Mahoney. 2018). Through this the aim was to explore the structures and underlying mechanisms that influenced the empirical reality within each of the organisations with the aim of future change of their KM (Bryman. 2016). Combine this with the Retroductive approach to theory development, instead of trying to identify if X causes Y, Critical Realism and specifically Retroduction sought to identify what must be in place for X to cause Y, (Edwards *et al.* 2014; Vincent and O'Mahoney. 2018). As such within the data collection there was a slight focus on the influential factors around KM, which I was aiming to link to the underlying mechanisms aspect of Critical Realism (See the Codebook within the appendix). However, despite extensive research and undertaking adaptations to much of the research methods around this theoretical position, ultimately it was abandoned as I was not confident that within the scope of the research, I was able to provide a strong enough argument for this theory to be used within the research.

This was the same process for Pragmatism. The idea around incorporating Pragmatism within the research was to reconcile both the objective and subjective elements of my understanding (Saunders, Lewis, and Thornhill. 2007; Haigh *et al.* 2019), as well as ensuring that my research had practical application and contributions to the three conservation organisations involved in my research (Simpson. 2017; Haigh *et al.* 2019). However, there is less written about this theoretical

position within the literature, and even when it was considered as a possibility, it was never going to be used in isolation, as it did not seem strong enough to withstand academic scrutiny. Additionally, as I looked at combining Critical Realism and Pragmatism, I found areas that did not align particularly in terms of the theory development, as I found Pragmatism was not flexible enough in its ontology and epistemology. This resulted in less confidence in my ability to ensure that this was rigorous within my research to withstand scrutiny. I also found that I was only really incorporating Pragmatism as I wanted to ensure sure that my research had practical application, which I realised I could do with my three organisations without bringing this into my theoretical position. As such Pragmatism was abandoned as well.

Around the same time, the concept of WSC was introduced to me and it was something that I felt more aligned with as it overcame my previous issues of strong constructionist of there being no objective material reality, which was my previous issues of Social Constructionism when exploring the various frameworks and tables mentioned earlier. Additionally, by the time I was introduced to this concept, it was later within the PhD, and I found that my own position and assumptions had developed from the strongly functionalist when I started pulled from my natural science background to a more middle and social science orientated approach to research.

5.0 Social Constructionism:

For Social Constructionists, as first described by (Berger and Luckmann, 1966) reality is socially constructed within the minds of groups of individuals (Delamater and Hyde, 1998; Marshall, Kelder and Perry, 2005; Moon and Blackman, 2014; Burr, 2015) and as such, reality is subjective rather than objective (Taylor, 2018). This means that there are possibly as many interpretations of reality as there are groups of people (Moon and Blackman, 2014; Burr, 2015), with each person's reality being actively constructed and associated around known knowledge (Jacobs and Manzi, 2000; Amineh and Asl, 2015), but also through shared language (Easterby-Smith *et al.*, 2015; Burr and Dick, 2017).

Due to this subjective internal reality which aids individuals in understanding their own experiences (Amineh and Asl, 2015) it means that concepts such as *truth* and *accuracy* are rejected when discussing knowledge (Galbin, 2014; Burr, 2015). For example, if all reality is subjective and varies upon the individual viewpoint, there will be multiple perspectives of the same thing (Moon and Blackman, 2014). Additionally, if all individual realities are given the same weight and none are more authentic than others (Fopp, 2008) then how can there be *truth* and *accuracy* within knowledge, as one would prescribe from an '*Objective*' reality? Moreover, this view of knowledge and the subsequent use of language is also situated historically, temporally, geographically, and contextually

(Gergen, 1973 as cited in Burr, 2015; Eriksson and Kovalainen, 2015; Taylor, 2018) which means that as time progresses and society changes, so will individuals' realities, and as such social *facts* are not permanent (Jacobs and Manzi, 2000; Marshall, Kelder and Perry, 2005).

Overall, it can be summarised that Social Constructionists believe in a subjective ontology and a relativist epistemology. This is with the understanding that reality is socially constructed within groups of individuals, and that knowledge is the outcome of individuals' active interpretation of the world which results in multiple perspectives where each is presenting a different '*truth*'.

Furthermore, it is with the understanding that our views of reality and understanding around knowledge will change with time, location, and the context in which it was created.

5.1 Social Constructionist vs Constructionist:

Before we go any further, I wanted to clarify the difference between a Constructionist and a Social Constructionist. Firstly, a Constructionist is someone who believes that reality is created only within individuals' minds and as such there are as many different realities as there are people to create them (Marshall, Kelder and Perry, 2005; Gergen and Gergen, 2007; Galbin, 2014). Their focus is on the different realities created within individuals' minds. Similarly Social Constructionists believe that reality is also created within individuals' minds, but how as groups we create this intersubjective reality between us (Delamater and Hyde, 1998; Marshall, Kelder and Perry, 2005; Cunliffe, 2008; Alvesson and Skoldberg, 2017). For example, for a Constructionist, individuals might perceive a tree to be pretty, or a tree house, or a hindrance. However, from a Social Constructionist perspective these individuals might have a shared or collective view of a tree, where it might be pretty, but it is also a useful resource for fruit, or view it is sacred, due to their religious beliefs. And it is this collective view that this research is interested in, rather than at the individual level.

There are three reasons why I chose Social Constructionism over Constructionism as my theoretical position. Firstly, is something that Hansen, 2004 describes as *Solipsism* whereby if reality is constructed within minds and there is no external reality, and you can only know yourself, how can you ever know anyone or anything else, as instead you would only know your own interpretation of them? Additionally, this perception of reality makes for a rather selfish lens through which to view the world. i.e., if the only thing you can know is yourself, then it is the only thing that you should focus on (Hansen, 2004). However, as described earlier, my assumptions are based upon a material external reality, as well as a constructed social world, this can ground us and provide alternative

perspectives through which to view reality. A good example of my position comes from (Dickens, 1996, Pg. 73):

“A fish is certainly understood in different ways by different societies. In certain instances, for example, it may be assumed forms of religious significance which would be unrecognisable in other societies. On the other hand, a fish surely has a real physical being, one which can be (and in many instances is being) damaged. It simply ceases to be a fish if it is surrounded by a toxic environment that kills it. A fish which has lost its life or its capacity to swim is by no stretch of the imagination just a social construction. In short, there are real differences between how people construe fishes, but this is a wholly different matter from how a fish is physically constructed”.

My assumptions, and those of this research are that there is a socially constructed reality, alongside there being some material dimensions to it, that is outside of the labels and language of humans (Galbin, 2014). Using the above quote as an example, I consider a fish first and foremost as a real physical being, outside of human construction. However, I also believe that a fish could be socially constructed as something beautiful, or as a resource or as something that needs protecting. Linking back to *Solipsism*, some might argue that because our knowledge filters through our senses and is interpreted by our previous experiences, that *Solipsism* is the natural way of being. However, I disagree, as it assumes that we then can't change our perspectives and we are stuck in our internal universe, whereas I know that I have certainly changed my mind on things based on new information, and so disagree with this deterministic viewpoint.

The second reason for choosing Social Constructionism vs Constructionism is that we can see clearly that there are shared realities and inter-subjective realities that are created by groups and not just individuals (Marshall, Kelder and Perry, 2005; Peterson, Peterson, and Peterson, 2005; Cunliffe, 2011). We can see this in cultures, religions, and fandoms; whereby people come together and view reality in a similar manner. Now I am not saying that there aren't differing realities within these groups on the same topics but that there is enough overlap for us to clearly see that they are shared socially constructed realities (Jacobs and Manzi, 2000; Cunliffe, 2008). And with these shared realities, how could one believe that reality is only found in the individual's mind rather than constructed socially as a group (Hansen, 2004; Amineh and Asl, 2015).

Finally, my last reason for choosing Social Constructionism vs Constructionism, is the fact that this research is engaging with organisations within the conservation sector. And it is clear from my own experiences and from the literature that organisations are a hub of individually constructed realities but are also a shared reality and the creation of a community focused on organisational values (Karataş-Özkan and Murphy, 2010; Galbin, 2014). Additionally, within social science conservation

there is attention on exploring the shared reality of individuals within a specific geography and historical context that will help to develop the research in that area (Gadgil, Berkes and Folke, 1993; Huntington, 2000), and that different groups of people could have wildly different perspectives around the same conservation issue (Peterson, Peterson, and Peterson, 2005; Moon *et al*, 2019). Encouraging these competing views of reality help to raise awareness around the conservation issues from different stakeholder perspectives, which could involve critical thinking, alongside multidisciplinary, interdisciplinary, and transdisciplinary research (Stirling and Burgman, 2021), all of which could be useful in tackling conservation issues.

Overall, this research is undertaking Social Constructionism over Constructionism. However, there are critiques of Social Constructionism that I do agree with and have tried to acknowledge and adapt around, thus finding a research position that I agree with, both in terms of its strengths and its limitations.

5.2 Critiques of Social Constructionism:

Firstly, one critique of Social Constructionism, is that due to all perspectives of reality having the potential to be equally true, and one cannot be said to be more *truthful* or *accurate* than the other, it might undermine minority positions (Fopp, 2008). This is due to what can be 'true' at a point in time, often reflecting the perspectives of those in more privileged positions through their influence and power (Alvesson, M and Deetz, 2000; Gergen and Gergen. 2007; Galbin, 2014), and within this they are often perpetuating discourses that are more beneficial to themselves (Crowther and Green, 2004; Burr and Dick, 2017). Often this is through language, which can be used to legitimise the power within people and organisations (Alvesson and Deetz, 2000; Crowther and Green. 2004). However, to counter this, by having equally true realities, it could provide the stage for other minority or marginalised positions to be heard, as since now all realities are equal, one cannot be said to be superior to the other (Gergen and Gergen, 2007). This stems from a Foucauldian understanding around discourses and knowledge truths not being governed by the author but being constantly recreated by each of the readers (Olsson, 2007). In reference to the conservation sector, (Peterson, Peterson, and Peterson, 2005) a social constructionist approach can legitimise existing patterns of environmental degradation. If the same community or political party is making the environmental decisions year after year, and if reality is socially constructed by the group making the decisions, it is unlikely that decisions are going to alter much and so this reinforces previous decisions and maintains the status quo. Hence the radical change aspect of Burrell and Morgans, (1979) *Sociological Paradigms*. For example, the material reality of climate change and melting

glaciers, being denied by certain socially constructed realities, and so action is hindered. This is particularly damaging for the conservation sector, who need swift action based on appropriate knowledge (Balmford and Cowling, 2006).

As mentioned above, my understanding around multiple realities within Social Constructionism, is that whilst there can be multiple conflicting realities based on individuals' history and socio-economic backgrounds (Alvesson and Deetz, 2000), there is also a material reality which these realities can be based upon (Johnson and Duberley, 2000). This material reality is possibly based upon the dominant discourse in each moment and based upon my own history and socio-economic background and can be seen within my language (Burr and Dick, 2017). However, this I will discuss more in the reflexivity section within Chapter 4. This is important for this research because the language used within each organisation when describing their conceptualisation and understanding of KM, will represent how that organisation views KM.

The second and possibly most prominent criticism of the Social Constructionist approach is to do with Relativism. I have discussed above that (some) Social Constructionists do not tend to believe in an objective reality (Taylor, 2018). And if that is the case and all reality is socially constructed, who decides which reality is truth (Jacobs and Manzi, 2000). Is it the shared reality with the most followers? In which case, as mentioned above, this would strongly support those more privileged positions with the power and influence to control the narrative. And taking that one step further, again we discussed earlier that all realities were equal (Fopp, 2008) but are they all equal? For example, within my research I am focusing on a specific shared project between three organisations, so can all individuals within those three organisations provide me with an equal picture of the project or are there individuals who specifically work on the project who might be able to provide a more detail reality than someone that doesn't work on the project. If that is the case how are all realities equal? (Marshall, Kelder and Perry, 2005).

Finally, taking this Relativism one step further, if as we have already established, our reality and our knowledge of it is socially constructed, then isn't, by definition, social constructionism, socially constructed? (Jacobs and Manzi, 2000; Fopp, 2008). And if this is the case, then relativism is unable to cope with its critique (Johnson and Duberley, 2000) i.e., there is no foundation on which to base decisions which can cause problems (Hansen, 2004; Gergen and Gergen, 2007). It has been suggested that when this critique is raised to Social Constructionists, what they tend to do is something called ontological gerrymandering (Woolgar and Pawluch, 1985) which is whereby the researcher picks and chooses what to believe, what to give a privileged position to (Jacobs and

Manzi, 2000). This is obviously inconsistent between social constructionists and a strong limitation to the Social Constructionist approach. Another approach to counter this, which has developed over the years is having Social Constructionism on a scale, between weak and strong, which I will detail below (Easterby-Smith *et al.*, 2015). Overall, there are several limitations to undertaking research through a Social Constructionist approach. However, as we have mentioned above, there are ways to accept and counter these limitations.

5.3 Weak vs Strong Social Constructionism:

My above descriptions of Social Constructionism, and those which have been criticised for their inherent relativism (Hansen, 2004), are known within the literature as a position of Strong or Radical Social Constructionism (Fopp, 2008; Amineh and Asl, 2015). As part of these criticisms, Johnson and Duberley, 2000, ascertain that Socially Constructed reality needs to rest on something, to ensure that not all reality is socially constructed and that there are some truths and accurate statements within Social Constructionism. This more flexible and moderate understanding of Social Constructionism is commonly described as moderate or WSC (North, 2016; Taylor, 2018). WSC is whereby there is an understanding that reality is socially constructed but they don't fully reject the notion of an objective understanding of truth (Jacobs and Manzi, 2000; Galbin, 2014; Easterby-Smith *et al.*, 2015). This helps to differentiate between socially constructed realities and those realities that have material existence – some might say are empirical and can be observed through our senses (Lawson, 2002). This links back to my understanding of Critical Realism earlier, where my assumptions aligned with a material reality outside of human influence, especially when it comes to nature. However, where it differs is that when it comes to social reality, there is a reality that is socially constructed, which aligns more strongly with a WSC perspective, but in my case, my WSC rests upon the material natural world.

6.0 Conclusion:

Overall, the assumptions that you have around reality and knowledge, not only influence your philosophical position, but this also extends out to the research methodology, and as I will demonstrate within Chapter 3, this links to how you define and classify knowledge and your subsequent approach to KM. As such, it is extremely important to understand your own position and assumptions surrounding knowledge before undertaking research. This is not to say that it is easy, or that you should fit yourself within a singular paradigm as presented by Burrell, and Morgan, (1979); Guba and Lincoln 1994; or Cunliffe 2011. Just that you should be reflective and ask yourself questions around the assumptions that we have discussed in this chapter. These include *Ontology*,

Epistemology, Human nature, Methodology, where you lie on the *Subjective-Objective* continuum, or whether you are working towards *Regulation* or *Radical Change* within your research. Once you have your answer to these questions, you should be able to identify your own philosophical position. And based on my experience, this will not be a straightforward or quick process, nor will there be a singular paradigm that you fit comfortably within. However, what it does give you is an understanding of some of your subjectivities, as well as what this might mean for your research, in relation to other literature and so you can then justify your position and research process. Within Chapter 3, I aim to take what I have learnt about my philosophical position from Burrell, and Morgan, (1979) *Sociological paradigms* and focus them on the topic of knowledge and KM. To do this I am going to use the KM Discourse Framework by Schultze and Stabell, 2004, to outline the different assumptions around knowledge, KM and its definitions, and classifications.

Chapter 3 Knowledge and Knowledge Management

1.0 Introduction:

This chapter is split into three sections. Firstly, I will be discussing both the concept of knowledge and KM in relation to the KM Discourse Framework (Schultze and Stabell, 2004). Then I consider KS and its link to KM, before finally, I will be discussing the application of KM within for-profit and non-profit organisations, alongside factors that can influence its application within organisations. Firstly, I will provide an overview and brief history of knowledge and KM and its development over the past few decades. Then, will discuss 'what is KM?' stemming from the overarching themes within the literature. Before introducing the KM Discourse Framework (Schultze and Stabell, 2004), which provides four contrasting knowledge discourses, that I will then be linking to the wider literature around both knowledge and KM. From this we will see how the knowledge within these discourses' links to KM and what this resembles in terms of KM strategies for organisations. After this, there is a short discussion around the different classifications of knowledge within the literature and how these link to the KM discourses previously described. Thereafter, I explore the different approaches and scales that KS can be undertaken through. This will be linked back to the KM Discourse Framework, discussing the frameworks compatibility to KS. In my final section, I will be providing an overview of KM application within both for-profit and non-profit organisations, specifically the conservation sector, linking this to partnerships within the GN-GS and factors from the literature that can influence KM and KS.

2.0 Knowledge and Knowledge Management:

This section explores how my WSC position influences my view of knowledge and KM. To do this, I will use the KM Discourse Framework (Schultze and Stabell, 2004) to demonstrate, how one's philosophical position and the assumptions can influence their perspectives on knowledge (Moon, Adams, and Cooke, 2019) and subsequently KM (Von Krogh, 1998; Hansen, Nohria and Tierney, 1999; Powell and Ambrosini, 2012). Knowledge is an extremely complex topic within academia (Nonaka, 1994; Alvesson and Kärreman, 2001), with researchers and philosophers having spent centuries developing this branch of study. Some examples of this include exploring knowledge through different philosophical perspectives (Morgan, Smircich, and Morgan, 1980; Guba and Lincoln, 1994; Moon and Blackman, 2014), within different academic disciplines (Cunliffe. 2011) or exploring knowledge in different sectors (Moon *et al.*, 2021). Due to the broad nature of knowledge, I am going to solely focus on the concept and various perspectives of knowledge as taken from the KM and organisational research literature. Whilst it is understood that this is only a small part of the

literature available on knowledge, due to the focus of this research being on organisational KM, it would seem prudent to keep the literature relevant, but will be extending this out to conservation organisations, towards the end of Chapter 3. The following section will introduce KM before I discuss the KM Discourse Framework.

2.1 Knowledge Management Introduction:

As with knowledge, KM is also a complex and multifaceted concept (Scarborough, Swan, and Preston, 1999; Greiner, Bohmann and Krcmar, 2007). Consequently, the origins and history of KM is not easy to present, particularly as there are multiple challenging perspectives, across both the business and academic landscape. This interest around KM developed over the last 40 years, becoming prominent in the 1990's within both businesses and academia (Davenport, De Long and Beers, 1998; Wilson, 2002) and as such, I have decided to present both the academic and organisational perspectives of the origins of KM, to provide greater insight.

2.2 KM within Organisations:

One possible perspective on the origins of KM, is its formation and development within for-profit organisations. This proposes that KM was developed in the private sector, by organisations, for organisations, (Corfield, Paton and Little, 2013). KM was not a new concept, but during the 1990's its uptake by organisations increased rapidly (Carrillo, 1998). At the time, organisations believed that there was a need to extract more out of their resources to stay competitive within the market (McKinlay, 2006). This was due to a globalising economy (Davenport and Prusak, 1998; Mårtensson, 2000; Coakes, Amar, and Granados, 2010), where there was greater competition between organisations (Greiner, Bohmann and Krcmar, 2007), with many western companies being overwhelmed and outcompeted by low-cost, high-quality products from overseas (Chase, 1997). This pressure alongside increasing technological capabilities (Mårtensson, 2000; Coakes, Amar, and Granados, 2010), compelled organisations to look further than their current resources (people, equipment, products, etc.) and expand into areas such as KM. This was with the aim of harnessing an organisation's knowledge, to work towards their organisational goals within a globalised market (Von Krogh, 1998; Alavi and Leidner, 2001; Zheng, Yang and McLean, 2010; Sohal *et al.*, 2018).

There were many other factors that could have influenced the development of KM within organisations. Mårtensson, 2000 and Serban and Luan, 2002, discuss these in detail and include *downsizing*, *high staff turnover*, and *specialisation* (i.e., knowledge being lost when people leave or change teams) (Jasimuddin, Klein and Connell, 2005). Also factors such as *Information overload* and

congestion (i.e., issues with finding the right information and getting it to the right person in a timely fashion) (Asiedu, Abah and Dei, 2022). And finally, *competition*, (i.e., where it is believed that having knowledge is power, and gives the organisations a higher chance to adapt and survive) (Mårtensson, 2000; Serban and Luan, 2002). Overall, within organisations, there seems to have been a strong need for KM or something like, to help organisations survive in the changing global economy.

2.3 KM within Academia:

An alternative perspective to KM, is that which developed within academia. This proposes that KM was developed in the early 1990's (Easterby-Smith, Snell, and Gherardi, 1998; Hansen, Nohria and Tierney, 1999), with many researchers suggesting that KM was the next management fad (Scarborough, Swan, and Preston, 1999; Wilson, 2002). This was thought because they believed that knowledge was intangible and so could not be managed (Sharratt and Usoro, 2003). However, there were others such as Davenport and Völpel, 2001 and Mckinlay, 2002 who believed that KM was not a fad, and organisations could benefit from its implementation. Furthermore, some research suggested that KM matured out of '*Organisational Learning*' (OL) (King, 2009; Easterby-Smith, and Lyles, 2011). However, Scarborough, Swan, and Preston, 1999 suggest, and is something that I agree with, that instead of KM developing from OL, KM is a divergence of OL. So, whilst interest in KM increased, and interest subsequently decreased in OL it was not because KM was replacing it, but more that there was a shift in underlying philosophy within organisational research. The importance of '*Information Technology*' within organisations (Sveiby, 1996b; Luan and Serban, 2002) was up-and-coming (as we will see in the following sections), and consequently there was a decrease in importance around '*People Management*', which is one way to explain OL decrease and KM increase within academia. Overall, KM seems to have developed due to changing philosophical positions, alongside the up-and-coming emphasis around *Information Technology* (Rogers, Licklider and Taylor', 2001; Coakes, Amar, and Granados, 2010; Asiedu, Abah and Dei, 2022). This history is important for my research as most work on KM is linked to competitiveness within for-profit organisations. This contrasts with my research context of non-profit organisations, so it is useful to understand KM origins to explore why it might or might not be suitable for the conservation sector.

Finally, I want to make it clear that I am not suggesting that either of the above perspectives around KM origins are more plausible than the other. In fact, I am suggesting that it is probably both perspectives occurring simultaneously. Carrillo, (1998) suggests that this confusing and complicated origin of KM is due to KM being driven by businesses with academic influence coming in thereafter. This is something that I agree with, as I can see that there has been a gap between the theory and

practical developments around KM. For example, developments in the philosophical assumptions around knowledge and KM, tend to be separate in the literature from practical frameworks that have been developed to help organisations implement KM, as I will demonstrate later. Obviously there will be some overlap, but this alongside the uncertainty regarding language and accord between frameworks (see below), leads me to agree with Carrillo, 1998 in the divergent development of KM. Overall, the development of any topic, particularly KM which is so deeply embedded within both theory and practice, is understandably complex (Wilson and Campbell, 2016).

2.4 Current KM:

In terms of where KM is now within both organisations and academia, you will see from the following sections that, KM within academia was mainly influenced by *Information Technology* and a Functionalist Paradigm, and whilst it is still dominant, there have been a recent push for more Interpretivist and Radical structuralist Paradigms around KM (Allix, 2003; McKinlay, 2006).

Organisations are beginning to understand that it is difficult to separate knowledge and people (Blair, 2002), so by managing people, they are managing the knowledge (Sveiby, 1996b; Davenport and Völpel, 2001; Ng *et al.*, 2012). This has also influenced the KM application within organisations (Hansen, Nohria and Tierney, 1999), with many researchers now believing that KM should be a combination of both technology and people (Davenport and Völpel, 2001; McKinlay, 2006; King, 2009; Powell and Ambrosini, 2012; Venkitachalam and Willmott, 2016; Bolisani, Padova and Scarso, 2020). This is due to the progression in awareness around technology being supportive and enabling KM (Serban and Luan, 2002; Wei, Choy, and Chew, 2011; Asiedu, Abah and Dei, 2022) but knowing that technology alone will not make KM successful (Alavi and Leidner, 2001; Serban and Luan, 2002; Venkitachalam and Willmott, 2015).

That's not to say that there aren't complications with KM. As I will demonstrate below across the Neo-functionalist and Constructivist discourse (Schultze and Stabell, 2004), the two discourses use different languages, and this tends to cause confusion (Sveiby, 1996b). Moreover, this extends out to the application of KM within organisations, which I will discuss in more detail towards the end of this chapter (Hansen, Nohria and Tierney, 1999; Powell and Ambrosini, 2012). Nevertheless, despite these obstacles, KM has become a global concept, being employed in multiple industries, across business, public and non-profit sectors worldwide (Davenport and Völpel, 2001; King, 2009; Lobe, Morgan, and Hoffman, 2020).

3.0 What is Knowledge Management?

Throughout the above sections, I realise that I have not specifically stated or explained what KM is, and that is because there is no easy answer, with much research not providing a definition of the term (Wilson, 2002). As I will soon demonstrate, there are multiple overlaps within the KM literature (Easterby-Smith, Snell, and Gherardi, 1998) which has led to confusion over definitions, concepts and even the appropriate methods to use, when undertaking KM (Hansen, Nohria and Tierney, 1999; Alavi and Leidner, 2001; Wilson, 2002; Jafari, Akhavan and Mortezaei, 2009; Bolisani, Padova and Scarso, 2020). This variation could be influenced by several factors, including the author's perspective on knowledge classifications (Alavi and Leidner, 2001) or ontology as well as whether organisations were focusing on efficiency or innovation (Greiner, Bohmann and Krcmar, 2007) as these things evolve over time.

KM entails an on-going process, being rooted in the day-to-day operations of the organisation (Nonaka, 1991) that can be extended externally to organisational stakeholders and partnerships (King, 2009). In general, KM is an approach employed by organisations to help manage their knowledge with the aim to work towards their organisational goal e.g., competitive advantage (Von Krogh, 1998; Alavi and Leidner, 2001; Zheng, Yang and McLean, 2010; Venkitachalam and Willmott, 2016; Sohal *et al.*, 2018). Some examples of what KM can look like within an organisation include: building knowledge repositories (Luan and Serban, 2002; Asiedu, Abah and Dei, 2022), improving accessibility to knowledge through technology (Davenport and Völpel, 2001; Serban and Luan, 2002; Venkitachalam and Willmott, 2016), social networks (Powell and Ambrosini, 2012) and creating environments conducive to KS through raising awareness and receptivity (Davenport, De Long and Beers, 1998).

Moreover, KM is made up of four processes that are common throughout most descriptions. These processes and their synonyms are **knowledge Creation** (*Discovering, Generating, Acquisition, Capturing, Identifying*); **knowledge Storage and Retrieval** (*Organise, Memory, Access, Selecting, Embed*); **Knowledge Sharing** (*Transfer, Distribute, Disseminate*) and **knowledge Application** (*Use, Utilise, Implement, Internalising, Externalising, project, Represent*) (Mårtensson, 2000; Alavi and Leidner, 2001; Wang and Ahmed, 2003; King, 2009; Ng *et al.*, 2012; Corfield, Paton and Little, 2013). Despite the large number of processes described, there seems to be only slight variation mainly in the terminology rather than in the approach taken within KM (Alavi and Leidner, 2001).

This confusion and obscurity around KM terminology is an issue for both academics and

organisations engaging with KM. Firstly, for academics, many researchers do not have a set definition for knowledge, KM, or any of its processes (Wilson, 2002; Ng *et al.*, 2012). Moreover, they are using certain terms interchangeably (Serban and Luan, 2002), such as '*Information*' and '*knowledge*' (Davenport and Prusak, 1998; Jafari, Akhavan and Mortezaei, 2009) or KS and '*knowledge Transfer*' which when explored closer, have different definitions and assumptions (Paulin and Suneson, 2012). This can be confusing for researchers new to the topic of KM, especially those that are looking for a set definition of KM, as one would expect from the Functionalist perspective. This then extends out to organisations attempting to undertake KM, whereby a well-defined approach to KM, with clear concepts and terms are required if organisations are going to benefit from KM (Greiner, Bohmann and Krcmar, 2007; Paulin and Suneson, 2012).

However, despite the above confusion around language, KM has become a global concept both in academia and organisations (Easterby-Smith, and Lyles, 2011; Powell and Ambrosini, 2012; Venkitachalam and Willmott, 2016). This is possibly due to there being a development around the creation of KM frameworks, many stemming from the above KM processes (Mårtensson, 2000; Liao, 2003). These frameworks were created with a variety of aims, but all with the intent to help us understand the KM processes (Holsapple and Joshi, 1999). Some frameworks were designed broad to describe the whole KM phenomena and include *Wiig's Three KM Pillars* (Wiig, 1993 cited in Wiig, 1995), and, *Leonard-Barton's Core Capabilities and knowledge building* (Leonard, 1995). Then there are frameworks which are more specific, focusing on a distinct part of the KM phenomena and include *Petrash's model of Intellectual Capital* (Petrash, 1996) (combining human capital, organisational capital, and customer capital), *Nonaka's Framework of knowledge Creation* (Nonaka, 1994; Nonaka and Toyama, 2005), whereby you undertake a process of *Socialisation* (shared experiences) when sharing TK with TK, *Internalisation* (action), when turning EK to TK, *Externalisation* (meaningful dialogue), when turning TK to EK and finally, *Combination* when sharing EK and EK through meetings and dialogue. Then there is *Szulanski's model of knowledge Transfer* (Szulanski, 1996), which presents that major barriers to KS are to do with the individual people and their absorptive capacity for the knowledge. Finally, there were frameworks that were more prescriptive in nature, such as Beckman's, *Conducting KM framework* (Beckman, 1997, as cited in (Holsapple and Joshi, 1999).

Whilst it is constructive that there have been many frameworks created and developed around KM and its processes, the lack of accord, either between the language, as discussed earlier, or in the approaches themselves, creates uncertainty of which KM framework to use, how best to implement

KM and where to start (Earl, 2001; McKinlay, 2006). KM lacks a successful framework to guide organisations (Hansen, Nohria and Tierney, 1999; Bolisani, Padova and Scarso, 2020), or even an accepted framework across the literature (Wilson and Campbell, 2016). Linking back to the previous point, even if KM has been implemented successfully, there is difficulty in measuring the outcomes of KM (Sharratt and Usoro, 2003; McKinlay, 2006; Zheng, Yang and McLean, 2010; Wei, Choy, and Chew, 2011) with the measures being potentially arbitrary and managerial. For example, what does successful KM look like? Is it an increase in monetary value, employee satisfaction, the creation of patents or databases etc? There is no right or wrong answer here, but it does raise the question of when do you know that KM has been successful?

Despite this, it could be argued that this variation in frameworks is advantageous both academically and for organisations, as through this variation they might identify a framework that best fits their specific needs (Powell and Ambrosini, 2012; Venkitachalam and Willmott, 2015). For this research, I am using the KM Discourse Framework (Schultze and Stabell, 2004) because, the framework is not prescriptive like others I have mentioned above, and it isn't directly linked to the KM processes, but instead can be used as a lens to the different ways that knowledge and so KM can be viewed, which is useful when exploring KM in organisations and sectors that it is not normally researched in. This is particularly important as KM frameworks cannot be generalised (Connell, Klein, and Powell, 2003) and what works in one organisation, might not work in another (Sohal *et al.*, 2018), or even within a few years' time (Bolisani, Padova and Scarso, 2020) and as such a more flexible framework is required. Furthermore, getting practitioners of KM to reflect on their own position around knowledge, can only benefit themselves, KM, and the greater understanding around theory. As such, I have decided to use this framework as a lens not only on knowledge but also on organisational KM and KS.

Within the following section I am going to discuss knowledge, KM, its definitions, and approaches from each of the four discourses described in the KM discourse framework. This will be done in a similar manner to the *Sociological Paradigms* explored in the previous chapter. Additionally for the Neo-functionalist and Constructivist discourse, I will provide more detail on the two prominent strategies of KM which are the *Personalisation strategy* stemming from a Constructivist discourse and the *Codification strategy* stemming from a Neo-functionalist discourse (Hansen, Nohria, and Tierney, 1999).

4.0 Schultze and Stabell’s KM Discourse Framework:

According to Schultze and Stabell, (2004) the aim of their framework is to ‘highlight different assumptions about knowledge and its management’ (Pg 550) and to ‘highlight different perspectives of knowledge that could and maybe should be applied in knowledge management, research and practise’ (Pg 550). Just like Burrell, and Morgan, (1979) this framework is a 2x2 matrix with a horizontal and vertical axis based on Epistemology and Social Order. However, Schultze and Stabell, (2004), did not fully agree with the *Sociological Paradigms* and took on board some criticisms of Deetz, (1996). Firstly, whilst Burrell, and Morgan, (1979) used *Subjective to Objective* along their Horizontal axis, Schultze and Stabell, 2004 used *Duality and Dualism*. And then instead of *Regulation and Radical change* along the vertical axis, Schultze and Stabell, (2004) have used *Consensus and Dissensus*. And as before, once you have found your position along both the horizontal and vertical axis, you will find yourself within one of four discourses: Constructivist, Neo-functionalist, Critical and Dialogic (see **Figure 2**).

	Duality	Dualism
Dissensus	<p>Dialogic Discourse</p> <p>Metaphor of Knowledge: discipline</p> <p>Role of Knowledge in Organizations: deconstruction of totalizing knowledge claims, creation of multiple knowledges</p> <p>Theories: post-structuralist theories, feminist theories, postmodern theories</p>	<p>Critical Discourse</p> <p>Metaphor of Knowledge: power</p> <p>Role of Knowledge in Organizational Underclass: reformation of social order</p> <p>Theories: labour process</p>
Consensus	<p>Constructivist Discourse</p> <p>Metaphor of Knowledge: mind</p> <p>Role of Knowledge in Organizations: coordinating action, shared context, recovery of integrative values, generation of understanding</p> <p>Theories: structuration theories, theories of practice, sensemaking, actor network theory</p>	<p>Neo-Functionalist Discourse</p> <p>Metaphor of Knowledge: asset</p> <p>Role of Knowledge in Organizations: progressive enlightenment, prediction, reduction of uncertainty, optimal allocation of resources</p> <p>Theories: resource-based view of firm, transaction cost theory, information processing theory, contingency theories</p>

Figure 2: Diagram taken from Schultze and Stabell, 2004 presenting the horizontal axis of *Duality and Dualism* and the vertical axis of *Consensus and Dissensus* with the four discourses within.

Moreover, Schultze and Stabell, 2004 once again departed from Burrell, and Morgan, (1979) *Sociological paradigms* in the use of the word ‘discourses’ over ‘Paradigms’ (Hassard and Cox, 2013). Schultze and Stabell, did this to ‘highlight that each of the discourses is plagued by internal debates and that the edges between the world views are not well demarcated and that debates in one worldview influenced debates in the other’. (Pg 555). To summarise, the term discourses is used to emphasise that whilst they do each have their own assumptions, they are not as mutually exclusive as laid out in Burrell, and Morgan, (1979) and that there is potential overlap. Furthermore, going back to my own critiques of Burrell, and Morgan, (1979) work, accompanied by comment by Deetz, 1996, and Willmott, 1993, I disagreed with the four mutually exclusive paradigms. This discourse terminology, where there is understanding and compatibility between the four discourses of knowledge is welcomed within this research. Additionally, due to the research topic being knowledge, the term discourses, which means ‘written or spoken communication or debate’ or ‘being an authority on a given topic, is a much more suitable terminology to use when discussing topics such as knowledge and KM. As such this research’s position on the term discourses aligns with that of Schultze and Stabell, 2004, whereby it is a presentation of a narrative, which is not necessarily mutually exclusive, unlike a paradigm. In the following section I will be discussing these four discourses in relation to definitions and classifications of knowledge within the literature and after KM. However, before I do that, I am going to briefly explore both the horizontal and vertical axis in more detail.

4.1 *Duality vs Dualism:*

As mentioned above, instead of using *Subjective and Objective* along the horizontal axis, *Duality and Dualism* were used instead. This was because Schultze and Stabell, (2004) agreed with Deetz, (1996) that *Subjective and Objective* was oversimplified and caused binaries to occur but did not support their replacement of *Subjective and Objective* with *Local-Emergent or Elite-A-priori*. *Local-Emergent or Elite-A-Priori* hold contrasting ends of a scale, but address where and how the research concepts arise, by considering aspects such as the language used, theoretical positioning, local vs grand narratives, practical vs theoretical knowledge. Full details can be found on page 195 of Deetz, (1996).

Duality asks questions such as ‘when is knowledge?’, and holds that knowledge, as a flow, is continuously shaping and being shaped by situational practices. As such things can be ‘Both/And’,

which prevents the creation of dichotomies. It assumes that causality is cyclical and emergent, and that knowledge can be infinite within certain parameters and is not completely knowable. Through this, knowledge is a flow that is influenced by the external subjective reality, which as discussed, there can be many different versions of, (Jacobs and Manzi, 2000; Amineh and Asl, 2015). *Dualism*, on the other hand, asks questions such as ‘*what is knowledge?*’ and holds that knowledge, as an object, is frozen in time and place. As such it can be ‘*Either/Or*’ but not both, which creates dichotomies. It assumes causality is unidirectional and determined and that knowledge is finite and so can be fully discovered and known. Knowledge can be discovered, picked up and transferred as deemed fit, which has predictable causality (Fopp, 2008).

There are benefits of both *Duality* and *Dualism* depending on the situation. Firstly, *Either/Or* helps to keep things simple, as you would want for exploring the causality between two elements (i.e., contingency theory and leadership within an organisation), whereas *Both/And* is more encompassing and understanding of the intricacies of the organisational world, when focusing with a more pragmatic lens (Schultze and Stabell, 2004). Additionally, asking questions around ‘What’ and ‘When’, both have their place. Sometimes you need to start with a ‘What’ question to establish and help frame the research (*I personally have started with a How question, but I am still using it to establish a point of reference*), before moving on to a more ‘When’ question, with the understanding that the social world is a continually moving and emergent process. When it comes to causality, with *Dualism* believing it is unidirectional and determined, and *Duality* believing it is cyclical and emergent, this research is more inclined to align with *Duality*, especially in relation to my WSC position, whereby knowledge is emergent and is not fully determined by external factors. Moreover, when it comes to assumptions about the world and knowledge, I do not believe that knowledge is finite, especially within the social sciences. Overall, whilst both *Dualism* and *Duality* are useful for research, through my WSC position, I am more strongly aligned with *Duality*.

4.2 *Consensus vs Dissensus:*

Instead of using ‘*Regulation and Radical Change*’ as Burrell, and Morgan, (1979) did, Schultze and Stabell, 2004 kept along the same lines of ‘*Social Order*’ but agreed with Deetz, 1996 in changing the language to ‘*Consensus and Dissensus*’. However, they did not explain why they made this decision. For *Consensus*, there is an understanding that social relations are about trust and common interest, with order being the natural state of the social world. Additionally, knowledge is believed to be neutral within its role in society. *Dissensus*, on the other hand, believes that social relations are about suspicion and conflicts of interest, with conflict and disorder is the natural state of the social

world. Finally, they believe that knowledge is both politicalised and historicised (Alvesson and Deetz, 2000). Overall, there are strong similarities between the Regulation/ Radical change dimensions, and the Consensus and Dissensus aspects described here.

5.0 Knowledge Management Discourses:

From the above discussions, by holding differing assumptions around knowledge, will lead to one of four discourses. Within the following paragraphs, I am going to describe the assumptions of knowledge for each of the four discourses, alongside definitions from the literature that are suitable for each discourse to aid the understanding around knowledge, KM and KS. This is with the aim to highlight that KM is not straight-forward and that your discourse assumptions influence how you view knowledge, KM and KS and what this means for your approach and emphasis on certain processes. This is particularly important because as we will see below, many KM approaches have been built upon the assumption that all knowledge is the same (Allix, 2003), which we shall discover is not the case. Consequently, it should be highlighted that there is no right way to manage organisational knowledge (Sohal *et al.*, 2018) hence the various discourses and approaches around KM below (Hansen, Nohria and Tierney, 1999; Powell and Ambrosini, 2012). For each of the following discourses, I am exploring KM through these assumptions and present a depiction of what KM could resemble in an organisation from this perspective. Furthermore, I will then present some knowledge classifications taken from the management literature and compare how these classifications relate to the KM discourse framework. I have chosen to explore the knowledge classifications after I have discussed the KM discourse framework, as interpretation of the classifications within the literature, do not neatly fit with any of the discourses, and as such I would like for the reader to have a decent understanding of each of the discourses before I explore classification that expanded across one or more of the discourses.

Finally, it should be noted that there is not an equal amount of literature on knowledge or KM from these four discourses, which I highlight where appropriate. Additionally, I wanted to point out that I am aware that my language within this chapter is leaning toward a more (Neo) Functionalist perspective and treating knowledge as an object that can be picked up and moved. This is partially due to the (Neo) Functionalist discourse being dominant within the literature in addition to it reflecting my previous understanding around the topic. However, where I have noticed, I have tried to highlight other discourses, or how other discourses might be appropriate in viewing knowledge, KM or KS from that perspective.

5.1 Neo-functionalism discourse of knowledge:

A Neo-functionalism discourse of knowledge is one of *Dualism and Consensus* and is most like the Functionalist paradigm from Burrell, and Morgan, (1979) *Sociological Paradigms*. The metaphor for this discourse is 'Asset', as there is a greater focus around knowledge being an organisational resource. Through this discourse, knowledge is tangible (Wong, 2005), an object (Sveiby, 1996b), that organisations want to harness to increase their competitive advantage (Davenport and Prusak, 1998; Inkpen and Dinur, 1998; Argote and Ingram, 2000; Wong, 2005). This could be done in several ways, including, optimum allocation of resources, increased efficiency, innovation, and overall effectiveness (Mårtensson, 2000; Alavi and Leidner, 2001; Sharratt and Usoro, 2003; King, 2009; Zheng, Yang and McLean, 2010). Finally, as one might expect, there is an importance surrounding order and control within organisations and society to ensure that all processes are supporting the organisations in working towards their organisational goals. Through this Neo-functionalism discourse, and from an organisational perspective, knowledge and its management could be extremely useful in helping an organisation survive within a globalised economy (Von Krogh, 1998; Alavi and Leidner, 2001; Zheng, Yang and McLean, 2010; Sohal *et al.*, 2018). However, this is a narrow perspective to take on knowledge and its management, as there is more to an organisation than just knowledge and resources. For example, through this discourse, people can be forgotten (Easterby-Smith, and Lyles, 2011).

5.1.1 Definitions of Neo-functionalism knowledge:

Within the KM literature, there are complementary views that align with the Neo-functionalism discourse described above. For example, there are definitions of knowledge, such as those by (Sveiby, 1996a) who define knowledge as: "*knowledge is a tool by which we either act or gather new knowledge*" (Pg 381). Or "*An intangible economic resource from which future revenues will be derived*" (Kamara, Anumba and Carrillo, 2002, Pg 206). As I will discuss more in the following section, it is unsurprising that this Neo-functionalism discourse is the dominant view of knowledge and KM, when many, including myself, would argue is the primary origin for KM (see previous section); organisations requiring an edge to increase their stake in the market and thus evolving from tangible resource management to KM (Von Krogh, 1998; Alavi and Leidner, 2001; Zheng, Yang and McLean, 2010; Sohal *et al.*, 2018).

5.1.2 Neo-functionalism KM discourse:

As described above, this is the current dominant discourse around KM, stemming from its link with *Information Technology* (King, 2009) and from philosophy more aligned with positivist natural

sciences (Von Krogh, 1998). As such, many if not most of the definitions that I have found for KM, align with this discourse. This links to what is known as an Objectivist ontology within the KM literature (Von Krogh, 1998). The Objectivist ontology holds that knowledge is viewed as a separate entity to individuals (Nonaka and Peltokorpi, 2006) and could be an object (Sveiby, 1996b) a process, or a capability (Alavi and Leidner, 2001). This knowledge is believed to be universal, objective, and explicit (Von Krogh, 1998). From my understanding and interpretation of the Neo-functionalist discourse and the Objectivist ontology, I would advocate they are taking the same approach and have similar if not the same assumptions around knowledge, KM, and KS and as such I am treating them as one for the duration of this research. Some examples of KM definitions from a Neo-functionalist discourse include:

'The process by which an organisation creates, captures, acquires, and uses knowledge to support and improve the performance of the organisations' (Kinney, 1998 Pg. 2).

'Refers to the developing body of methods, tools, techniques, and values through which organisations can acquire, develop, measure, distribute and provide a return on their intellectual assets' (Kamara, Anumba and Carrillo, 2002 Pg. 205).

'knowledge management includes all the activities that utilize knowledge to accomplish the organisational objectives in order to face the environmental challenges and stay competitive in the marketplace' (Greiner, Bohmann and Krcmar, 2007 Pg. 4).

From the above definitions, knowledge is always explicit, and being treated like a tangible object (Sveiby, 1996b) that can be owned, moved, and managed. Another key thing to point out is that KM is always undertaken at the organisational level with the aim to help the organisation (Kinney, 1998; Greiner, Bohmann, and Krcmar, 2007). Whether this is improving the performance, increase value, or meet its productive opportunities (Kinney, 1998; Alavi and Leidner, 2001; Corfield, Paton and Little, 2013). The aim of KM from this perspective is for the benefit of the organisation. Additionally, a couple of the definitions contain processes to ensure KM is undertaken 'correctly' i.e., (Kinney, 1998; Kamara, Anumba, and Carrillo, 2002) linking back to the KM processes and framework section above.

So, what might this KM discourse resembles within an organisation? This could be the creation of databases or knowledge repositories for both internal and external data, information, and knowledge (Luan and Serban, 2002; Asiedu, Abah and Dei, 2022). Or greater management around managing intellectual property (i.e., trademarks and patents) (King, 2009). Or even the use of search engines, and automation tools for capturing and editing knowledge (Davenport and Völpel, 2001). It

will be no surprise to anyone that because of its focus around *Information Technology*, that many of the KM examples through this discourse rely heavily on technology for KM processes (Connell, Klein, and Powell, 2003; Venkitachalam and Willmott, 2015; Navimipour, Jafari and Charband, 2016).

Interestingly, alongside this discourses' prominence within both academia and organisations, Hansen, Nohria and Tierney, 1999 created the Codification strategy, as an aid for organisations who were undertaking KM using these assumptions (Von Krogh, 1998; Bryman, 2016). This strategy's aim is the easy collection, storage, and quick dissemination of knowledge internally and externally (Greiner, Bohmann, and Krcmar, 2007) so that they can reuse the knowledge (Venkitachalam and Willmott, 2016; Bolisani, Padova and Scarso, 2020) thus saving future time and money. This strategy is strongly supported by technology (Bolisani, Padova and Scarso, 2020; Asiedu, Abah and Dei, 2022) and has been described by (Sveiby, 1996b Pg. 1) as the "*Management of Information*". Only EK is being stored (Hurley and Green, 2005; Asiedu, Abah and Dei, 2022), enabling organisations not to be reliant on individuals. However, because of this, there is a greater chance of the knowledge being leaked externally due to the ease of articulation (Connell, Klein, and Powell, 2003; Schultze and Stabell, 2004; Jasimuddin, Klein and Connell, 2005; Powell and Ambrosini, 2012).

Despite being the dominant discourse within academia and organisations, it does have its limitations. Firstly, there is a complete lack of acknowledgement around the human dimension of knowledge and KM (Easterby-Smith, and Lyles, 2011). Not just in terms of how knowledge is created and the subsequent assumptions, but also regarding humans working within an organisation and the power dynamics that can occur, and this influence on KM and KS. Moreover, despite this heavy reliance on technology, it is now well established, and has been for two decades, that technology on its own, will never be enough for the integration of KM within an organisation (Pierce, 2002; Allix, 2003; Coakes, Amar, and Granados, 2010) and is just a tool for KM (Davenport and Völpel, 2001). This is interesting as it demonstrates that the assumptions that organisations have around KM influences how they then go on to undertake KM. But also, that there is not one right way to undertake KM within an organisation, and one size does not fit all, either across organisations (Greiner, Bohmann and Krcmar, 2007; Powell and Ambrosini, 2012; Venkitachalam and Willmott, 2015), their partners or in time (Scheepers, Venkitachalam and Gibbs, 2004; Bolisani, Padova and Scarso, 2020). This flexibility will be extremely relevant to this research as I explore KM within organisations worldwide.

5.2 Constructivist discourse of knowledge:

A Constructivist discourse of knowledge is one of *Duality and Consensus* and is most like the Interpretivist paradigm from Burrell, and Morgan, (1979) *Sociological Paradigms*. The metaphor for this discourse is *'Mind'*, as there is a greater focus around people, who are crucial to knowledge (Sveiby, 1996b; Von Krogh, 1998; Blair, 2002; McKinlay, 2006; King, 2009). Building on this, is the belief that knowledge is continuously being shaped by individuals and society (Burr and Dick, 2017), and as such knowledge is continually emerging and so knowledge is not finite (Schultze and Stabell, 2004). In terms of how these discourses influence organisations, through a Constructivist discourse, organisations aim to manage knowledge by creating a shared context for employees, where their understanding, values, and experiences are integrated (McKinlay, 2006). Through this Constructivist discourse, Schultze and Stabell, 2004 suggest that *'there can be no separation either between individual and social knowledge'* (Pg. 558), which is something that I don't agree with. Fundamentally, you cannot separate knowledge and the knower, as you cannot force them to forget. However, knowledge can be taken (freely or forcefully) from an individual and shared to another, with it suggested that through this process the knowledge could then change. As Sveiby, 2001 puts it *'knowledge grows when it is used and depreciates when it is not used'* (Pg 346). So, whilst you cannot separate knowledge from a Knower, it is possible to duplicate and share, which as we will see within the next section, is a crucial part of KM and KS.

5.2.1 Definitions of Constructivist knowledge:

Within the KM literature, there are complementary views that align with the Constructivist discourse described above. For example, there are definitions of knowledge, such as those by Orange, Burke, and Boam, (2000) (Pg. 3) who define knowledge as: *"knowledge is the product of that process [learning] and is personal to that individual"*. Or Wilson, (2002) (Pg. 3), who defines knowledge as involving *"the mental processes of comprehension, understanding and learning that go on in the mind and only in the mind, however much they involve interaction with the world outside the mind and interaction with others"*. As I will discuss, there has been a substantial movement within the last two decades whereby the underlying epistemological assumptions around knowledge have moved away from the objective and technologically focused discourse to one of a subjective and personal discourse (Allix, 2003; McKinlay, 2006).

In addition to the definitions above, there were other definitions that I wanted to put under the Constructivist discourse, but ultimately decided against. These include:

"knowledge is a fluid mix of framed experiences, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of the knowers. In

organisations it often becomes embedded not only in documents or repositories but also in organisational routines, processes, practises, and norms.” (Davenport and Prusak, 1998, Pg. 4).

And Sveiby, 1996b explains that there are two approaches to KM, firstly is the “*Management of the Information*” and secondly there is the “*Management of the People*” (Pg. 1).

As these all have an emphasis around people and knowledge, I originally wanted to include them under the Constructivist discourse. However, after further analysis, I now consider whether they would fit under this discourse depending on your assumptions. Some could argue that these definitions should fit on the vertical axis between the Constructivist and Neo-Functionalist discourses. As whilst they are all involving the human element in knowledge, they are also viewing knowledge as an ‘Asset’ – a resource, something that can help the organisation become more efficient, rather than more neutral definitions emphasising people. However, with the Constructivist discourse being *both/and* in its duality, it could be argued that the Constructivist discourse can accommodate this dual nature. The definition by Davenport and Prusak, (1998) started off aligning with the Constructivist discourse, before the final sentence pulls it towards the Neo-Functionalist discourse in how it can be useful to an organisation. It is interesting that there can be such diverse views and definitions of knowledge, but when it then links to KM, these seem to narrow to predominantly a Neo-functional or a Constructivist discourse, that aligns extremely close to Neo-functional, in its usefulness to an organisation.

5.2.2 Constructivist KM discourse:

This discourse could be classed as being the second most prominent discourse around KM based upon the recent movement, for KM research from an alternative perspective, one that understands the socio-organisational and cultural issues within an organisation (Allix, 2003; McKinlay, 2006; Venkitachalam and Willmott, 2015). There is a growing awareness within both organisations and academia that KM is a more social process (Wilson, 2002; King, 2009; Coakes, Amar, and Granados, 2010) and as such there has been a move away from technologies and towards people and the social construction of knowledge (McKinlay, 2006). As with the Neo-functional discourse, there is a comparable ontology within the KM literature, called the Constructivist ontology. The Constructivist ontology holds that knowledge is created and experienced within and among individuals (Von Krogh, 1998) and it is a social construct that can be both individual and group orientated (Alavi and Leidner, 2001). The knowledge created is subjective and contextual to the individual’s experiences (Nonaka and Peltokorpi, 2006) but involves both TK and EK (Von Krogh, 1998). Again, as with the Neo-functional discourse, I would suggest that both the Constructivist discourse and Constructivist

ontology have similar if not the same assumptions around knowledge and KM, and as such I consider them as one for the duration of this research. Some examples of KM definitions from a Constructivist discourse include:

“Management of an ampliative process, in which knowledge is created through learning and used for dealing with unfolding complexity and novelty, and in solving organisational problems”. (Allix, 2003 Pg. 16).

“An entity’s deliberate and organised efforts to expand, cultivate and apply available knowledge in ways that add to the value of the entity in the sense of positive results in accomplishing its objectives or fulfilling its purpose”. (Holsapple and Joshi. 2004, Pg. 596).

Firstly, there are less definitions of KM from a Constructivist discourse than a Neo-functionalist one. But I have chosen these two definitions because they both focus on people, although not directly. Firstly, Allix, 2003, mentioned knowledge being created through learning, which as discussed in the previous chapter can only be undertaken when people are involved. Secondly, Holsapple and Joshi, 2004, discuss an entity's effort, which they go on to say can be at varying levels including the individuals (as well as an organisation, and nations). This demonstrates that KM cannot be undertaken without people. However, as with Constructivist knowledge definitions above, these definitions of KM also discuss their use for the organisation in either *‘solving organisational problems’* or *‘accomplishing its objectives’*. Because academics and organisations tend to agree that KM is for the benefit of organisations, this is not an issue as it was for knowledge, but instead we see an alternative perspective in how knowledge can support the organisation, via people (Schultze and Stabell, 2004).

So, what might this KM discourse resemble within an organisation? This could be face-to-face (or online) meetings and presentations whereby there can be individual and collective learning as well as collaborative decision making (King, 2009). Or it could be building up a network of people (King, 2009; Powell and Ambrosini, 2012), enabling access to a broader range of knowledge. This allows the right knowledge at the right time (Serban and Luan, 2002). Or it could be developing a Community of Practice (COP) (Davenport and Völpel, 2001), which is an informal community of people within an organisation that brings like-minded people together to share their knowledge (Davenport and Völpel, 2001; Mckinlay, 2002; King, 2009).

Interestingly, alongside the Codification strategy, Hansen, Nohria and Tierney, 1999 also created an opposing strategy that had assumptions around KM aligning with the Constructivist discourse and

Constructivist ontology, called the Personalisation strategy. The Personalisation strategy considers knowledge to be an individual experience and is subjective depending on the individuals' background and values (Von Krogh, 1998; Bryman, 2016). The aim of the Personalisation strategy is building a network of individuals (Blair, 2002; Greiner, Bohmann and Krcmar, 2007; King, 2009) to share both TK (Venkitachalam and Willmott, 2016) and EK (Hurley and Green, 2005). This is using the expert economic model (Bolisani, Padova and Scarso, 2020) whereby the organisation focuses on specific customer solutions (Greiner, Bohmann and Krcmar, 2007; Ng *et al.*, 2012) rather than the reuse of knowledge. This could be through organisational training (Szarka, Grant, and Flannery, 2004) or through informal COP (i.e., break room chats or request for help) (Davenport and Völpel, 2001; Sharratt and Usoro, 2003). Due to the nature of the Personalisation strategy and its emphasis on the role of people in KM, it is much less supported by technology (Bolisani, Padova and Scarso, 2020) and has been described by (Sveiby, 1996b) Pg. 1 as the "*Management of People*". This strategy emphasises the importance of organisational collaboration to allow these COP to occur, but it is also applied less formally within organisations (Pierce, 2002; McKinlay, 2006). This is partly due to the organisation then being more reliant on individuals, partly because the Personalisation strategy can be time consuming, expensive, and slow (Hansen, Nohria, and Tierney, 1999) and partly since this strategy has had mixed benefits for the organisations (Jasimuddin, Klein and Connell, 2005; McKinlay, 2006). This is because people take time to learn things, and then subsequently manage and share this knowledge with others. This means that the knowledge, particularly expert knowledge, is difficult to utilise outside of the expert (Blair, 2002). However, people are more complicated and demanding than inanimate knowledge e.g., a database, and so different and much more subtle KM approaches are required (Venkitachalam and Willmott, 2017).

Finally, there are limitations from viewing KM from a discourse that is established on *Consensus*, rather than *Dissensus*. We have discussed that much KM was designed around providing benefits for organisations, which included improved decision-making, employee relations and development, and lower costs and improved return on investment, (Davenport and Prusak, 1998; Zheng, Yang and McLean, 2010). However, all organisations have different interests, priorities etc. So, whilst KM might have some benefits, having this overarching understanding that it is 'beneficial' for organisations can neglect the plurality and variation across organisations (Powell and Ambrosini, 2012; Venkitachalam and Willmott, 2016) something that the Critical and Dialogic discourse consider.

Before I move onto the Critical KM discourse, I would like to raise a few points about the Codification

and Personalisation strategy and its application within organisations. Within Hansen, Nohria and Tierney, 1999 seminal piece where the Codification and Personalisation strategies were introduced, they strongly advised that organisations should pick either of the strategies at an 80:20 split, as anything more towards a singular strategy might be unwise (Venkitachalam and Willmott, 2017) as could the reverse by having two equal strategies. However, since then there have been several studies, summarised by Bolisani, Padova and Scarso, 2020, whereby the strategies chosen by organisations might be better off being more balanced (Ng *et al.*, 2012), or vary across organisational departments (Scheepers, Venkitachalam and Gibbs, 2004). Powell and Ambrosini, 2012 suggest that both strategies can be applied at the same time, with Asiedu, Abah and Dei, 2022 supporting this blended approach, and Kumar and Ganesh, 2011 promoting this to ensure that the organisation gets the most out of its KM. These two KM strategies are well suited and commonly used across both academia and organisations, but the strict usage of them, as first suggested by Hansen, Nohria and Tierney, 1999 is not suitable. Furthermore, not in any of the previous research mentioned above, have these KM strategies been applied or explored within conservation organisations, and as such it will be interesting for this research to explore how well these KM strategies apply to the no-profit, conservation sector.

5.3 Critical discourse of knowledge:

A Critical discourse of knowledge is one of *Dualism and Dissensus* and is most like the Radical Structuralist paradigm from Burrell, and Morgan, (1979) *Sociological Paradigms*. The metaphor for this discourse is 'power', as there is a greater focus on knowledge being used to either suppress or emancipate (Feder, 2014; Heyes, 2014). This is because those viewing knowledge through a Critical discourse believe that society is stratified into fractions, specifically two fractions: 'a powerful group that is evil and guilty of oppression and a powerless group that is pure, innocent, and helpless' (Schultze and Stabell, 2004, pg. 558). Those who view knowledge through a Critical discourse, believe that knowledge is an object (Sveiby, 1996b) or a tool (Mårtensson, 2000) that can be used to wield power, either for control or freedom. As such, knowledge is particularly politicised and not value free. Within this discourse there is intention to raise awareness and understanding around social injustices and to emancipate those under others control. Despite having similarities to both the Constructivist discourse, in its emphasis around people, and a Neo-functionalist discourse in its view of knowledge as an asset, it differs from these discourses when it comes to its approach with organisations. Due to its *Dissensus* property, instead of working towards order and control within organisations, the Critical discourse is 'Anti-organisational' like it was for Burrell, and Morgan, (1979). As such these see any action by an organisation to gather knowledge from its employees as

exploitative and are actively attempting to prevent this profiteering from occurring (Schultze and Stabell, 2004).

In my opinion, this view of knowledge and the stratified society is an oversimplification of good and bad and the influence of power. This dichotomy, which is attached to the *Dualism* property, is a reductionist perspective regarding society, when society is not made up of good or bad people, as bad people can do good things and good people can do bad (Schultze and Stabell, 2004). Additionally, in discussion around this power and conflict, there is the general assumption of negativity, being used to control others within the organisation (Reith. 2010). However, different forms of power can produce different results, and this will be unique to each organisational context (Derkzen, Franklin and Bock. 2008). Although this is possibly more beneficial to the organisation than it is to the employees. Additionally, more relevant to this research is whether this Critical discourse is as appropriate when exploring non-profit organisations, as it is for for-profit organisations? Whilst this is not made explicit, within non-profit organisations, it is harder to justify this line of thinking as exploitative when the work that the organisation is doing is normally some level of charity, environmental or humanitarian work and so whilst they might be managing knowledge by harnessing it from their employees, is it exploitative? That's not to say that this level of thinking around knowledge doesn't happen, or that non-profit organisations cannot exploit their employees but just that this line of thinking is not as common. Additionally, when it comes to non-profit organisations, it is not surprising that a Neo-functionalist discourse is more common, with their focus on efficiency and effectiveness (Greiner, Bohmann and Krcmar, 2007), as it is widely known that there are never enough resources of any description within non-profit organisations, specifically conservation organisations (Kapos *et al.*, 2008; Waldron *et al.*, 2013; Nel *et al.*, 2015).

5.3.1 Definitions of Critical knowledge:

Within the KM literature, it is uncommon to find definitions of knowledge that one would immediately link to this Critical discourse. This seems to be because most definitions of knowledge are focused on the Neo-functionalist and Constructivist discourses, with knowledge being neutral rather than politicised (Schultze and Stabell, 2004). However, an example of Critical knowledge would be the management and spreading of misinformation, which could be used to maintain control within a market or within a partnership. Only really using knowledge can it be seen as politicised and applying the KM Discourse Framework as an example, there is not much discussion around the use of knowledge, with many assuming the use of knowledge should and is in the best

interests of the organisation (Sharratt and Usoro, 2003; King, 2009; Zheng, Yang and McLean, 2010). As such the definitions that I have chosen to represent the Critical discourse are as follows: *“knowledge is the capacity to act (conscious or not)”*. (Sveiby, 2001 Pg. 345). And *“Info combined with experience, context, interpretation, and reflection. It is a higher value form of info that is ready to apply to decision and action”*. (Davenport, De Long and Beers, 1998, Pg. 43). By having this capacity to act, to make decisions and actions, you are giving the individual power (*power as an Entity/ Resource*) (Gordon and Grant, 2004) which is why I have chosen definitions from the literature that discuss having these capacities when using knowledge. However, again we are assuming that this is the managers within an organisation being given this power. But, through the Critical discourse, you would be sceptical of this and wonder whether the knowledge could be used by the lower-level employees and to give them power and some level of emancipation.

5.3.2 Critical KM discourse:

This discourse could be classed as the third most prominent discourse around KM. It is up-and-coming to the KM field, where there is an understanding that not all KM research should be about the benefits to the organisation (Schultze and Stabell, 2004). One could ask, if KM was designed around providing benefits to the organisations, where does that leave people, who as we have just established are critical to KM? If KM is beneficial for the organisation, is it not beneficial for the employees? Can KM be beneficial for people? These are all important questions around KM from the Critical discourse perspective. Some examples of KM definitions from a Critical discourse include:

“Knowledge Management is the planning, organising, motivating and controlling of people, processes, and systems in the organisation to ensure that its knowledge-related assets are improved and effectively employed”. (King, 2009, Pg. 4).

‘The systematic and organised approach of organisations to manipulate and take advantage of both explicit and tacit knowledge which in turn leads to the creation of new knowledge’. (Serban and Luan, 2002, Pg. 9-10).

I have chosen these definitions of KM for this Critical discourse due to the language that these definitions use. Firstly, with King, 2009 the definition is like one that we would expect to find in a Neo-functionalist discourse. Knowledge being an object and it is benefiting the organisation. However, they use the term *‘controlling of people’* which is why I have placed it here under a Critical discourse. Within this discourse, the belief is that knowledge is power (Schultze and Stabell, 2004),

and KM is used to help keep the organisation powerful and the people powerless, with this term '*controlling*' supporting that perspective. The same can be said about the second definition from Serban and Luan, 2002, whereby the term '*manipulate and take advantages*' again illustrates a power dynamic within the organisation that KM could be accentuating.

So, what might this KM discourse resemble within an organisation? This discourse would highlight the exploitative nature of KM within organisations, such as the extensive efforts of changing TK within people to EK (through *Externalisation*) that the organisation can harness (Nonaka, 1994). This discourse would emphasise the power dynamics within the organisations, whether that is between different teams, or between managers and employees, or even between organisational partners, specifically with a focus around KM (Heizmann and Olsson, 2015). It acts as a reminder that not all KM research should be about *Consensus* within an organisation and that changing the status quo is acceptable.

As with the previous discourses, this Critical discourse also has its own limitations. Firstly, maybe not a limitation of the Critical discourse per se, but one that it highlights about KM, is that KM can be used in a negative way, to reinforce old and 'bad' ways of working rather than using it to revolutionise the way things are done (McKinlay, 2002). With the example made in the previous chapter, unless changes are made to people's understanding and actions, climate change will have devastating impacts worldwide (Bellard *et al.*, 2012). Moreover, KM will not work within competitive organisations, who are using KM through this Critical discourse, as employees are unlikely to share what they deem makes them useful to the organisation (Serban and Luan, 2002; Navimipour, Jafari, and Charband, 2016). As such viewing KM from this Critical discourse, can actively hinder KM within organisations (McKinlay, 2006), but provide a platform for employees to find their voice. Finally, the main limitation of KM highlighted through this Critical discourse, is the lack of awareness that organisations have on their people, like the Neo-functionalist discourse (Schultze and Stabell, 2004). From the definitions, we can see that KM focuses solely on how to improve organisational performance through the controlling of organisational resources, including people. It is believed that this perspective stems from the previously dominant '*Management of Information*' approach (Sveiby, 1996b), arising from the Objectivist ontology, which, whilst is profitable for businesses, is lacking a human element, which some would say is crucial for KM (Chase, 1997; Tuomi, 1999; Davenport and Völpel, 2001; Wilson, 2002; King, 2009). Technology can be constructed to contribute to organisational profits, however according to this view, humans and other social processes can also be harnessed in this manner. This view does not take into consideration that humans are

dynamic beings, with individual thoughts, feelings, values, and behaviours that cannot be exploited in this way. It is not unexpected for people to view KM from this perspective given its origins (Mårtensson, 2000; Serban and Luan, 2002), however by considering the social nature of those involved, it can help to balance this view. Fortunately, there are steady attempts to incorporate this into KM, within academia (in works of Sveiby and Nonaka), within organisations (Hansen, Nohria and Tierney, 1999; Bolisani, Padova and Scarso, 2020) and within the conservation sector as reflected in the introduction (**Section 2.2**). However, the manners in which organisations and academics place value on KM, and the criteria that it is judged against are still managerial, with this looking unlikely to change (Davenport, De Long and Beers, 1998; Zheng, Yang and McLean, 2010; Wei, Choy, and Chew, 2011).

5.4 Dialogic discourse of knowledge:

Finally, a Dialogical discourse of knowledge is one of *Duality and Dissensus* and is most like the Radical Humanist paradigm from Burrell, and Morgan, (1979) *Sociological Paradigms*. The metaphor for this discourse is '*Discipline*', as there is a focus on how knowledge within oneself can be used to drive us. Stemming from a Foucauldian perspective, this follows that having knowledge of an individual (i.e., test and interview results, observations), means having power over them in certain situations (Hoffman, 2014). Like the Critical discourse, the Dialogic discourse is interested in social conflict and the role of knowledge, but it lacks the political agenda. Instead, the Dialogic discourse focuses on disciplinary practices that shape knowledge, viewing knowledge as a '*system of correction and control*' (Schultze and Stabell, 2004, Pg. 560). It has the intent to provide space for different knowledge and marginalised voices to come through and help to deconstruct self-evident concepts and power relations. This has the same aim of the Critical discourse, but instead of an external focus of the organisation, this discourse has an internal focus upon the individual. By identifying the shape of control and discipline around oneself, through being reflexive, it can help to identify and resist the existing power relations and discursive practices.

5.4.1 Definitions of Dialogic knowledge:

Within the literature it is extremely difficult to find definitions of knowledge that link to the Dialogic discourse. As above, I can think of examples of Dialogical knowledge discourse but no definitions of knowledge in the literature. This includes manipulation of data or even social media to influence the way individuals respond to the organisation and their boost their reputation. However, this highlights something interesting about the way that academics view knowledge. There is an overall lack of viewing KM through a *Dissensus* perspective, as seen by the Critical and Dialogic discourses,

with there being a dominant perspective of KM being created for and by organisations, working towards their organisational goals. Overall, we can see that within the KM literature, there is much larger support for KM from a *Consensus* perspective, balancing the Neo-functionalist and Constructivist discourses.

5.4.2 Dialogic KM:

This discourse, and my interpretation of it, the focus around KM is the subtle approaches of control that can restrain its people, linking back to *power as a Strategy* (Gordon and Grant, 2004; Heizmann and Olsson, 2015). Unfortunately, based on my interpretation, I cannot find any definitions of KM from what I would describe as the Dialogic discourse, only examples such as KM organisational culture within the literature.

This could be described as a culture of mutual trust, innovation, openness and sharing, as well as using incentives and support to ensure a positive association between KS and rewards (Davenport, De Long and Beers, 1998; Blair, 2002; Sharratt and Usoro, 2003). Individuals coming into the organisation, regardless of what their experiences were elsewhere, will be subtly influenced by this culture into sharing their knowledge, because it is 'what is done'. And if you don't realise how the organisation's culture is influencing you, then you cannot make any changes towards it, i.e. "*before something can be controlled it must first be known*" (Schultze and Stabell, 2004), Pg. 560). However, it is well documented that influencing an organisations' KM culture is one of the most difficult barriers to overcome when implementing KM (Chase, 1997; Davenport, De Long and Beers, 1998; Holsapple and Joshi, 2000; Mårtensson, 2000; Blair, 2002; Sveiby and Simons, 2002; Hume and Hume, 2008; Venkitachalam and Willmott, 2015).

Overall, when it comes to Schultze and Stabell, 2004 KM discourse, I would say that I am in the middle of Constructivist and Neo-functionalist discourses. This is because my research aims are around how to help the conservation organisation at their KM through raising awareness and insight into the topic. So, whilst I can agree with the Critical discourse and the Dialogic discourse and see where research on KM in these areas would be useful, I am more *Consensus* than *Dissensus* when it comes to this KM research. Even within this debate, having these binaries and dichotomies means that I am more associated with the Neo-functionalist discourse, and it would make sense since that is my background in natural science. However, I don't feel comfortable being just in that box, because as a WSC my assumptions are that there are multiple realities created in the minds of

people and this is the Constructivist discourse. So, based on all the above, I would say that I am on the vertical axis between Constructivist and Neo-functionalist discourse (Schultze and Stabell, 2004).

5.5 Limitations of the KM Discourse Framework:

Now that I have provided an understanding of the KM discourse framework, I want to now highlight some of the key limitations that I will refer to throughout this research. Firstly, this framework is still strongly *Functionalist* in the way it has been written and presented. Whilst the authors use TK (which I describe in more detail later in this chapter) as an example to compare across all four discourses, all the examples are linked to the organisational level, of how it can be beneficial for the organisation if used in a certain manner. Additionally, the discussion of the subsequent discourses, after the *Neo-Functionalist*, gives the sense of being compared back to the Neo-functionalist discourse, in the same manner that Burrell and Morgans, (1979) *Interpretivist, Radical Structuralist* and *Radical Humanist* paradigms feel like they are being compared to the *Functionalist* paradigm.

Secondly, is the limitation that this KM Discourse Framework, does not have practical application within organisations. This is a limitation that Schultze and Stabell, (2004) admit at the end of their paper, but per the quotes above, they wanted to highlight the different assumptions around KM and how these can be used in practice. The framework does not include any details of what KM would practically resemble within an organisation if undertaken from a specific discourse, just the theoretical overview of it. Whilst it is useful to have the metaphor within each discourse of what knowledge resembles, in practice, this is missing from the framework and so it makes it difficult for practitioners to use this framework without some level of modification which my research looks to explore.

Finally, the framework uses the term *discourse* instead of *Paradigm* to provide some level of flexibility and overlap between the assumptions within each discourse, which on the surface looks to overcome the incommensurability issue of Burrell and Morgan, (1979). However, towards the end of the paper Schultze and Stabell, (2004) still suggest that research should not be undertaken by using more than one of the discourses. This is something that I disagree with, and I will be developing throughout this research, as incommensurability between the different theoretical positions especially around knowledge and KM has been repeatedly discussed within the literature, including the conservation literature.

Overall, there are several ways to view KM within an organisation, some more practical and some more theory focused, but all are valid, and many if not all discourses can be seen within an organisation simultaneously. This is an important realisation for this research because, as KM research has only limitedly been undertaken within conservation organisations, it is useful to know that there is flexibility within how organisations conceptualise KM across the four discourses. This will link to my first Research Question, on how KM is conceptualised within each of the organisations, which KM strategy they will use and what this means for their partnerships. I will now move onto the classifications of knowledge within the literature, where I will be discussing two different classifications of knowledge and how they align with the KM Discourse Framework, before moving onto a certain process within KM, Knowledge Sharing, due to its importance within the conservation sector.

6.0 Classifications of Knowledge:

Now that I have provided an overview of the four KM discourses and how they link to the KM literature, I would like to discuss the classifications of knowledge that are prominent within the literature, relevant to the research and explore how they align with the KM discourse framework. As mentioned above, these classifications do not fit within just one of the discourses and I will explain how and why this is the case. Within the following paragraphs, I will be discussing TK and EK, as well as *data*, *nformation* and *knowledge* Classifications.

6.1 Tacit and Explicit knowledge:

The first classification of knowledge that I will discuss is TK and EK. This classification was developed by Polanyi, 1966 with TK, and subsequently built upon over the years. TK is the unstructured, unconscious and context specific knowledge (Alavi and Leidner, 2001) that occupies the human mind (Mårtensson, 2000; King, 2009). It is developed through experiences, actions, and intuition (Connell, Klein, and Powell, 2003; Finn and Waring, 2006; Venkitachalam and Willmott, 2016) and depending on the literature, it is either extremely difficult (Hurley and Green, 2005; King, 2009), or impossible to articulate (Fazey, Fazey and Fazey, 2005; Raymond *et al.*, 2010; Powell and Ambrosini, 2012). Generally, it is presumed that experts have more TK than members of the public (Orange, Burke, and Boam, 2000; Fazey, Fazey and Fazey, 2005), with an example of TK being cross-cultural negotiation skills (Hedlund, 1994), within an organisational partnership.

On the other hand, EK is the structured (Serban and Luan. 2002; Venkitachala, and Willmott. 2016) and conscious knowledge that can be articulated through written or spoken language (Alavi and

Leidner, 2001; King, 2009; Powell and Ambrosini, 2012). Due to its ability to be articulated, EK can be captured and shared through social interactions (Nonaka, 1994) and technology (Mårtensson, 2000). It exists in formats such as, numerical data, documents, databases, or manuals (Orange, Burke, and Boam, 2000; Easterby-Smith, and Lyles, 2011), where it is widely accessible (Raymond *et al.*, 2010.) An example of EK would be knowing how to do calculus (Hedlund, 1994).

TK and EK are generally described as separate entities based on their characteristics, although some would suggest they are on more of a spectrum (Spender, 1996; Inkpen and Dinur, 1998; Jasimuddin, Klein and Connell, 2005). However, whilst TK can be conceptualised by itself, to understand and interpret EK, prior TK is required (Polanyi, 1966; Tuomi, 1999; Alavi and Leidner, 2001). Furthermore, since articulating TK is difficult, there has been considerable research on transforming knowledge either through *Socialisation* (Tacit-Tacit), *Externalisation* (Tacit-Explicit), *Combination* (Explicit-Explicit) and *Internalisation* (Explicit-Tacit) (Nonaka, 1994). However, that is not to say that one class of knowledge is superior, only that they are complementary to one another (Nonaka and Peltokorpi, 2006) and that to attain the highest level of knowledge, all classes of knowledge are required.

6.1.1 Tacit and Explicit knowledge and the KM discourse framework:

From the description above and seeing how it aligns with the KM Discourse Framework, TK with its emphasis around people and situational contexts is more aligned with *Duality* (Constructivist and Dialogic discourses), whilst EK with its emphasis on being tangible and articulable is more aligned with *Dualism* (Neo-functionalist and Critical discourses), with their 'Asset' view of knowledge (Schultze and Stabell, 2004). Regarding TK and the discourses, I would place greater strength around TK's connection to the Constructivist over the Dialogic discourse due to the emphasis around the 'Mind' for both TK and Constructivist discourse (Schultze and Stabell, 2004). Both place assumptions around the importance of the human mind in the creation and storage of knowledge. However, its link to the Dialogic discourse is not difficult to conceive in terms of the more subtle levels of knowledge within Discipline, something that you might not be able to articulate, making it TK. For example, Sexism or Racism, hence why Feminist theories are undertaken using the Dialogic discourse.

Something that should be kept in mind about TK and EK is that it is a binary, and 'either/or', which according to Schultze and Stabell, 2004, means that it should be in *Dualism*, not *Duality* as I have suggested above. This is particularly the case if you view them as separate entities, but still the case if they are on a continuum (Jasimuddin, Klein and Connell, 2005). As such, I would place equal

emphasis of EK on both the Neo-functionalist and the Critical discourse. This is because EK, as described above, is an object, can be articulated and is not influenced on whether it is being used to maintain the status quo or attempting to overturn it (Alavi and Leidner, 2001). I would say that EK can be both neutral and politicised knowledge, depending on how it is used. An issue encountered when it comes to aligning TK and EK or any classifications to the KM Discourse Framework, is that whilst they have their own separate description, i.e., articulable, or non-articulable etc. the latter half of any description then relates to how it can be used or recognised within an organisation. This is something that I have done myself within the preceding paragraphs. I discuss experts' skills for organisational partnership or formats such as databases one might expect to find within an organisation. Maybe it is because my research is focused on organisational KM, but it seems that whichever way you describe or classify knowledge, it always comes back to its organisation benefit and so the Neo-functionalist discourse.

However, to take a different perspective on TK and EK within the KM Discourse Framework, is linked to the Critical discourse. It is said frequently within the literature that knowledge is crucial for an organisation (Kumar and Ganesh, 2011; Venkitachalam and Willmott, 2016). Furthermore, TK is more important than EK when it comes to organisational competitive advantage as it is the knowledge that is held within people that is more valuable, rare, and innovative (Nonaka, 1994; Jasimuddin, Klein and Connell, 2005; McKinlay, 2006; King, 2009). Additionally, it cannot be copied or stolen (Schultze and Stabell, 2004) since it cannot be articulated (Fazey, Fazey and Fazey, 2005; Raymond *et al.*, 2010). As such, some might argue that this makes TK more valuable and so the ones holding this TK, have more power (*power as an Entity*) (Gordon and Grant, 2004). It is one of the reasons suggested why employees don't share their knowledge, as they believe that having this knowledge provides them some protection of job security (Serban and Luan, 2002). So, it could be argued that from a Critical discourse perspective that it's not just knowledge is power for either domination or emancipation, but more TK is power for security or competitive advantage.

6.2 data, Information, and knowledge:

Expanding on the definition of knowledge and its attributes is the relationship between *data*, *information*, and *knowledge* (Davenport and Prusak, 1998), **(Figure 3)**. These three terms are not considered interchangeable (Sveiby, 1996a) despite being done so greatly within the literature (Wilson, 2002). Whilst Polanyi, 1966 would argue that *data*, *information*, and *knowledge* are separate entities; others would argue that they are connected to one another and sit upon a continuum (Kamara, Anumba and Carrillo, 2002). Moreover, certain academics view *data*,

information, and *knowledge* on a hierarchical scale (Kinney, 1998; Mårtensson, 2000; Alavi and Leidner, 2001; Serban and Luan, 2002). Below we expand on the relationship between *data*, *information*, and *knowledge* before presenting a contrasting perspective to this, whereby Tuomi, 1999 states that the relationship between *data*, *information* and *knowledge* should be reversed.

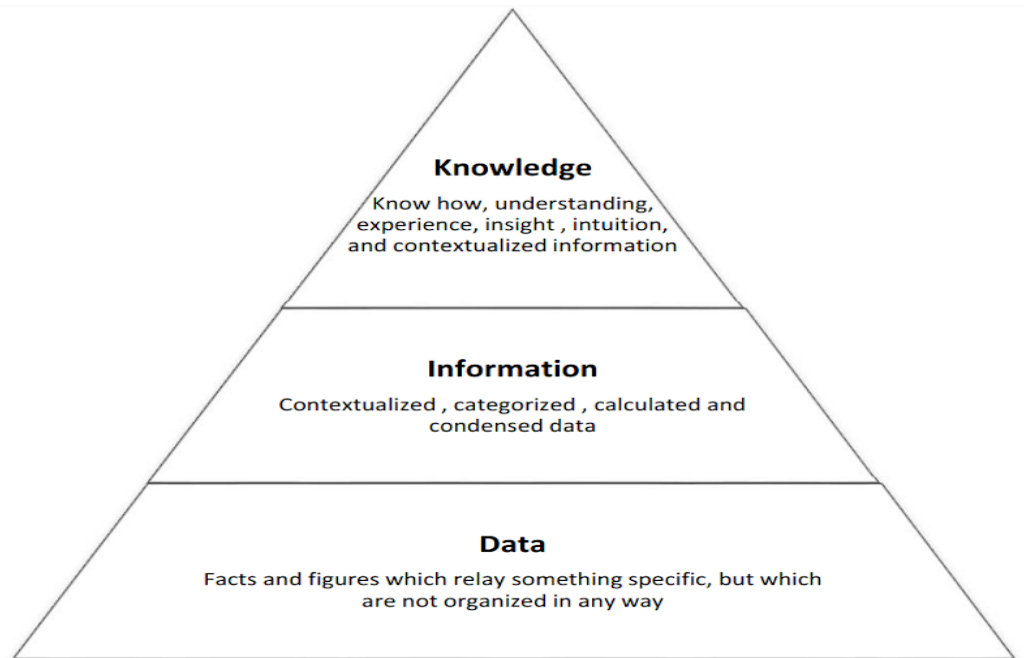


Figure 3: Figure presenting the hierarchical relationship between *data*, *informations* and *knowledge*, taken from (Arshad, Noordin, and Othman, 2016).

Using this hierarchical scale, *data* is said to be the most basic form, inasmuch that it is made up of raw facts and numbers (Orange, Burke, and Boam, 2000; Alavi and Leidner, 2001; Serban and Luan, 2002), that lack relevance or purpose (Davenport and Prusak, 1998). An example of *data* would be the account numbers contained within banks, usually stored within technological repositories (Davenport and Prusak, 1998).

Information is *data* that has meaning, relevance and purpose (Davenport and Prusak, 1998) but is also described as communication (Sveiby, 1996a). There must be a sender and receiver of *information* and whether it comes through hard or soft networks (technology or a memo) (Davenport and Prusak, 1998), *information* tells us something – from the origin of its name, it must be informative (Sharratt and Usoro, 2003). *Knowledge* is the next step up from *information*, which requires a human element (Connell, Klein, and Powell, 2003). Through individual sense making (Paulin and Suneson, 2012), *knowledge* becomes personalised and contained in the mind of the

individual (Alavi and Leidner, 2001), with it then being articulated to others (Alavi and Leidner, 2001) within books and documents. *Knowledge* is broader, deeper, and richer than *information* (Davenport and Prusak, 1998) with Serban and Luan, 2002, Pg. 9 describing it as information “*combined with experience and judgement*”. Polanyi, 1966, who made a specific effort to keep the two terms separated, supports this distinction between *information* and *knowledge*. Taking this one step further, academics such as Davenport and Prusak, 1998, suggest that proceeding from *knowledge* is *knowledge in Action, Experience, Grounded Truths, Complexity, Judgement, Intuition and Values and Beliefs*, however these are beyond the scope of this research. Be that as it may, Tuomi, 1999 challenges this *data, information, knowledge* hierarchy by suggesting that *knowledge* needs to exist before *Information* can be formulated and before *data* can be measured to form *Information*. Instead, he suggests the relationship between *data, Information* and *knowledge* is more of an interconnected loop. Despite the challenge by Tuomi, 1999, this research concurs with the prevailing view of *data, information, and knowledge* (Davenport and Prusak, 1998), seeing them as separate but connected entities residing on a hierarchical scale.

6.2.1 *data, Information and knowledge and the KM discourse framework:*

From the descriptions above and seeing how it aligns with the KM discourse framework, *data* and *Information* could be said to be *Dualism*, with their tangible view of knowledge, whilst *knowledge* with its emphasis around people and their minds could be more *Duality*. However, as with TK and EK, *data, Information* and *knowledge* being an ‘*Either/Or*’, it is leaning more towards *Dualism*.

Regarding *data* and *Information*, I would place greater strength around their connection to a Neo-functional discourse, over a Critical discourse, mostly because within the literature these terms are value free. However, as before, this could change depending on how they are used within the organisation. The *data* or *information* could certainly be used by the organisation for control and domination, in the same way it could be used by the employees for emancipation (Schultze and Stabell, 2004). Building on this, is a connection that I have observed between *data* and *information*, and this being closely linked to EK. From my interpretation of both classifications, there is a strong similarity between the two. This could also be said for *knowledge* and TK, which both agree on the importance of the mind and people. Furthermore, *knowledge*, within the *data, information* and *knowledge* classification, is over the axis on the *Duality* side of the framework, and so within the Constructionist and Dialogic discourses (Schultze and Stabell, 2004). This is due to the engagement required around human perception, experience and understanding of this *knowledge*. I suggest that *knowledge* sits within both discourses equally, but that TK could be argued to be either within the

Constructivist (as described earlier) or the Dialogic discourse. This is due to the subtle and inarticulable nature of TK, which links to the discipline and control within oneself highlighted by the Dialogic discourse. For something to be managed it should first be known, which is difficult when it cannot be articulated. Overall, knowledge can be classified across several frameworks, with similar underlying assumptions, that are reflected in the KM Discourse Framework.

7.0 Knowledge Sharing:

KS was chosen out of the other KM processes (*creation, storage, application*) because it is one of the most important parts of KM (Navimipour, Jafari and Charband, 2016) especially within the conservation sector (Nguyen, Young and Cooke, 2016), as presented within the introduction. There has been much research on this area (Roux *et al.*, 2006; Sunderland *et al.*, 2009; Reed *et al.*, 2014; Nel *et al.*, 2015; Cvitanovic, McDonald and Hobday, 2016), but it is still lagging other sectors (Fazey *et al.*, 2012; Cvitanovic *et al.*, 2015), such as management and the healthcare sector. It is believed that through developing the KS across the conservation sector, it can help develop new solutions to old problems, increase impact through collaboration with researchers (Reed *et al.*, 2014) as well as increasing the likelihood of the knowledge being used in policy and practise (Cvitanovic *et al.*, 2015). As such, this section will be exploring the KS definitions in relation to KT and KE. Additionally, the approaches to KS will be explored using the Neo-functionalist and Constructivist discourses, before ending on the limitations of KS across the management and conservation literature. All the while being related to the research questions.

7.1 Knowledge Sharing definition:

As with KM, there are multiple synonyms used to describe the movement of knowledge either to other individuals, groups, or organisations (Alavi and Leidner, 2001). These include KS and KT. Despite the phrase KT being more common within the management literature (Paulin and Suneson, 2012), and there being confusion over the language and scale of KS within an organisation (Mitton *et al.*, 2007), this research will be using the terminology of KS, due to the multi-directional movement of knowledge that fits best within the research context (Fazey *et al.*, 2014; Reed *et al.*, 2014; Nguyen, Young and Cooke, 2016). KS can be defined as '*the exchange of knowledge between and among individuals and within and among teams, organisational units, and organisations*' (Paulin and Suneson, 2012, Pg. 83). This flexible definition of KS, whereby it is a multi-directional exchange of knowledge, as well as acknowledging the scale of movement (people, teams, and organisations) is beneficial when exploring KS within and between organisations (Paulin and Suneson, 2012). For me, this links back to a Constructivist discourse, whereby people are actively involved with the process of

creating and sharing knowledge (Delamater and Hyde, 1998; Marshall, Kelder and Perry, 2005; Moon and Blackman, 2014; Burr, 2015). However, for knowledge to be shared, there is a level of understanding that it is tangible, an object (Sveiby, 1996b). So, however I might argue that KS is more Constructivist, due to the nature of knowledge that can be shared, leans it more towards the Neo-functionalist discourse, whether humans are involved or not (Schultze and Stabell, 2004). This demonstrates that our understanding around knowledge, influences our conceptualisation of KM, and subsequently KS as well.

The confusion and uncertainty around these terms and others such as KE (popular within the conservation literature) (Mitton *et al.*, 2007; Fazey *et al.*, 2012, 2014; Reed *et al.*, 2014; Cvitanovic *et al.*, 2015 Nguyen, Young and Cooke, 2016) can have negative implications for those attempting to undertake KS within or between organisations. Individuals or organisations might know what knowledge they need to prosper, but they do not know how to develop, retain, and share the knowledge to get there (Huber, 1991; Argote and Ingram, 2000) due to ill definitions. This is particularly genuine as, just like KM, KS is context dependent and should not be generalised across organisations (Argote and Ingram, 2000; Mitton *et al.*, 2007). And despite a decent number of KE research papers within the conservation sector as referenced above, whether the KS research from the management literature will be applicable to the conservation context needs to be known before KM and its processes can or should be undertaken within the conservation sector.

Despite these limitations around language, KS is a common occurrence within organisations. This is because what is classed as successful KS can produce shorter completion times (Hansen, 1999), increased innovation (Navimipour, Jafari and Charband, 2016) and fewer wasted resources reproducing unsuccessful operations (Hansen, 1999). KS is also a fundamental mechanism for learning, both at the individual and organisational level (Argote *et al.*, 2000) and leads to new knowledge and understanding (Szarka, Grant, and Flannery, 2004). Extending outside the organisation, KS is also effective for collaborations and partnerships (Finn and Waring, 2006), where an organisation can learn not just from itself but also from others (Argote *et al.*, 2000). It is interesting that the benefits suggested above for KS, are not only for the organisations but for the individual as well, linking both to the Neo-functionalist, and Constructivist discourse (Schultze and Stabell, 2004). The more relevant knowledge that is shared around an organisation, the more an individual learns, so benefiting them as well as the organisation. This responds well to the Critical discourse, of knowledge is 'power', thus the more knowledge the individual has, the greater their power and the lesser the organisation's power over them (Schultze and Stabell, 2004). Overall,

although KS might not be as useful as it could be due to the barriers mentioned above, it is still worth undertaking as organisations that share knowledge are more likely to survive than those that do not share knowledge (Argote *et al.*, 2000) as well there being a greater need for it within the conservation sector (Nguyen, Young and Cooke, 2016).

7.2 Neo-functional and Constructivist approaches to Knowledge Sharing:

As with KM, there seems to be two approaches to KS based upon assumptions from the Neo-functional and Constructivist discourses (Schultze and Stabell, 2004). Firstly, Neo-functional approaches are strongly related to the technological mechanisms of KS (Connell, Klein, and Powell, 2003). These can include electronic communication such as emails and social media, using the internet or intranet (Kinney, 1998; Wei, Choy, and Chew, 2011), as well as reverse engineering of products and the use of databases as knowledge repositories (Szarka, Grant, and Flannery, 2004; Asiedu, Abah and Dei, 2022). The knowledge shared through technologies, is assumed to be EK rather than TK (Sharratt and Usoro, 2003). However, the same argument that was made above about technology within KM just being a tool (Davenport and Völpe, 2001; Pierce, 2002; Allix, 2003) could also be made here. Using emails or social media to share knowledge is fine, but it needs to be actively undertaken by people. Secondly, Constructivist approaches focus on sharing TK from one individual, team, or organisation to another, with Inkpen and Dinur, 1998 describing this process as ‘*sense making*’. This can be anything from formal training sessions (Argote *et al.*, 2000) and presentations, to more informal face-to-face communication, such as asking for help (Sharratt and Usoro, 2003). Additionally, technology can be used to support this process (i.e., online meetings) (Greiner, Bohmann and Krcmar, 2007). Other approaches include apprenticeships (Levitt, and March 1988), or socialisation with partners, customers, or suppliers (Hansen, Nohria and Tierney, 1999). Moreover, with organisations dividing into separate departments, individuals are said to be even more crucial to the sharing of knowledge during departmental collaboration (Szarka, Grant, and Flannery, 2004). Finally, there are strengths and limitations to each of these mechanisms i.e., face-to-face communication is beneficial to those involved, but it does not widely distribute knowledge, whereas training sessions distribute standardised knowledge, but limits creativity and innovation (Alavi and Leidner, 2001). Despite the multiple approaches to KS, some believe that conversation may be the only means of effective KS (Pierce, 2002), with Powell and Ambrosini, 2012, suggesting that interpersonal communication is necessary for KS and being superior to knowledge shared via documents. Overall, it is generally recognised that the KS mechanism should depend on what knowledge is being transferred (i.e., Ek or TK) (Inkpen and Dinur, 1998).

This is important for my research, because as mentioned above, KS is extremely important within the conservation sector (Nguyen, Young and Cooke, 2016), particularly between partnered organisations, in terms of not wasting resources repeating or replicating work or research (Reed *et al.*, 2014). As such having an understanding on how this knowledge can be shared, either through technology or people, is useful to know as each organisation will have a preference, which might influence the 'successes' of KS. This links back to both research question 2 and 3, in terms of exploring how the different geographically situated organisations share their knowledge, as well as what facilitates or constrains the KS within and between the organisations.

7.3 Summary and limitations of KS:

Overall, KS can be viewed through several of the KM discourses, including the Neo-functionalist, Constructivist and Critical (Schultze and Stabell, 2004). The literature on the language used around KS is convoluted (Sharratt and Usoro, 2003), and confusing to both individuals and organisations alike. However, the approaches that can be used to share knowledge are more straightforward and as with KM, fall under either a Neo-functionalist and technological approach or a more people focused Constructivist discourse.

One thing that should be mentioned here is that it doesn't matter what mechanisms there are to share knowledge or how they are divided using the discourses if people aren't willing to share their knowledge in the first place (Serban and Luan, 2002). If people do not understand why sharing is important both for themselves and the organisation, then they will not be willing to share (Argote *et al.*, 2000). This is alongside there being a personal and organisational costs of sharing knowledge (Hansen, 1999), which could put individuals off. These costs include the knowledge donor potentially losing career opportunities (Sveiby, 2001) as well as KS taking time and energy in converting knowledge (Sveiby, 1996a) that might not be wholly useful or even applicable to due to the differences in context the knowledge is applied. Additionally, even if knowledge is shared, measuring the KS is extremely difficult and complex, as knowledge is not easy to quantify (Sharratt and Usoro, 2003). Additionally, the measures of performance that are calculated such as completion time, final project costs, product quality, degree of innovation, market success etc. (Hansen, 1999) might not be causally linked to KS and so what they are measuring might not even be related to the KS approaches they have institutionalised (Argote and Ingram, 2000).

More specifically to the conservation sector, are issues around the different views when it comes to knowledge. As detailed within the introduction, the current debates around *evidence-based* and *experience-based* knowledge within the sector can cause issues as there is a lack of mutual

understanding between individuals (Cash *et al.*, 2003). Additionally, researchers have been known to promote their own work above others (Reed *et al.*, 2014), or researchers neglecting either the social or natural aspects of the conservation issue (Boreux, Born and Lawes, 2009). This accumulates in there being a delay in decision making as individuals are uncertain of the knowledge available (Reed *et al.*, 2014). Overall, across several sectors, KS can be difficult to achieve. Despite these issues, KS is still undertaken in many organisations, either on a formal or informal basis across several sectors, including information technology (Roux *et al.*, 2006) manufacturing (Sveiby and Simons, 2002) and more specifically the conservation sector (Evely *et al.*, 2011; Nel *et al.*, 2015). However, it is important to recognise these limitations, how many of them are strongly linked to those of knowledge and KM whilst others are due to a lack of clear comprehension of KS a natural consequence of the mixed language used, with this directly linking back to the research questions 2 and 3 as described above.

8.0 Knowledge Management Application:

The final section of this chapter will be firstly exploring the application of KM and KS across the for-profit, non-profit and conservation sectors. This is because KM was developed within the for-profit sector (Carrillo, 1998), so it is pertinent to see how KM and KS have been applied to these organisations. Moreover, as my research is exploring conservation organisations, rather than businesses, I thought it use to explore KM and KS within the non-profit sector with it being interesting to compare the two sectors (Corfield, Paton and Little, 2013). I then go on to explore the factors that can influence the KM and KS processes within organisations. This is relevant because, these factors identified within the literature are generally angled towards for-profit organisations, and as such it will be intriguing to explore whether these same factors can be identified within my three conservation organisations. However, due to the dominant nature of the Neo-functionalist discourse, this research will predominantly focus on the technological factors that could be influencing KM and KS across the organisations.

8.1 Knowledge Management application within for-profit organisations.

Thus far, an overview of the premise behind KM has been presented, yet, as KM was designed for functional application, it is also important to focus on this as well. KM is undertaken across multiple sectors and organisations (King, 2009). This includes private sectors such as Marketing and Human Resources (Easterby-Smith and Lyles, 2011), Information Technology (Luan and Serban, 2002) Consulting companies (Hansen, Nohria and Tierney, 1999) and Construction (Orange, Burke, and Boam, 2000; Kamara, Anumba and Carrillo, 2002) and occasionally in Small and Medium Enterprises

(Wong, 2005; Coakes, Amar, and Granados, 2010; Edvardsson and Durst, 2013). Additionally, it has also been used in the public sector such as the National Health Service (Connell, Klein, and Powell, 2003; Finn and Waring, 2006). Within these sectors, it has been used to achieve the organisation's goals through improved performance, more effective decision-making, individual and collective learning, and increased innovation (Mårtensson, 2000; King, 2009). Some examples of this KM success include BP creating international COP, with the technology required to connect them (Davenport, De Long and Beers, 1998; Earl, 2001) and Dow chemical company reducing its patent tax costs by \$40 million (Petrash, 1996).

Despite the progress of KM within the for-profit sector, there are still several criticisms of KM, including its organisational 'fit' (Wei, Choy, and Chew, 2011) implementation and running costs and ineffective monitoring and evaluation (Migdadi, 2009; Reed *et al.*, 2014). Whilst being designed by organisations for organisation, there are an immense number of organisations worldwide, all different from one another. How then is KM going to 'fit' and be advantageous to all organisations? (Hansen, Nohria and Tierney, 1999). Especially as KM frameworks cannot be generalised (Connell, Klein, and Powell, 2003). Just taking organisational size as an example, KM is conceptualised and utilised in different ways depending on the size of the organisation (Migdadi, 2009) with this extending out to the non-profit sector too (Hume and Hume, 2008). For the successful implementation of KM, there are high start-up costs for technological advancement and allowing both management and employees to gain an understanding of the KM process. Additionally, there are high maintenance costs, and the need to invest long-term consideration within the KM framework (Migdadi, 2009). One final point I would like to make is that the research and application of KM in most of the organisations and research mentioned above, is situated within the GN (Martins, 2020). This supports the question of how KM is going to 'fit' organisations in different countries and cultures (Wei, Choy, and Chew, 2011). Overall, despite its global utilisation, there are still several fundamental critiques to KM application.

8.2 Knowledge Management application within Non-Profit Organisations.

As well as the value it provides for-profit organisations, KM could also be advantageous to non-profit organisations or NGO's (Finn and Waring, 2006; Corfield, Paton and Little, 2013). This is due to NGO's being classed as knowledge intensive organisations (Lettieri, Borga and Savoldelli, 2004; Hurley and Green, 2005; Renshaw and Krishnaswamy, 2009). Consequently, there has been a modest uptake of KM by NGO's worldwide, (Smith and Lumba, 2008) and although it is still in its infancy, decisive steps have been taken. The aim of this uptake is like for-profit organisations, but

instead of targeting financial gain and competitive advantage, these organisations are aiming for an optimization of resources (Corfield, Paton and Little, 2013) with Lettieri, Borga and Savoldelli, 2004 demonstrating that KM can support an increase in effectiveness and efficiency within Italian non-profit organisations. However, there is still the question of KM translatability into NGO's (Hume and Hume, 2008). Several barriers to NGO KM uptake have been identified, including funding, technology, resources, and language, (Smith and Lumba, 2008; Renshaw and Krishnaswamy, 2009; Corfield, Paton and Little, 2013). This research is particularly interested in technology as a factor influencing KM and KS across the organisations, which is something I will discuss in more detail within the latter half of this section.

These barriers demonstrate the difficulties NGO's face when attempting to integrate KM into their organisation, with it being suggested that the specific barriers preventing KM uptake, vary depending on the size of the NGO in question (Hume and Hume, 2008). For example, small organisations would benefit from COP due to their small size, whilst might struggle financially if technology was required for KM (i.e., the Codification strategy, Kumar, and Ganesh, 2011). However, large organisations, with their established culture, might find KM difficult to implement if the two strategies (business and KM) do not align (Greiner, Bohmann and Krcmar, 2007) with a greater focus on leadership to bring the two together (Hume and Hume, 2008). Additionally, Smith and Lumba, 2008 noted that using the wrong KM framework could cause organisational ineffectiveness (as it can in for-profit organisations (Greiner, Bohmann and Krcmar, 2007; Bolisani, Padova and Scarso, 2020), as well as the implementation of for-profit characteristics such as capturing knowledge without the aim to share it (Corfield, Paton and Little, 2013). Overall, KM will need to be tailored to the non-profit sector if it is to be effective for NGOs (Renshaw and Krishnaswamy, 2009).

Despite, the mixed success, and obstacles for KM implementation within NGO's (Corfield, Paton and Little, 2013) drawing from the description of the old and new worlds of business (Malhotra. 1998), the new world of business that contains characteristics such as uncertainty and unpredictability are likened to the issues faced by conservationists (Game *et al.*, 2014) with conservation being a crisis discipline (Stirling and Burgman, 2021). Is it possible KM will be more translatable to the conservation sector than general NGO's?

8.3 Knowledge Management application in Conservation:

As previously mentioned, there has been some research into the application of KM and KE within the conservation sector (Cash *et al.*, 2003; Duchelle *et al.*, 2009; Fazey *et al.*, 2012; Cvitanovic *et al.*,

2015; Norström *et al.*, 2020) including in areas such as Resource governance and management (Boreux, Born and Lawes, 2009), Catchment management and uplands work (Reed *et al.*, 2014) and Marine conservation (Cvitanovic *et al.*, 2015).

Consequently, there has been an abundance of research into several key areas in the last decade. These areas include the factors that influence the effectiveness of KE (Cvitanovic *et al.*, 2015; Nguyen, Young and Cooke, 2016) research exploring the social network of people within KE (Roux *et al.*, 2006; Nguyen, Young and Cooke, 2016) and KE processes (design, represent, engage, impact, reflect and sustain (Reed *et al.*, 2014). There is also research into the barriers and solutions to KE within conservation including: cultural perception (Cvitanovic *et al.*, 2015), Language and communication (Cash *et al.*, 2003; Boreux, Born and Lawes, 2009) Institutional barriers (Cvitanovic, McDonald and Hobday, 2016) and Inaccessibility (Wilson and Campbell, 2016). Solutions to these include knowledge brokers (Mitton *et al.*, 2007), Boundary organisations (Guston, 2001; Cook *et al.*, 2013), Training (Boreux, Born and Lawes, 2009) and improved access to knowledge (Cash *et al.*, 2003). However, conservationists' understanding and research around KE is still in its infancy and lagging other sectors (Fazey *et al.*, 2014; Cvitanovic *et al.*, 2015; Nguyen, Young and Cooke, 2016). And it is this research that this study wants to build upon.

9.0 Factors influencing Knowledge Management and Knowledge Sharing:

Finally, this last section is exploring factors that can influence the KM and KS process within organisations, but due to the nature of this research and the dominant Neo-functionalist discourse, there will be a greater focus around technology. Firstly, there is a large amount of KM literature discussing the 'critical success factors', 'barriers', or the 'influencing factors' around KM, with it being crucial that organisations are aware of the factors that will influence the success of KM and KS (Wong, 2005).

From the literature, there are influential factors at the individual and organisational level. Firstly, at the individual level, KM can be influenced by the type of communication between individuals (Chase, 1997; Davenport, De Long and Beers, 1998; Mårtensson, 2000) possibly resulting from the level of trust and empathy between individuals (Sharratt and Usoro, 2003; Finn and Waring, 2006). It is suggested that more trust and empathy between individuals will improve both the KM and KS (Politis, 2003, as cited by (Hume and Hume, 2008). Additionally, people have preferences over the approach to communication (Davenport, De Long and Beers, 1998), which will influence the KM and KS. Moreover, specifically KS can be influenced by several factors including a *lack of absorptive*

capacity, causal ambiguity, and arduous relationships (Szulanski, 1996) *willingness and ability to share, and strength of relationship ties* (Hansen, 1999) and *duration of contact between the individuals or the organisations* (Connell, Klein, and Powell, 2003). Paulin and Suneson, (2012) have suggested that where there is a barrier, knowledge sharing cannot be undertaken, but I disagree, in that it could hinder not prevent the KS.

Moreover, at the organisational level, the predominant factors that can impede KM include organisational culture (Chase, 1997), lack of support and incentive (Finn and Waring, 2006) and a lack of top management commitment (Chase, 1997; Wei, Choy and Chew, 2011). Coincidentally, these three factors are also the main factors that can influence organisational KS. Sveiby, 2001 and Wilson, 2002, highlight the advantages that can come from having an organisational culture of sharing. Hansen, Nohria and Tierney, 1999 and Wilson, 2002, emphasise the influence that positive rewards and incentives can have on KS and finally Inkpen and Dinur, 1998 and Szarka, Grant, and Flannery, 2004 stress the importance of a supportive top management if KS is to be successful. There are other factors that can influence both the KM and KS within an organisation and include: the organisational physical structure (Sveiby, 1996a; Wei, Choy, and Chew, 2011) and strategy (Zheng, Yang and McLean, 2010). This is alongside elements partly outside of the organisation's control, such as the size of the organisation (Davenport, De Long and Beers, 1998; Davenport and Völpe, 2001), and the amount of time the organisations have available to commit to KM and KS.

9.1 Technology:

Finally, as the focus of this research, Technology can also influence the KM and KS within and between organisations (Sharratt and Usoro, 2003). Within this research, I view technology as both hardware, software, and the internet. To begin with, as stated there has been an increase in technology, which has influenced the dominance of the Neo-functionalist discourse and Codification strategy (Hansen, Nohria and Tierney, 1999; Schultze and Stabell, 2004; Bolisani, Padova and Scarso, 2020) but it has also influenced the value of TK due to its scarcity (Prusak, 2001; Jasimuddin, Klein, and Connell, 2005). Technology and by default the Codification strategy can benefit the rapid, search, access, and retrieval of knowledge (Davenport, De Long and Beers, 1998; Kinney, 1998; Serban and Luan, 2002). Additionally, technology can also be used to connect individuals beyond traditional face-to-face communication (Davenport and Prusak, 1998; Alavi and Leidner, 2001; Sharratt and Usoro, 2003). However, technology, both hardware, software and the internet can be complex and expensive for organisations (Hume and Hume, 2008) with Serban and Luan, 2002 suggesting that the technology needs to be easy to use if it is to be beneficial for KM. This leads us to

an issue around technology that whilst not found within the KM literature, is important to this research in its connection to influencing factors and GN/GS organisational partnerships – the Digital Divide.

9.2 Digital Divide:

Firstly, many organisations, especially within the non-profit sector, have limited resources and finances (Ferraro and Pattanayak, 2006; Kapos *et al.*, 2008) to support a strong technological presence within the organisation, which could have implications for the KM and KS. This is particularly the case with organisations within the GS. Odeh, 2010 suggested that there is inequality in technological developments between the GN and GS, and within the last two decades, increased attention has been paid to this imbalance, resulting in the term *Digital Divide* (DD). The DD has several definitions within the literature, predominantly focusing on those who have access to digital technologies and those that do not (van Dijk, 2006; Knights and Willmott, 2017). However, this is an oversimplified definition, being an *Either/or* Neo-functionalist definition (Schultze and Stabell, 2004). Hargittai, 2007, discusses *Digital Equality*, which explores several layers of inequality in relation to the DD, not just physical access to technological hardware. So, not just about having the access to literal hardware, but also software to undertake the work, as well as telecommunication infrastructure, to ensure reliable bandwidth for stable internet connectivity (Cullen, 2001; Roberts, Pavlakis, and Richards, 2021). Alongside the debates around physical access there are also issues within the DD regarding other types of access including motivational access (do they want to access technology), usage access (having time to use the technology), and the one more relevant to this research is the skills access (do they have the required skills to use the technology) (van Dijk, 2006). So having physical access to the hardware, software in an appropriate quality and finally having the skills to use it to achieve their aims are the key aspects of the DD. It is evident that there is a divide between the GN and GS when it comes to technology, particularly as it is argued that a strong cause of this DD is due to socioeconomic factors (Cullen, 2001; Rogers, Licklider and Taylor', 2001; Chen and Wellman, 2004). But the implications of this on KM are currently unknown, as when technology is discussed in relation to KM, it is normally in relation to for-profit organisations and the Codification strategy (Hansen, Nohria and Tierney, 1999) rather than the application of KM within non-profit organisations in the GS.

Overall, there is vast literature exploring the influencing factors to both KM and KS. However, the challenge of this research is that these factors are context specific and might not be applicable to other sectors or organisations. Most of this research is done on case study organisations with each

organisation having specific size, focus, geographical location or having different national or organisational cultures. Furthermore, there are many variables influencing the KM and KS within an organisation that, it is impossible to identify which individual factor is at play, what strength it has or even whether it is a combination of factors (Davenport, De Long and Beers, 1998; Zheng, Yang and McLean, 2010). Moreover, even if you identify which factor is at play, figuring out and quantifying that level of influence and the impact it has will be extremely difficult (Sharratt and Usoro, 2003). Based on this, the quantification of KM and KS impact is nearly impossible (Argote and Ingram, 2000).

10.0 Conclusion:

In summary KM was created by organisations for organisations (Corfield, Paton and Little, 2013) but has a long and convoluted history within both organisations and academia (Scarborough, Swan, and Preston, 1999; Mårtensson, 2000). However, whichever angle you choose to view KM from, KM is predominantly viewed using a Neo-functionalist discourse (Schultze and Stabell, 2004) although in recent years there has been a move towards a more Constructivist discourse (Allix, 2003; McKinlay, 2006). This can be seen within the strategies that organisations can use to undertake KM – Codification and Personalisation (Hansen, Nohria and Tierney, 1999). Moreover, whilst there is no set definition of KM or its processes (Malhotra, 1998; Mårtensson, 2000; Alavi and Leidner, 2001; Serban and Luan, 2002; Wang and Ahmed, 2003; King, 2009; Corfield, Paton and Little, 2013), definitions of KM can be found across the Neo-functionalist, Constructivist and Critical discourses but not the Dialogic. This is because the Dialogic discourse focused too much on the intangible aspects of KM that can impact people. And whilst this is prominent within the literature, it does not hold well when defining KM.

Alongside KM, I have chosen to focus on KS, a key process of KM within and between organisations. Like KM, there is no set definition of KS (Alavi and Leidner, 2001; Sharratt and Usoro, 2003). Interestingly the KS within the literature also reflects the KM literature in that there are generally believed to be two distinct approaches to undertaking it – technology and personal (Szarka, Grant, and Flannery, 2004). Because of this extensive interest in KM and KS, it has been applied across organisations within several sectors, as described above. This is despite there being several limitations of both KM and KS including implementation problems (Earl, 2001; McKinlay, 2006), there being no uniform approach for KM (Hansen, Nohria and Tierney, 1999; Bolisani, Padova and Scarso, 2020) and there being discord between philosophy and practise (Hansen, Nohria and Tierney, 1999; Wilson, 2002; Paulin and Suneson, 2012). This is alongside there being issues in the

quantification and measuring of both KM (McKinlay, 2006; Zheng, Yang and McLean, 2010; Wei, Choy, and Chew, 2011), and KS (Sharratt and Usoro, 2003).

Finally, there are several factors that can both help and hinder KM and KS within and between organisations, including those at the individual level such as, trust (Finn and Waring, 2006), strengths of relationship ties (Hansen, 1999), and the absorption capacity of individuals (Szulanski, 1996) and the organisational level such as Organisational culture (Chase, 1997), lack of support and incentive (Finn and Waring, 2006), and a lack of top management commitment (Chase, 1997; Wei, Choy and Chew, 2011). Finally, another interesting area for this research are the influences of Technology on KM and KS, including facilitating the rapid storing and sharing of knowledge (Sharratt and Usoro, 2003), but also the expenses that come with technological developments (Hume and Hume, 2008). Overall, this chapter has provided an understanding around how a philosophical position can influence views of knowledge and KM through the KM discourse framework, and the impact that they can have on the application and utilisation of KM within organisations. The following chapter lays out, discusses, and justifies my methodology for this research, linking it back to my WSC position.

Chapter 4 Methodology

1.0 Introduction:

As described in the previous chapters, this research aims to explore KM within and between conservation organisations, classed as Global, GN and GS, with a specific focus on KS and how this impacts their partnership. As such the research questions are as follows:

- 1. How is Knowledge Management conceptualised within and between conservation organisations and what impact does this have on their project partnership?*
- 2. To what extent, and how does the classification of Global, Global North and Global South shape Knowledge Sharing processes within and between conservation organisations?*
- 3. How do technological factors and the associated discourses facilitate and constrain the KS within and between conservation organisations?*

These research questions were chosen because I wanted to explore KM and KS conceptualisation within and between conservation organisations and understand what could influence KM. Firstly, I aim to identify how each organisation understands KM, how they define it, and explore how it might influence their partnerships with one another. Secondly, I was interested in how the geographical location of the organisations might influence their conceptualisation of KM and taking this one step further to explore their KS and how this varies between the Global, GN and GS. Finally, alongside their geographical location, I also wanted to add to the body of literature on what factors can influence the KM and KS within and between the organisations and whether these were the same in conservation organisations, as they were for-profit organisations.

The following chapter will detail how I answered my research questions and provide a description and rationalisation of each stage of my methodology. This will include: (1) **Sampling Strategy** for both the organisations and the individuals. An overview of my, (2) **Organisations** including the Global, GN and GS and the shared project. This section will be useful in exploring how my research came together, why these organisations were chosen, as well as the data collection process. Next is my (3) **Philosophy**, a reminder of my WSC approach, and how it relates to my methodology, before expanding on my abductive approach to theory development. (4) After that is my **Research Design** (Interdisciplinary and Qualitative approach). Following on from this is my (5) **Research Strategy** of FE will be discussed in comparison to Traditional Ethnography, justifying its use and adaptation via virtual means, before detailing the (6) **Research Methods** used to collect the data (Interviews, Participant Observation, Document and Website Analysis, Feedback sessions and Researcher Diary).

Penultimately, my (7) **Research Analysis** including Thematic Analysis and its links to the above research. Finally, I provide more detail on the ethical considerations, and research quality. It is hoped that within this chapter, each stage described above will not only link back to the research itself, but will link to the other methodological sections, demonstrating how they are connected within the research context, thus establishing a strong and cohesive research methodology.

More discussion around the selection of the organisations, details around their partnership and timeline of their life cycle could potentially influence their results – but then more of a justification of the section of this specific partnership. This includes practical matters but also its relevance to pursue the chosen research questions.

2.0 Sampling Strategy:

I firstly wanted to provide background on how my three organisations and the participants were identified and engaged to be a part of my research. This starts off with the identification and recruitment of my three conservation organisations and the shared project, before moving onto the identification and recruitment of the participants across all three organisations. I then provide an overview of each of the organisations and their shared project in as much detail as possible given the confidentiality around the research and finally, I present a timeline of the data collection and analysis process to provide some context for the remainder of this chapter.

2.1 Identification and recruitment of organisations and project:

Originally, the research aimed for partnered GN and GS conservation organisations. The criteria for choosing these organisations were as follows:

1. Organisation needs to be situated in either the GN or GS as defined by the ODA recipients list (OECD.2023).
2. Organisations need to be currently and officially partnered with one another. This is defined by the 3 organisations working together at the time the research took place on a shared project, whereby there were contractual agreements set in place for the roles and responsibilities of each organisation working on the project.
3. Organisations should preferably be focused on conserving *Life on Land*, (SDG - Target 15), with the specific focus (species, habitat etc.) open to discussion (SDGS. 2015).
4. Finally, there are practical criteria to the search including language, security, and climate, as well as it being essential that both conservation organisations benefited from participation in the research.

Firstly, the research needed a GN-GS dynamic. The ODA recipients list was used to identify GS countries as it is a standard used across several countries, as developed by the World Bank and United Nations (OECD.2023). It should be noted that whilst the GS organisation (Organisation 3) was chosen based on the 2018 ODA recipients list, Organisation 3's country is still on the list in 2023 and as such this is still accurate as the research progressed. Secondly, by having the organisations already partnered, KS was guaranteed as required by the research questions. This was alongside the fact that having currently partnered organisations, would ensure that the data collected was up-to-date and reflective of current factors, so ensuring that Research Question 3 on influencing factors was relevant to current contexts. This is particularly important as within the conservation sector, problems are fast paced and constantly changing (Martin *et al.*, 2012; Cooke *et al.*, 2016) and as such getting up-to-date and accurate information is key to solving some of the issues (Cvitanovic *et al.*, 2015). As I will discuss further in this chapter, the length of time the project or partnerships had been established were important to the research as I wanted to ensure that there was practically enough of a project and Partnership for there to be data to collect, however, I did not have anything specific in mind in terms of the length of the project or Partnership's. Thirdly, whilst there are several other SDGs that I could have linked my research to, (and have done so with '*Partnerships for the goal*' SDG 17, please see Chapter 8), as SDG 14 and 15 were the main ones related to protecting the environment, and with the conservation context of my research, I deemed this a suitable choice. Additionally, by choosing *Life on Land* rather than *Life below Water* as the focus, it was thought to generate more potential organisations, as there is a greater focus on land conservation over marine conservation. However, I wanted to keep the specific focus of the organisations open to not limit my research. Finally, the pivotal criterion of language, and security came about as a natural consequence of conversations with my supervisors. As I only speak English, I needed countries and organisations that spoke English as their primary or secondary language, which limited the locations of the organisation. And more importantly, safety for myself was paramount as when research was face-to-face, the University would not consent if I were travelling somewhere dangerous. Overall, the criterion around GN/GS location, language, and safety, shaped the location of the organisations worldwide, whilst the criteria surrounding their relationship and project focus was shaped by the current partnership criteria and the SDG specificity.

By involving Criterion sampling (Gray, 2017) and adopting the organisational criteria above, conservation organisations in the GN and GS were identified through previous and current connections of myself, my supervisors, as well as using NGO Explorer (NGO Explorer. 2019). Once a

list of conservation organisations was compiled, using the above criteria, the potential organisations were contacted through email, detailing the research, and asking whether they would like to be involved. This process, as expected, was complex and time consuming (Plankey-Videla, 2012), overall taking 9 months, partly due to rejection, the global Covid-19 pandemic, as well as taking the time to build up trust and rapport with the organisations.

However, as the contacting of conservation organisations progressed, so did the research project. Whilst contacting a GN organisation, it became apparent that they would require being classed as a 'Global' organisation, rather than a GN organisation if they were to participate in the research. This was because, although the organisation was based in the GN, they work and have regional offices in other GN and GS countries and as such did not feel comfortable being classified as GN and preferred Global instead (See the section below for more details about the specific organisations and chosen project). Due to this organisation matching the above criteria and being connected to other organisations in the GN and GS, whom I could contact through them, this Global organisation was chosen. Alongside the classification change, greater emphasis was placed upon the Global, GN and GS dynamic as this was something the organisation was particularly interested in.

Starting with discussions with the Global organisation, three potential projects were identified, alongside the potential GN and GS partners. Similar criteria were used to narrow down the focus, including the *Life on land* SDG, but more practical criteria were added regarding ensuring that there was enough data for the PhD; it being a well-established project, with well-established partnerships, with enough people working on the projects etc. After undertaking detailed research on these potential projects, through their websites, and having a chat with a project lead from the Global organisation, the project was chosen, along with a GN and GS partnered organisation. These three organisations are partnered together as they are all working collaboratively on the specific project (**See Figure 4**). However, just for reference they are not the only organisations working on this project, they are just the ones I am interested in for my research as the whole partnership network is too broad, as it is a global conservation project.

Before we go any further, I wanted to justify and establish my use of the term '*Gatekeeper*', as it will be used throughout this research. According to the Oxford English Dictionary, the second definition for Gatekeeper is: "*Whether an organisation or person, have the power to allow or deny access to place, people, events, or documents* (Eriksson and Kovalainen, 2015), pg. 53). This is the definition of Gatekeeper for which I will be using for this research. When I mention my Gatekeepers in reference

to my organisations, I mean an individual who is my first point of contact for those organisations, should I have any issue. For my Global organisation, this was a formal relationship, with them being assigned as my Gatekeeper, with the GN organisation, this was much less formal and ultimately became two individuals just through the natural process of the research, and for the GS, it remained as one individual, but much more informal than the Global organisation. They were the individuals who helped me organise the presentation I undertook before data collection, as well as forward on general emails asking individuals to return their consent forms (Kim *et al.*, 2021). These were the individuals who gave me access to their documentation and advised on who might be useful to talk to or what meetings I might be able to attend. Whilst I understand that Gatekeeper can have different perceptions and can be seen as a position of power (Singh and Wassenaar, 2016), which can be messy and unpredictable (Crowhurst and Kennedy-macfoy, 2013), over who they give access to, I do not believe this to overly be the case for my research. I was never explicitly prevented from attending meetings or having interviews with certain people by the Gatekeepers. However, due to the nature of the data being collected online, I do not ultimately know what other meetings and people there were available for the research. As such, it is possible that I was not invited to some meetings by my Gatekeeper, but I cannot know this for sure, with them ultimately having control over the information that I had access to (Kawulich, 2005). What I do know is that all my Gatekeepers were extremely valuable in helping me integrate within the organisations, both in actions and advice, and that this research would not have been as successful without them. This dynamic will be discussed in more detail in Chapter 8.

Due to the nature of the organisations and their partnerships, once access was gained to one organisation, access to further organisations in the network was more straightforward (Gray, 2017). Through the preliminary coordination with my three organisations, I established a Gatekeeper for the Global organisation who sent out a joint email inviting the GN and GS organisations to be a part of my research, with me Cc'd in. From here, we (myself and my three Gatekeepers) then had a joint video call for me to explain my research to them and to give them a chance to ask questions, in addition to me managing their expectations regarding a timeline for the research. As part of this process, there were further discussions around the access I will have at each of the organisations, employees, and documents as well as the research data management. This involved clarification on the participants I would like for my research and the documents I would require. Additionally, in relation to my Global Organisation only, these discussions centred around an agreement over ownership of research, where I took advice from the University Research Services. Once all organisations decided they would like to be a part of my research and all discussions had and

Organisational Consent Forms signed and returned (**See Appendices**), only then was data collection started. As it stands to date, this research includes partnered Global, GN and GS organisations, focusing on a specific conservation project, which will be elaborated on in the next section.

2.2 Identifying and recruiting Human Participants:

Within the conservation organisations, Purposive, a combination of Criterion and Snowball sampling was used to identify my participants (Eriksson and Kovalainen, 2015; Bryman, 2016). This is because within qualitative research, it is essential for the participants to be appropriate in terms of first providing enough information for the research but more importantly, providing relevant information (Higginbottom, Boadu and Pillay, 2013). This is essential not only for the research, but also in terms of undertaking the research through a WSC philosophical position. As mentioned previously, knowledge is socially constructed (Easterby-Smith, and Lyles, 2011; Burr, 2015), and individuals can generate different meanings from the same phenomena (Moon and Blackman, 2014; Burr and Dick, 2017). As such it is important that these participants are all relevant to the specific project so that these perspectives come through in the data (Fossey *et al.*, 2002). Criterion sampling was used to ensure that all the participants engaging in the research were able to contribute, either directly or indirectly (Gray, 2017). Additionally, Snowball sampling was undertaken as it was deemed likely, due to the virtual nature of the research, that help would be needed to identify potential participants, whether this be with other participants or the Gatekeepers (Gray, 2017). Using a combination of these approaches ensured a broad range of participants working on various aspects of KM and KS within and between the organisations and project and balances the assurance of knowledge vs the flexibility and emergence of qualitative research (Fossey *et al.*, 2002). This is important because as we have addressed in the literature review, KM can be a confusing topic, so by getting a broad range of participants, it helped gain a greater understanding of their own comprehension of KM, because this is socially constructed and so unique to the individual (Easterby-Smith, and Lyles, 2011). Finally, having multiple participants will support triangulation within the research as I will discuss towards the end of this chapter.

Prior to data collection, I established which employees were relevant to my research, through discussion with my Gatekeeper and undertaking my own research on their organisational websites. For this research I engaged with: *Any employee who works on the conservation projects shared between the partnered organisations, employees who disseminate knowledge within the organisation or publicly outside of the organisation and finally those that might be able to have an input on the Global, Global North and Global South dynamic.* Having a discussion with the

Gatekeeper around this description was invaluable, as whilst I know the above qualities of the participants I wanted, my Gatekeeper obviously knows the participants, and bringing this knowledge together within the discussion was helpful.

I hope that provides a clear and justified explanation for how and why both the conservation organisations and participants were chosen to be involved in the research, as I aim to be as transparent as possible at all stages, to help increase the *Dependability* of the research (Guba and Lincoln, 1994). Before I go on to describe the three conservation organisations and the shared project involved in my research, I would just like to briefly discuss the impact of the Covid-19 pandemic on my data collection, to provide context for the remainder of the research.

2.3 Impact of Covid-19:

Covid-19 hit the UK after I had started engaging and negotiating with my Global Organisation. This created unprecedented impacts on my research particularly as I was wanting to undertake it using a face-to-face ethnographic approach. Because of Covid-19 there were decreased levels of engagement across all three organisations as well as needing to adapt my methodology as face-to-face contact and data collection was no longer viable.

Firstly, during this period, I needed to update and adapt my research methods and ethics to reflect undertaking an ethnographic approach to data collection online. This included adapting my ethnographic approach, while still benefiting from the richness this approach offers qualitative research. As I will explain below, I was inevitably not my organisations' top priority and as such I wanted to make it as easy as possible to engage with my research, particularly in allowing me to virtually sit in on meetings they were already having. As such I needed to use the same online platforms that they were using, which resulted in several technological challenges in gaining access to the organisations. Consequently, this took time, which can be seen in Figure 5.

Consequently, building and maintaining a rapport with the organisation and participants was more challenging, which affected levels of engagement and placed a great reliance on my Organisational Gatekeeper. During data collection, I quickly established that just because the organisation had agreed to be a part of my research, does not mean that the employees will engage, without further incitement (Singh and Wassenaar, 2016). As such I adapted my participant consent forms into Google Forms, which I asked the participant to add their email address to, so that they could receive a copy. This then allowed me to contact them directly instead of relying on my Gatekeepers to distribute information. Moreover, after realising engagement was low, I undertook a presentation at

each organisation at the beginning of the data collection to introduce myself and my research, and to manage the expectation of the individuals who would engage with my research. Whilst this all worked out, it significantly extended the time that I had planned to be collecting data within each organisation and as I will argue in my final chapter, possibly influenced the type of data that I collected from my participants. Overall, Covid-19 pandemic did have a big impact on my research, but I was persistent and continued with my research as planned.

3.0 Organisations:

This section provides an overview of the three organisations and their shared project (**Figure 4**). I start with their shared project before moving on to detail my Global, GN and GS Organisation, as well as their partnership and roles within.

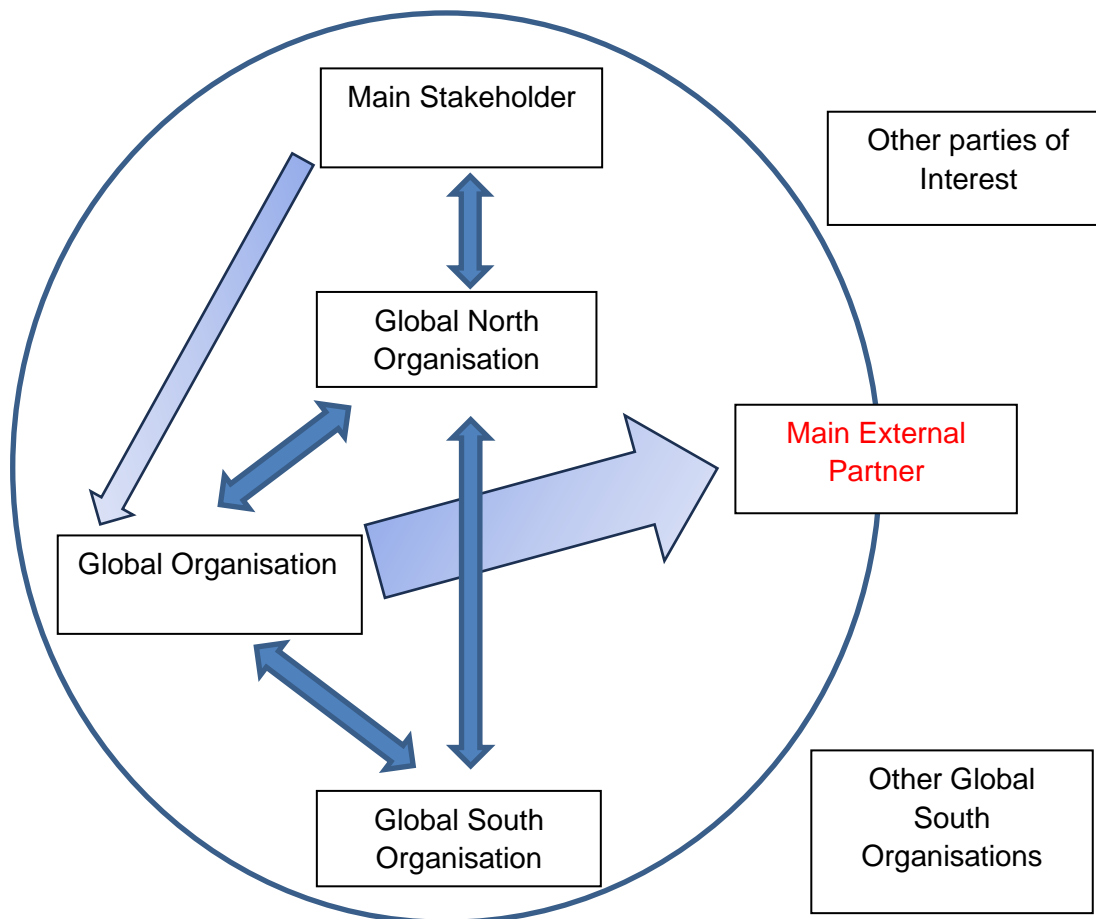


Figure 4: A simplified diagram presenting the partnership between the three organisations, other relevant parties, and their focus on the project. Within the diagram the locations of the organisations in relation to one another is my interpretation of the project's coordination. Firstly, as

the day-to-day coordination of the project is undertaken by the GN and heavily influenced by the Main Stakeholder, they are central with the Main Stakeholder being above the GN because they have more power and influence over the project. From here the Global organisation is off to the side as they were contracted in to help provide their data management expertise. They relate to the Main Stakeholders, the GN and GS organisations as well as the Main External Partner. Then the GS who are one of the implementers of the project and with information flowing in both directions. This is all encapsulated within a circle presenting the scope of this research, but outside of the circle there are more GS countries and as well as Main External Partner who was included within O3 M1 alongside the Global and GS organisations and then finally there are other interested parties involved in this project who are outside the scope of the research.

3.1 Project:

This 10+ year project focuses on a global conservation issue and at the time the research was undertaken the project was coming to the end of its second phase after just over a decade. The aim of the project is to enhance management and utilisation of this global conservation issue, both for the benefit of biodiversity, conservation, and society, in the areas that it targets worldwide. It explores the conservation issue across 70+ countries, with all but 9 of these countries being classed as GS (OECD.2023). Within these three organisations there are 25+ people working on this project with over 60 million being spent so far. The project was designed and funded by the Main Stakeholder; however, the day-to-day running of the project was coordinated by the GN organisation. The Global organisation was contracted in to supply their expertise in the conservation area as well as data management of the project. Finally, my GS organisations were one of the first implementers of the project on the ground having been involved since 2014.

3.2 Project databases:

Within the project there are several databases containing different types of data, information, and knowledge across all three organisations, this includes both qualitative and quantitative information. However, the most relevant is the **Main database** and the **Sub-database**. For the project, the GN organisation created a **Main database** to hold all the quantitative data relevant to the project. This is across all 70+ countries. The **Sub-database** is built the same and contains the exact same data and information, but only that which is relevant within the GS region. As such, raw data, is shared from the GS **Sub-database**, into the GN **Main database**, which is then processed and shared back down to the **Sub-database**. This is facilitated by the Global Organisation, who ensure that the data is processed 'correctly' as well as keeping this data within their own database (*Project Focus database*).

The dark blue arrows are the primary relationships between my three organisations and the Main stakeholder, with them all going in both directions to demonstrate the two-way KS. The lighter blue arrows are the secondary relationships within the research, that either were discussed, or I observed within the research. These include between the Global Organisation and the Main stakeholder, which was discussed, plus between the Main External Partnership and the Global Organisation and Global South organisation, which was observed. Interestingly I did not hear or observe any relationship between the Main stakeholder and the GS Organisation, hence there being not arrow between them.

One thing I would like to mention, going forward and for the rest of the thesis, is that my GN organisations will be referred to as Organisation 1, my Global organisation will be Organisation 2 and my GS organisation will be Organisation 3, as this was the order that data was collected in.

3.3 Organisation 1:

Organisation 1 is a science organisation established by the Main Stakeholder. They are based in the GN, but is only one of their six sites spread throughout the GN. They work with numerous organisations worldwide but are based solely in the GN. In a similar fashion to the Global organisation, the GN organisation is focused on the management of data, information and knowledge that could be useful to policy makers, enabling them to make evidence-based decision making. From my understanding, their role in the project was firstly to coordinate the project with the other partners, which they do with the support of the Main Stakeholder. Alongside this, their role was to design, build and maintain the Main databases for the project, and provide technical support to other partners within the project, such as Organisation 3. Additionally, due to their close relation to the Main Stakeholders, they are also engaged in more administrative work in reporting to the wider partners and stakeholders. All participants that engaged with the research from Organisation 1, (12) were part of the KM unit within the organisation. This means that they were actively engaged within the project, either coordinating, working on the thematises of the project exploring the projects wider impact, or on the technical aspects of the project regarding the databases.

3.4 Organisation 2:

Organisation 2 is a global conservation organisation that has close partnerships with Governments, NGOs, and charities. The Global organisation is based in the GN, but works in and with over 120 countries worldwide, and employs over 150 staff members. It was established 20+ years ago. Their

focus is on environmental knowledge and ensuring that this is available and utilised by those making decisions, so that the best possible outcome is achieved for nature, society, and development. From my understanding, they were consulted into the project, with their role of providing technical support and expertise in terms of aiding the Main database and Sub-database of the project. This involved the processing of data provided by the GS organisation, ensuring completeness and the correct format before sharing with the GN and back to the GS for input into the Main database and Sub-database. Additionally they facilitated training on these databases and how they should be used within the project, with the other partners within the GS such as Organisation 3. Within Organisation 2, there was broader engagement from 22 participants. Some of these participants were directly involved within the project in terms of liaising with Organisation 3, but there were also those that were involved in the project through other GS partnerships that this research did not focus on. Additionally, there was engagement from administration officers, project officers, to project coordinators, and Programme managers. Moreover, there were individuals slightly detached from the project but a part of the wider team, that helped explore the KM within the organisation. Finally, within this organisation an interview was held with the organisations' knowledge manager.

3.5 Organisation 3:

Organisation 3 is a regional organisation established by its Government and is based in the GS, collaborating with over 20 countries, and employing around 100 staff members. The GS organisation places an emphasis on multi-disciplinary knowledge, working in collaboration with partners and taking a keen interest in community level conservation with it focusing on the protection and sustainability of their region. This is with the aim of building up their resilience to future change through the integration of partnerships, funding, knowledge, programmes, and attitudes. From my understanding their role in the project was to be a boundary organisation between those in the GN and other organisations within their region. Within this they actively engage with Organisations 1 and 2 in helping to provide data, information and knowledge for the Main and Sub-databases as well as facilitating training out to their region and providing feedback to the GN, Global Organisation and external partners. Within Organisation 3, 11 participants engaged with the research and 1 from the Main External Partner, and it was a balance between being involved in the project or across the wider organisation. Of the 11 participants, 3 were directly involved within the project, with a further 4 being involved in the wider team and so being acutely aware of the project. In addition to this there was engagement with a member of the organisational KM team, the communications team and two individuals outside of the projects team, but who were interested in the research and could provide details on the KM and KS within the organisation.

From this we can determine that the project and the subsequent partnerships between all three organisations are well established, having been initiated several years ago and still ongoing for the duration of the research and then some. This is important to understand as it will have an influence on the data collected, which will be reflected within the following empirical chapters in answering each of the Research Questions. The longevity and stability of the project and subsequent partnerships will most likely affect how the participants answer the interview questions and the observations within meetings, which for example might then influence the way in which KM is conceptualised thus impacting Research Question 1. This is in comparison to if the project and partnerships were relatively new and thus had not had time to establish and influence one another. Additionally, as described above, each organisation has a distinct role within the project (e.g., coordination, technologically supporting, implementing), which it is possible will have an influence on the exploration of the Research Questions. For example, it is likely that the organisational roles are going to be meaningful in the way that KM is conceptualised as well as possibly linked to their Global, GN or GS position. All of this is important to demonstrate, as it presents the uniqueness of the research and supports a key point in this chapter, that the research is limited in its generalisability.

4.0 Timeline of data Collection and Analysis:

To provide details and transparency to my data collection and analysis, the following section provides a timeline and particulars of the data collection and analysis process. This will include an overview of what occurred during the data collection and provide brief original plans in comparison to what happened within the three organisations.

4.1 Research Timelines:

Below is a table (**Table 2**) and Gantt chart (**Figure 5**) presenting details and the timeline for my data collection and analysis. The original plan was to collect data face-to-face within each of my organisations for 6 weeks, undertaken consecutively. However, this was not the case for a multitude of reasons including Covid-19.

Organisation	Activity	Dates	Duration
Organisation 1	Pilot data collection	9th November 2020 - 18th December 2020.	6 weeks
	Preliminary Feedback Session 1 (PFBS1)	18th December 2020	1 day
	Administrative edits	4th January 2021 - 24th May 2021	20 weeks
	Presentation	25th May 2021	1 day
	data collection	7th June 2021 – 22nd July 2021	6 weeks
	Technological edits	26th July 2021 – 5th November 2021	15 weeks
	data collection	8th November 2021 -30th November	3 weeks
	Preliminary Feedback Session 2 (PFBS2)	15th December 2021	1 day
	Formal Feedback Session	24th January 2022	1 day
Organisation 2	Administrative edits	4th January 2021 – 30th July 2021	29 weeks
	Presentation	16th August 2021	1 day
	data collection	17th August – 9th November	11 weeks with 1 week break
	Preliminary Feedback Session (PFBS)	22nd November 2021	1 day
	Formal Feedback Session	14th January 2022	1 day
Organisation 3	Administrative edits	8th July 2021 – 31st October 2021	15 weeks
	Presentation	1st November 2021	1 day
	data collection	2nd November 2021 - 19th December 2021	7 weeks
	Preliminary Feedback Session	18th January 2022	1 day
	Formal Feedback Session	27th January 2022	1 day
All	Joint Feedback Session	26th January 2022	1 day

Table 2: Summary of the dates and duration of activities across my three organisations. For example,

my pilot data collection with Organisation 1 took 5 weeks from 9th November 2020 - 18th December 2020. Activities across multiple organisations were occurring simultaneously, especially towards the end of data collection. Finally, '*Administrative edits*' include amending my ethics, consent form and working on the contract. '*Technological edits*' include gaining access to the suitable online platform for each organisation.

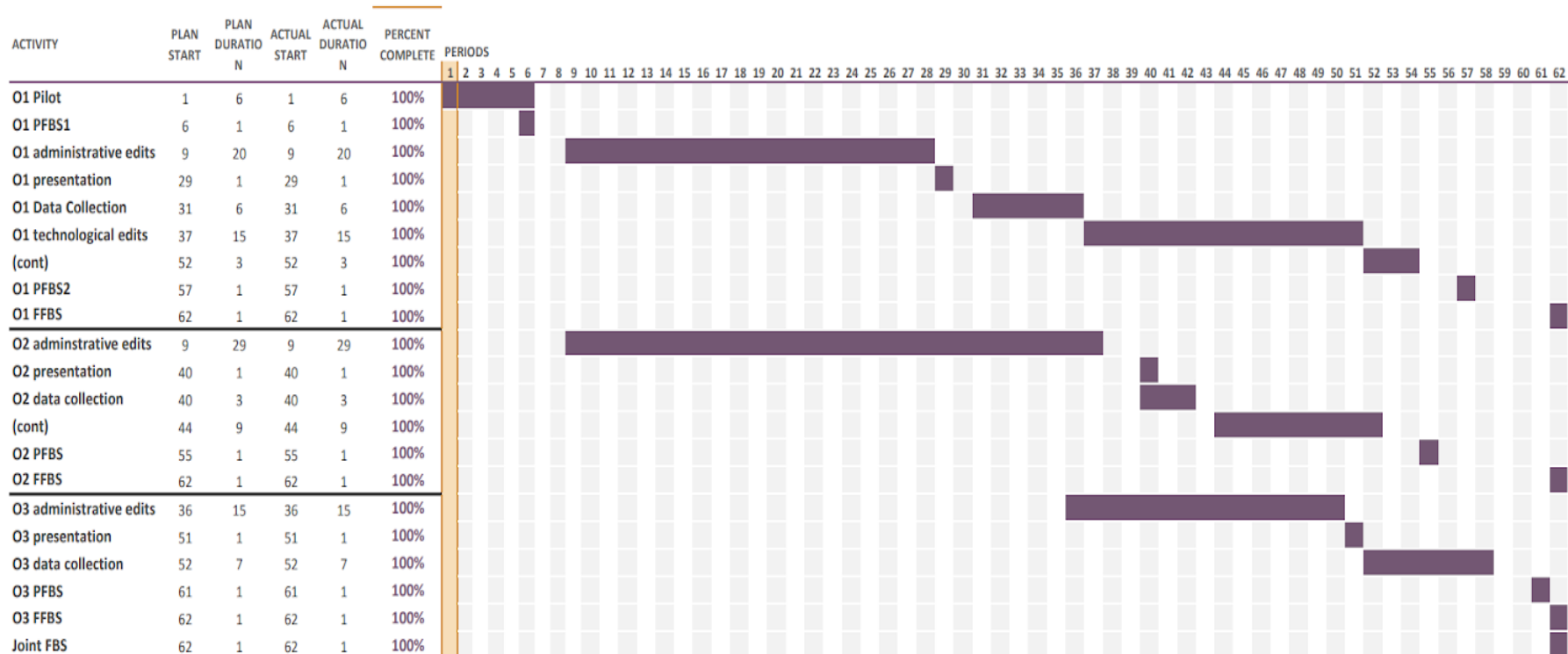


Figure 5: Presenting the timeline of my research from my pilot study with Organisation 1 starting 9th November 2020 until my feedback sessions at the end of January 2022.

4.2 Organisation 1:

data collection was from the 9th of November 2020 - 18th December 2020. During these 6 weeks I got an interview with my Gatekeeper and was provided five documents to analyse. These documents were all focused on the shared project and were written across several years so that I was able to see how the project had developed. On the last day, I provided very preliminary feedback to my Gatekeeper. During this time, despite my Gatekeeper repeatedly contacting other participants, getting them to engage proved difficult. As such changes were made to my data collection approach, including updating my ethics, designing, and presenting a presentation, and updating my consent forms, into Google Forms, as was suggested by my Organisation 1 Gatekeeper.

data collection continued when I presented to Organisation 1 on the 25th of May 2021, but it wasn't until 7th June 2021 that I got access to collect data within the organisation. This data collection went on until 22nd July 2021 (just over 6 weeks). However, at this point enough data had not been collected, with the main issue being technological access. Through the University of Sheffield, I have access to Google Meets, whilst Organisation 1 only has access to Microsoft TEAMS, with intermittent access to Google Meets. And as I was attempting to sit in on their meetings with as limited disruption as possible, it would be easier for me to access through TEAMS. But due to their own IT security, without a TEAMS account and other organisational login, it wasn't possible for me to sit in as a guest. As such a couple of months were taken out of data collection to allow me access to a TEAMS account through the University of Sheffield before data recommenced on the 8th of November 2021 until the 30th of November 2021. Overall, for Organisation 1, including the pilot period in 2020, 16 weeks of data collection occurred.

4.3 Organisation 2:

Prior to data collection with Organisation 2, there was some administrative paperwork that needed sorting. This included a contractual agreement, as well as a Non-Disclosure Agreement. This process was started January 2021, and due to having to ask for advice from the University of Sheffield Research Services and the Sheffield Management School ethics committee, as well as repeated back and forth with the organisations, this did not get finalised until the end of July 2021. As such there was a delayed start to the data collection with Organisation 2. However, I had my first meeting with my appointed Gatekeeper on the 9th of August 2021, where we discussed what I would need from them, access to interviews, meetings, and documentation, as well as a presentation date to start. Through some back and forth, it was decided that I would do my presentation at their weekly meeting on the 16th of August 2021. After this the data collection started the next day on the

17th of August 2021 and lasted until 9th November 2021 (bar 1 week I was away). Due to the trial and error that occurred with Organisation 1, data collection with Organisation 2 went more smoothly. Overall, for Organisation 2 data was collected over 11 weeks.

4.4 Organisation 3:

After several emails back and forth with Organisation 3, where there were some issues around organisational copyright, I finally presented to them on the 1st of November 2021. Unfortunately, despite getting consistent access to weekly meetings and even gaining access to an inter-organisational meeting between Organisations 2 and 3 and their external partner, getting participants involved within interviews proved challenging. No data collection occurred until the 15th of November 2021, after which it came in rapidly, occasionally having two interviews consecutively. An additional problem to overcome was time difference. There was a significant time difference between me and Organisation 3 meaning that much of the data collection was collected outside of working hours and thus limited the overlap in workdays and so access to meetings and interviews. However, by the 19th of December 2021, data collection had finished across 7 weeks.

4.5 Feedback sessions:

Whilst all data collection was finished prior to the end of 2021, the feedback sessions took place predominantly between November 2021 and January 2022. I say predominantly as technically the first feedback session with Organisation 1 took place in December 2020. For Organisation 1, they had their PFBS in December 2021 and the Formal Feedback Session (FFBS) in January 2022. For Organisation 2 they also had their PFBS in November 2021 and their FFBS in January 2022. Moreover, for Organisation 3 they had both their preliminary and formal feedback sessions in January 2022. Finally, the joint feedback session took place in January 2022. The urgency and quick turnaround of the feedback sessions and reports was due to the contractual agreement with Organisation 1 ending in January 2022. And as I wanted all three organisations to attend the joint feedback session and with the joint feedback session ideally being the final feedback session it meant that all organisational feedback needed to be finished by the end of January 2022. Overall, this resulted in 88 pieces of data, which can be seen in **Table 3**.

	Participants	Time*	Interviews	Meetings	Documents	Feedback Sessions	Summary
Org 1	12	16 (10)	9	11	6	3	12 participants 29 pieces of data 18hrs of recordings 304pg of documents
Org 2	22	11	15	10	5	2	22 participants 32 pieces of data 15hrs of recordings 190pg of documents
Org 3	11(12)	7	10	6	8	2 (3)	11 participants 26 pieces of data 10hrs of recordings 107pg of documents

Table 3: Details of data collection between each Organisations, starting with the number of participants and time spent collecting data. This time is in weeks and for Organisation 1 the 10 in brackets is the number of weeks without the pilot student in 2020. Additionally, this time taken is only for the data collection not including the feedback time in November – January. The 12 in brackets for Organisation 3 under participants include the participant on a meeting that was external to Organisation 3 but involved in the project. The 3 in brackets for Organisation 3 under the Feedback Session column are where I have included the Joint feedback session. Overall, this is **49 Participants, 34 (28) weeks, 34 interviews** (21 hours), **27 meetings** (15 hours), **7 feedback sessions** (6 hours), and **19 documents** (601 pages). Plus, this final **Joint feedback session** (1 hour) – overall **88 pieces of data (44 hours)**.

5.0 Philosophical Position:

Previously I presented my philosophical position of WSC, exploring how it influenced my views of knowledge and KM. Within this chapter, I am going to provide a brief reminder of my WSC position, before moving onto discussing how my WSC position influenced my methodology. This includes my approach to theory development, research design, research strategy, research methods and research analysis.

5.1 Weak Social Constructionism:

WSC assume that reality is socially constructed within the minds of groups of individuals (Delamater and Hyde, 1998; Marshall, Kelder and Perry, 2005; Moon and Blackman, 2014; Burr, 2015). This subjective perspective provides the possibility of multiple interpretations of reality, based on the individuals or groups previous experiences, values, and knowledge (Jacobs and Manzi, 2000; Amineh and Asl, 2015; Burr and Dick, 2017). As such, there is no truth or accuracy within a socially constructed reality or within knowledge (Burr, 2015). However, within the above, as part of my WSC position, I also believe that there is a material reality, which provides a base for the social construction of reality to build from. Moreover, reality and knowledge are situated historically, temporally, geographically, and contextually (Burr and Dick, 2017; Taylor, 2018) which means that both reality and knowledge are temporary and will change (Jacobs and Manzi, 2000; Marshall, Kelder and Perry, 2005).

These assumptions influence my research in several manners. Firstly, due to the subjective nature of reality, and the subsequent interpretations of this reality, all the data collected within this research is valid. This is because all participants that were part of my research were relevant in exploring KM and KS within and between my three organisations. And as such all the data collected through them is important and so valid for this research (Burr and Dick, 2017). Furthermore, due to this and wanting to explore the KM within the conservation organisations through my participants interpretation of reality, I will be using an abductive approach. This will ensure that the data collected with my participants is their socially constructed reality, and whilst this will be interpreted by myself and the KM Discourse Framework, through using an abductive approach and thematic analysis (Braun and Clarke, 2006), I will ensure that the participants' voices are not lost. This is further supported by the data being collected, and methods used to collect the data being qualitative (Rynes and Gephart, 2004) which provides space for my participants to present their interpretation of KM and KS within the conservation organisations, gaining in-depth, insightful, and emergent data (Fossey *et al.*, 2002; Burr and Dick, 2017). Finally, language is important to WSC and

through this research (Delamater and Hyde, 1998; Marshall, Kelder and Perry, 2005; Burr, 2015), I am taking the words the participants used and not interpreting them any further than the definitions they gave, thus keeping the participants' voice and interpretations intact.

Secondly, it means that my data is context specific to the organisation, their geography, and the time of data collection. As such, taking time to collect the data over a period of months, provides a greater overview than a shorter snapshot of time within the organisation. However, this needs to be balanced with the fast-paced nature of the conservation sector and their time critical projects (Martin *et al.*, 2012; Cooke *et al.*, 2016). To provide this balance I have used FE (Knoblauch, 2005) which I will provide more detail on shortly. Overall, it is unlikely that the data collected within this research could or should be extrapolated or generalised to other organisations or to the wider conservation sector. This balance between my assumptions and understanding of the conservation sector is also demonstrated within the interdisciplinary nature of the research that I am undertaking as I will discuss in the following section. Overall, WSC has a large influence over many aspects of my methodology.

5.2 Abductive Approach to Theory Development:

Due to using a WSC philosophical position and balancing exploratory research and the KM Discourse Framework, I have chosen to undertake my research using an abductive approach. This involves starting with observations within your research and developing explanations of these observations after the fact (Saunders, Lewis, and Thornhill, 2019) like for an inductive approach, which Alvesson and Skoldberg, 2017, (Pg. 3) describe a '*leap from a collection of single facts to a general truth*'. However, abduction takes this a step further by incorporating in theories to explain the data. (Simpson, 2017). This is an iterative process of data – theory – data- theory, which complements both inductive and deductive approaches (Simpson, 2017). Moreover, due to the relatively small sample size of this research and the research questions, not just wanting to describe what is occurring, but to understand it through asking 'Why' and 'How' through the testing of current conceptual frameworks and strategies within the KM literature, leads to the belief that an abductive approach is the most appropriate for this research (Saunders, Lewis, and Thornhill, 2019). As I will describe in the analysis section, there was an iterative process in terms of data collection and analysis for the organisational feedback reports before repeating the same process for the thesis (Alvesson and Skolberg, 2009). The data was collected in an inductive manner, but through the analysis, using the KM discourse framework as a lens it enabled me to identify themes and patterns, which I have then used to test and evaluate this framework in its applicability for this research. As

you will see in my empirical chapters, I am not forcing my organisations to fit within one discourse or another, but more using it to highlight that my different participants view knowledge in a variety of ways, supporting my WSC position (Burr and Dick, 2017) and this can be reflected at the organisational level.

Overall, for this research an abductive approach means that I have a general area of interest (KM within and between conservation organisations) to explore with an open mind (Bryman, 2016), using the KM Discourse Framework to help achieve this and provide a lens for the analysis (Schultze and Stabell, 2004). This is instead of viewing KM from just one perspective, such a Neo-functionalist, and deeming that organisations who aren't also viewing knowledge from this perspective are doing it 'wrong'. Overall, an abductive approach seems the most suitable approach to my theory development. Having established the philosophical position and approach to theory development, the next section will depict the research design, providing detail and rationale for undertaking this research using a qualitative approach.

6.0 Research Design: Qualitative Research

Firstly, this research will be undertaken using an interdisciplinary and qualitative approach. Conservation organisations are predominantly natural science focused (Bennett *et al.*, 2017). What I mean by this is that they tend to be staffed by individuals who have a natural science background and related beliefs (i.e., Neo-functionalist) and expertise, at least in relation to a social science background. Combine this with the research exploring KM, which is a management concept, it was deemed pertinent to address the interdisciplinary nature of this research. Additionally, due to my own position of WSC and background within natural sciences, exploring the interdisciplinary nature of this research also holds a personal level. Finally, as this research wants to explore not only the 'what' and 'how' around KM within conservation organisations, but also the 'why' and the influential factors of KM and KS, qualitative research was deemed more appropriate than quantitative as it provides that extra level of depth and detail, as I will discuss below. The following sections provide an overview and justification for these decisions.

6.1 Qualitative Research:

To complement the abductive and WSC approach, a qualitative research design was used to collect the data (Morgan, Smircich and Morgan, 1980; Alvesson and Deetz, 2000). This is due to wanting an in-depth, contextual, and emergent approach to the research (Fossey *et al.*, 2002; Gergen and Gergen, 2007). Qualitative research can provide a thick and detailed description of the phenomena

observed using the participants' language (Rynes and Gephart, 2004; Burr and Dick, 2017). This is because qualitative data tends to be collected in the form of interviews and observations of the participants (Alvesson and Skoldberg, 2017). As such, it gives the participants a chance to voice their thoughts, feelings, and experiences in more detail than one would get through a more quantitative approach such as a questionnaire.

Much research within conservation and KM is undertaken using quantitative approaches (Salojärvi, Furu and Sveiby, 2005; Ceballos *et al.*, 2015; Cvitanovic *et al.*, 2015), with the aim to produce structured, generalisable, and reliable data (Bryman, 2016). This helps to explain the 'What' and the 'How'. However, natural science and quantitative methods are not always suitable for social science research (Morgan, Smircich and Morgan, 1980; Guba and Lincoln, 1994; Easterby-Smith *et al.*, 2015), particularly research from a WSC perspective. Moreover, this research wants to gain a better understanding of the 'Why' behind KM within and between conservation organisations through the realities constructed from the personal experiences of the participants (Orb, Eisenhauer and Wynaden, 2001; Cruz and Higginbottom, 2013) using their own language. By taking this approach of collecting data through the participants (and the researchers') subjective perspectives, depth and detail can be gained for the contextual understanding of this research (Fossey *et al.*, 2002; Burr and Dick, 2017), building upon and adding to previous works in this area (Fazey *et al.*, 2012, 2014; Cvitanovic *et al.*, 2014; Reed *et al.*, 2014; Cvitanovic *et al.*, 2015; Cvitanovic, McDonald and Hobday, 2016). Additionally, my epistemological stance of relativism, whereby knowledge is subjective, transient, and constructed by humans (Jacobs and Manzi, 2000; Easterby-Smith, and Lyles, 2011; Taylor, 2018) matches the emergent and flexible nature of qualitative research (Fossey *et al.*, 2002) and as such I suggest that a qualitative approach would be more appropriate.

On the other hand, qualitative research has been criticised for allowing the researcher too much freedom and subjectivity (Madill, Jordan, and Shirley, 2000), meaning it can be difficult to replicate and generalise (Bryman, 2016). However, (Fossey *et al.*, 2002) would argue, and I would partially agree, that judging qualitative research to the same criteria as quantitative positivist research is unjust and instead it should be judged against criteria more consistent with its own philosophical position (Guba and Lincoln, 1994). Social Science research has a divergent purpose than natural science research and this should be reflected in its quality criteria (Moon, Adams, and Cooke, 2019). This is something that I will speak more about at the end of the chapter in the section on Research quality, where I will be discussing different quality criteria such as Dependability, Trustworthiness,

Credibility and Transferability (Guba and Lincoln, 1994; Eriksson and Kovalainen, 2015).

Nonetheless, this research has undertaken steps such as triangulation (Madill, Jordan, and Shirley, 2000; Bowen, 2009; Bryman, 2016) and member checking to address the research quality. The triangulation included method triangulation, data source triangulation, investigator triangulation and theory triangulation (Rashid, Hodgson and Luig, 2019), all of which will be explained towards the end of the chapter. Thus, cross checking the trustworthiness of the data, and demonstrating the research complexity and high internal validity (Fossey *et al.*, 2002). Furthermore, member checking (asking participants for feedback on findings) occurred within each organisation (Burr and Dick, 2017; Moon *et al.*, 2019) both in a preliminary fashion and for the final reports. Finally, despite not aiming for generalisability or replicability (Moon *et al.*, 2019) I have still attempted to maintain transparency across this research to ensure that the readers are able to see the connection between the claims the research makes and what it shows (Rynes and Gephart, 2004) as well as for them to understand the reasons behind the decisions made (Fossey *et al.*, 2002). Overall, the benefits of using a qualitative approach far outweigh the limitations, especially in the context of this research design where its qualities such as being 'diverse, complex and nuanced' are beneficial (Braun and Clarke, 2006).

7.0 Research Strategies: Traditional and Focused Ethnography

As stated earlier, this section will clarify the Research Strategy, which in this case is, FE. I will also be linking this to the virtual and conservation elements of this research. However, before we delve into FE, I thought it pertinent to discuss Traditional Ethnography and why I chose FE instead.

7.1 Traditional Ethnography:

Although ethnography can be a research method, a methodology or the written results, (Bryman, 2016), I will be using Saunders, Lewis, and Thornhill, (2019) description of Ethnography being a Research Strategy. According to Hammersley, (2006), Pg. 4, Traditional ethnography is "*research that emphasises the importance of studying first-hand what people do and say in a particular context*". It is a method of predominantly collecting qualitative data (Hammersley, 2006) with the researcher immersing themselves within the research context to make interpretations about a participant's behaviour, culture, and experiences (Higginbottom, Boadu and Pillay, 2013; Bryman, 2016; Gray, 2017). It is traditionally conducted in the natural setting of the participants to provide a rich and in-depth description of their lives in real time (Millen, 2000; Higginbottom, Boadu and Pillay, 2013; Günbayi and Sorm, 2018). Traditional ethnographic data is commonly collected through

multiple research methods (Higginbottom, Boadu and Pillay, 2013) including participant observation (Easterby-Smith *et al.*, 2015; Eriksson and Kovalainen, 2015) interviews, and document analysis producing comprehensive quotations, descriptions, and excerpts (Gray, 2017).

From the above description of ethnography, I am confident that my WSC assumptions, are suitable for undertaking research using this general research strategy, as demonstrated in previous research (Jacobs and Manzi, 2000; Marshall, Kelder and Perry, 2005; Cunliffe, 2008; Jarzabkowski, Bednarek and Cabantous, 2015). Ethnographies emphasise the participants' subjective interpretations (Eriksson and Kovalainen, 2015) hence collecting first hand data, in their natural setting, align with the subjective WSC position on knowledge being socially constructed. This is further backed by Deetz, (1996), supporting the use of ethnography from an interpretivist discourse, which if compared to the KM discourse framework overlaps strongly with the Constructivist discourse. Moreover, I have already established above the suitability of qualitative research being undertaken from a WSC perspective, and with Ethnographies traditionally undertaking their data collection using qualitative research methods, as such undertaking ethnographic research using a WSC perspective is suitable.

Throughout the literature, there are many strengths of Traditional Ethnography, including *"its ability to make visible the 'real world' sociality of a setting"* (Hughes *et al.*, 1994, pg. 3), the capacity to gain a richer understanding of the setting as well as the relationship between individuals and groups (Millen, 2000). And finally in a more critical approach, it can be used to scrutinise how things are and conceive how things could be different (Gray, 2017). However, whilst Traditional Ethnography does provide rich, personal and context specific data (Higginbottom, Boadu and Pillay, 2013) it is a rather convoluted research strategy, with conflicting and contradictory definitions of what ethnography is (Cruz and Higginbottom, 2013; Gray, 2017). This vagueness can lead to Traditional Ethnography being used inconsistently within the literature (Hammersley, 2006). Although it should be mentioned, as ethnography is traditionally undertaken using a more interpretivist epistemology, these different and contradictory definitions are all valid and demonstrate the evolution of ethnography both through time and from different disciplines and perspectives. Finally, for this research, the key limitation of Traditional Ethnography within this conservation context is that it is time consuming, both in terms of the data collection and analysis (Millen, 2000).

Despite its ambiguity, Hughes *et al.*, (1994) has suggested that Traditional Ethnography does not accommodate easily to the pressures of development, staying consistent to its own assumptions

across the last few decades. However, this could be outdated as an alternative perspective being that Traditional Ethnography has progressed recently due to technology and societal pressures (Hammersley, 2006; Kim *et al.*, 2021) with many extensions of Traditional Ethnography existing today; Virtual Ethnography (Hine, 2000), Organisational Ethnography (Rosen, 1991) Global team-based Ethnography (Jarzabkowski, Bednarek and Cabantous, 2015), and Focused Ethnography (Knoblauch, 2005). However, Hughes *et al.*, (1994) has a point, that the uptake and reputation of these other ethnographies has been slowed and diminished potentially by Traditional Ethnographers who see these as 'lesser' even given descriptions such as '*Quick and Dirty*' (Pink and Morgan, 2013). There is still trepidation in using some of these alternative ethnographies within research, with the implication of reduced research quality (Pink and Morgan, 2013; Gray, 2017) despite being well suited to the research context.

Finally, irrespective of these limitations, Traditional Ethnography is still a prevalent research strategy, used in the social sciences worldwide (sociology, communication, and education studies) (Gray, 2017). Despite its extensive use, this research will not be using Traditional Ethnography, but will instead be undertaken using an extension of Traditional Ethnography, FE in an organisational setting, using a virtual approach, on a global scale.

7.2 Focused Ethnography:

This section on FE provides an overview of FE and how it compares to Traditional Ethnography. I will then be exploring its suitability for this research by exploring the suggestions by (Knoblauch, 2005) for research to be undertaken via a FE approach before bringing in its application in this research in conservation, organisations, and virtually.

Focused Ethnography, is a relatively new branch of ethnography, gaining momentum within the healthcare community over the last 15 years (Kilian *et al.*, 2008; Cruz and Higginbottom, 2013; Higginbottom, Boadu and Pillay, 2013; Wall, 2015; Conte *et al.*, 2019; Rashid, Hodgson and Luig, 2019; Andreassen, Christensen and Møller, 2020). It commonly focuses on "*a distinct problem in a specific context and is conducted within a sub-cultural group rather than a cultural group that differs completely from that of the researcher*" (Wall, 2015) Pg. 3). Linking this to my research, I will be focusing on KM within and between conservation organisations, undertaking data collection with the organisational employees, that are different to myself. To help us understand FE better and to justify my use of FE over other Ethnographies, **Table 4** highlights the similarities and differences between Traditional and FE, which will be elaborated on shortly.

Traditional Ethnography	Focused Ethnography
Longer time	Shorter time
Extensive data collection and analysis	Intensive data collection and analysis
Solitary data collection and analysis	Optional group data collection and analysis
Limited use of audio and visual help	Extended use of audio and visual help
Open focus to research	Problem focused and context specific
PP hold non-specific knowledge	PP hold specific K
Study a culture, different to their own	Study a culture they are familiar with
Participant role	Field - observer role

Table 4: Summarises the contrasting qualities between Traditional and FE, created through reading: (Rosen, 1991; Knoblauch, 2005; Cruz and Higginbottom, 2013; Higginbottom, Boadu and Pillay, 2013).

Firstly, FE takes place over a shorter period, but to counter this there is more intensive data collection so still generating rich numerous data (Knoblauch, 2005). This aligns with the WSC understanding that knowledge is transient (Fopp, 2008) and constantly emerging, which means that data collected over a longer period might be outdated at the time of analysis. Additionally, there are arguments that this acute data collection could be too intense, potentially having a negative impact on both the research and researcher (Knoblauch, 2005). However, in relation to this research, the data collection came in peaks and troughs across all three organisations. And whilst I did find data collection intense, especially in November 2021 when I was collecting data across all three organisations, I knew that it would not last forever. As such, I do not believe that the intense data collection period was detrimental to myself or to the quality of my research. Moreover, this element of FE is crucial to this research as the conservation sector does not have excess time, with many projects being time-critical (Martin *et al.*, 2012; Cooke *et al.*, 2016) and as I mentioned earlier getting up-to-date and accurate information is key to solving some of the issues (Cvitanovic, *et al.*, 2015). And whilst Traditional Ethnography takes a long time to undertake and analyse (Millen, 2000; Easterby-Smith *et al.*, 2015) sometimes up to years of being immersed within another culture (Gray, 2017), this research undertook data collection and analysis within several months, so being more suitable for research within the conservation sector.

Secondly, data analysis is undertaken not only by the researcher but also by my supervisors, but also my participants through member-checking (Burr and Dick, 2017; Moon *et al.*, 2019). This provided alternative perspectives to the ones gathered during data collection (Knoblauch, 2005). This

member-checking took place individually after each transcribed meeting or interview, as well as within my feedback sessions at the end of the data collection (**see Section 11.2**). The aim of which was to ensure that participants could check the transcript and provide more detail if required. My supervisors did not have a great involvement within the data analysis, but we had several key discussions around the data, during the data collection and afterwards during the analysis. This presented the opportunity to explore alternative perspectives of my findings. This is particularly important from a WSC position, where since reality is socially constructed, and each participant might have a different interpretation (Hansen, 2004; Marshall, Kelder and Perry, 2005), it is critical that I provide them the chance to voice and explore this further. Furthermore, to facilitate this intense data collection there is the option to employ the use of audio or visual help, to allow the collection of data simultaneously (Knoblauch, 2005; Higginbottom, Boadu and Pillay, 2013). In this research, I audio recorded my interviews, meetings, and feedback sessions etc to facilitate my data collection and particularly my analysis (Kim *et al.*, 2021). This gave me the opportunity to ensure that I hadn't missed anything said by the participants and get the data transcribed for further analysis. This aspect of FE, i.e., collecting data using technological means, was crucial for my research given that it was virtual.

Thirdly, FE is problem focused and context specific, which means that FE is a more pragmatic ethnography than Traditional Ethnography and so more suited to countering practical problems (Knoblauch, 2005). This allows me to undertake research on a topic of focus rather than letting the data completely guide the research focus. This supports an abductive approach (Eriksson and Kovalainen, 2015) by starting with observations (of KM within and between conservation organisations), and then allowing the data to dictate the direction of the research and using a conceptual framework provide explanations for these observations (Saunders, Lewis, and Thornhill, 2019). Because of this pragmatic and context driven specificity, FE can address distinct aspects in highly differentiated organisations (Higginbottom, Boadu and Pillay, 2013) which is particularly useful for this research. Alongside this focus on the topic, there is more criterion around the research participants (Cruz and Higginbottom, 2013). The research participants are known (prior to data collection) to hold specific knowledge around the area of interest ensuring that the data collected is relevant for the research (Higginbottom, Boadu and Pillay, 2013), thus further supporting a WSC position for this research where all participants interpretations and perspectives are valid (Burr and Dick, 2017). Additionally, due to the shorter time for data collection and the fact that participants hold specific knowledge, there are generally fewer participants within the research (Cruz and Higginbottom, 2013). However, this does not mean that less data is collected. On the contrary, almost to compensate for being deemed as 'lesser' more data is collected to ensure the

researcher gets the full and detailed picture (Higginbottom, Boadu and Pillay, 2013). Overall, for all the above reasons, this research used FE (Knoblauch, 2005) as its main research strategy.

7.3 FE Application:

Putting all the above into context, the following sections will explore the application of FE within this research, focusing on the conservation sector, and its use in a virtual manner.

7.3.1 FE within the Conservation Sector:

Firstly, it is important to mention the previous areas of applications for FE and notice that the conservation sector is not one of them. (Higginbottom, Boadu and Pillay, 2013) presents multiple studies in the Healthcare sector where FE has been utilised, alongside the ones mentioned earlier (Kilian *et al.*, 2008; Cruz and Higginbottom, 2013; Conte *et al.*, 2019; Rashid, Hodgson and Luig, 2019; Andreassen, Christensen and Møller, 2020). Additionally, (Wall, 2015) explored FE within Healthcare but recognised that it has been previously used in IT and Engineering. Despite extensive searches of the literature, I have not been able to find a study where FE has been used within the conservation sector or in relation to KM or KS. However, due to the fact it has been used in healthcare, which has been paralleled to the conservation sector (Pullin and Knight, 2001; Sutherland *et al.*, 2004) in that they are both 'crisis disciplines' (Soulé, 2007; Stirling and Burgman, 2021), I think that it should be well suited to the conservation sector. However, I understand that this should not be assumed, so as a part of the evaluation of this research, I will be evaluating the appropriateness of using FE in the conservation sector.

7.3.2 Virtual FE:

As already mentioned, due to Covid-19, and Government and University guidelines stating that face-to-face contact with participants are no longer allowed, all data collection was undertaken remotely. This is where the virtual approach comes into play, which has ultimately changed the approach taken to this research, from recruitment, to access and data collection and analysis (Roberts, Pavlakis, and Richards, 2021). I have already discussed earlier in this chapter about the impact of Covid-19 on my research and I will elaborate later how it specifically influenced my data collection through the data being collected virtually (Howlett, 2022). But for now, I will be discussing specifically how my research adapted to undertake FE virtually. Firstly, what I mean by Virtual FE, is undertaking FE using digital tools (Ghosh, 2020) rather than online ethnography, or netnography whereby data is collected through the observations on online platforms. In the case of my research, and which I will elaborate on in more detail later, using computer software such as Google Meets to facilitate synchronous interviews. This is supported by FE's use of technology in the collection of the

data (Knoblauch, 2005). It has also been argued by (Kim *et al.*, 2021) that rapid qualitative methodologies have a place under pandemic conditions as a balance between traditional more long-term approaches and no research at all, further supporting the use of virtual FE within this research.

In terms of how undertaking the research virtually influenced the ethnography, it made the data collection longer than planned, made access and sampling participants more challenging (Kim *et al.*, 2021), made for new areas regarding ethics that were not relevant before (Roberts, Pavlakis and Richards, 2021) (**see Section 10.0**), influenced the data collection so that there were more interviews than participant observation and made me be more reflexive than I might have been (**see Section 11.3**) (Howlett, 2022). Overall, for the first time, research will be undertaken using FE, within the conservation sector, with an organisational focus and using digital research methods. Due to its novelty, I evaluate this approach to data collection in Chapter 8.

8.0 Research Methods:

Before, I discuss the following research methods used to collect data across my three organisations, I firstly want to highlight that the methods that I chose below, are a personal preference, and whilst I will be justifying and supporting their use within the research, I agree with (Morgan, Smircich and Morgan, 1980) in their beliefs that the precise nature of research methods depends on the stance of the research and how the researcher chooses to use them (Eriksson and Kovalainen, 2015). As such, these might not have been the methods that others might have chosen or used in the way that others would, but these are the research methods that I have used, influenced by my own personal preference and the ongoing global pandemic. The following section will explore the techniques and procedures used to collect and analyse data. For this research, this involves Semi-Structured Interviews (SSI), Participant Observation (PO), Document and Website Analysis (DWA), Feedback Sessions (FS) and a Researcher Diary (RD). Across each method I will justify its inclusion in this research, evaluate its use and finally at the end I will describe the implications of Covid-19 and the virtual aspect of this research.

8.1 Semi-Structured Interviews:

Firstly, SSI were chosen over other interview methods, not only because they are a crucial method of FE, but because it provides flexibility to the interview questions and order (Fossey *et al.*, 2002) so allowing me to change the direction of the question and probe deeper in certain areas if necessary (Bryman, 2016). This was important when I needed to provide clarification or repeat a question for my participants, ensuring there were no misunderstandings. These are alongside the general

strengths of using qualitative interviews which include, allowing participants to express their thoughts, feelings, attitudes, beliefs, behaviours, and experiences in their own words, so adding insight and rich detail to the interview (Baxter and Eyles, 1999; Fossey *et al.*, 2002; Gray, 2017). This level of detail and focus on the participants' experiences links well to my WSC position (Deetz, 1996; Marshall, Kelder and Perry, 2005) due to SSI allowing the participants internal subjective interpretation of reality to come through, specifically using the language the participants are most comfortable with. Additionally, as mentioned earlier in this chapter, this research is largely exploratory in nature, with Criterion sampling being used to identify both organisations and participants. These characteristics align well with qualitative interviews according to (Gray, 2017), as well as providing the opportunity for reflection for both the researcher and participants.

8.2 Participant Observation:

As a part of undertaking FE, PO was used to collect data, specifically observing the background environment, including individuals' behaviours, and routines, as well as the meanings participants ascribe to them (Fossey *et al.*, 2002; Kawulich, 2005; Gray, 2017). PO is construed as crucial to any ethnographic research and has many of its own benefits (Kawulich, 2005; Easterby-Smith *et al.*, 2015). These includes the ability to capture TK and skills contained within individuals (Finn and Waring, 2006; Wall, 2015) observe more natural behaviour (Bryman, 2016), gain insight into interpersonal behaviours and motives (Gray, 2017) and uncover discrepancies between what is mentioned in the interviews and reality (Kawulich, 2005; Cruz and Higginbottom, 2013). Alongside this, PO is also useful for helping to build up rapport and gain a better understanding of the study site and focus (Kawulich, 2005).

Within the literature there is much discussion over the level of involvement a researcher could have when observing participants, with Gold, 1958 as cited by (Kawulich, 2005) summing it up into four different roles; *Complete Participant*, *Participant as Observer*, *Observer as Participant* and *Complete Observer*. Due to the virtual aspect of the observation, this research took on the *Observer as a Participant* role. This means that participants will know that I am there, and the research will involve conducting more SSI over PO, which as you can see from **Table 3**, is the case with 34 interviews to 27 meetings. Additionally, it is the most ethical out of the above options from Gold (1958) as cited by (Kawulich, 2005) as the participants know I am there and what I am researching, as was highlighted to them within the introductory presentation. However, as part of taking this role, (Bryman, 2016) suggests that there could be issues with the researcher not understanding the social settings because they are not fully immersed within the culture.

This can lead to misguided assumptions or interpretations on the researcher's part (Kawulich, 2005). This is supported by (Fossey *et al.*, 2002) describing that having both the insider and outsider perspective in research is crucial and that I must have some level of participation with the participants if I am to have an accurate understanding of what it is I am observing. Surprisingly, this occurred naturally within the research. Whilst it was not my intention to play any part within the observed meetings, it was the case on a handful of occasions that during the part of the meeting whereby the participants were asked of their work plan for the week, I was also invited to be a part of this and so engaged with the participants on a small level. As such, according to (Eriksson and Kovalainen, 2015) I undertook both PO and non-Participant direct observation. Similarly, (Rosen, 1991) describes the different approaches of Participant and Observer when undertaking organisational ethnography. Within their paper I am an observer rather than a participant, as I am not working for the organisations. Therefore, being an observer, I might have less in-depth access (as suggested in my previous discussion around my Gatekeepers), but I will have access to a wider scope of the organisation as I am not pinned to one department. Overall, despite its complexities, PO was undertaken within this research, but it will be of a different nature to typical PO as described above.

8.3 Document and Website Analysis:

To accompany the SSI and the PO, I also undertook DWA. This was predominantly document analysis, with some superficial exploration of the organisation's websites. These documents pertain *to either the specific collaborative research project shared between the organisations, or documents that demonstrate how the organisations manage and share their knowledge, both within and between the organisations.* This broad approach ensures that multiple documents have the choice to be sent to me, but also ensures that they are all still relevant to the research. Document Analysis is not only a crucial part of ethnographic research (Hammersley, 2006; Cruz and Higginbottom, 2013; Bryman, 2016), but it was key in substantiating data heard and observed within the interviews and meetings and helping to triangulate it for analysis (Bowen, 2009; Mackieson, Shlonsky and Connolly, 2019). Alongside triangulation, (Bowen, 2009) advocates that DWA can also provide greater context and information for the research, identify new areas of interest as well as help to track development over time (Eriksson and Kovalainen, 2015). This is particularly key if there are reports over multiple years, which can be used to identify the changes and potential historical mechanisms for these changes (Mackieson, Shlonsky and Connolly, 2019). Relating this to my WSC position, the DWA supports my position as these texts and language used are my organisation's representation of reality that they believe about themselves and want to present to the world (Eriksson and

Kovalainen, 2015). It is acknowledged that there could be some subjective bias in the reputation and image that the organisation is presenting through their documents, but that is part of providing a platform for the organisation's voice to come through and tell us more.

However, when undertaking DWA, (Gray, 2017) makes a good point in that the documents and websites are not factual evidence, but more a representation of the organisation's perception of itself, which could be strongly positive in nature. This is interesting, as using a relativist epistemology where people can interpret the same information differently, it begs the questions of how these documents are interpreted by the target audiences. It is at this point of the DWA, that critical questions will be asked such as *'Why were the documents created? Who is its target audience? Who is the author or is it not signed? Was the document solicited or not?'* (Bowen, 2009). It is important to keep a critical lens on these documents and not take the information they provide as a given, regardless how it is interpreted. However, this level of interpretation, does not mean that they cannot tell us anything, moreover, they can provide insight into the organisational consciousness across a long period of time, through different events and in a rather low cost and unobtrusive manner (Bowen, 2009). Overall, the documents and websites were used as a supplementary data collection method, being critically analysed for the information they contain (or don't contain).

8.4 Researcher Diary:

To supplement the above data collection methods, I undertook a researcher diary for the duration of data collection and analysis. This diary had two purposes: Methodological and Epistemic reflexivity (Johnson and Duberley, 2000). Firstly, was to log decisions that I made and provide objective information around the circumstances and context of the SSI, PO and DWA (Bryman, 2016). This additionally, ensured that the decisions made were transparent. Secondly, the diary was used as a space to reflect on my research and create an inner dialogue of my thoughts and feelings (Gray, 2017). I typed the researcher's diary, at the very least once a day, to provide extra depth and detail to the research, with this including both words and diagrams.

As proposed by (Engin, 2011), there are several known benefits from undertaking a researcher diary, and those most relevant to me include: resolving fieldwork anxiety, dealing with feedback (from both the university and my organisations), as well as serving as a reminder for the past data collection, the decisions that I made around these and then using them as a guide for the next set of data collection. Alongside these more personal elements, the researcher diary supplements the data collected from the SSI, PO, DWA and FS. Moreover, through this reflexive researcher diary, I was able

to take time and space to think about the methods I was using and evaluating as part of the research, and with the multiple changes, the researcher diary was an excellent anchor for my decisions (and justification thereof), interpretations, and progress of research from my own perspective (Engin, 2011; Gray, 2017). Finally, based on my own WSC position, I am aware that these writings were my subjective interpretation of the research and apart from myself the data is not being seen by anyone else.

8.5 Feedback Sessions:

As mentioned in **section 4.5**, there were 8 feedback sessions across the three organisations, which were collected, recorded, transcribed and member checked. These feedback sessions had multiple purposes for both the researcher and organisations. Firstly, it was to ensure that the organisations could explore the collected data and to raise awareness of the KM and KS within their organisation and the other organisations. Secondly it was another level of member-checking (Moon *et al.*, 2019) whereby the participants within the organisations could comment and check the data and to establish whether it was accurate and representative to their own organisation. Finally, it also provided a chance for feedback to be given on the data collection and approach to data collection, thus allowing me to evaluate my own research as seen in Chapter 8. Overall, the feedback sessions were a key part of the data collection and were extremely beneficial for all involved.

8.6 Virtual nature of data collection:

As I have made clear, this research was undertaken during the Covid-19 pandemic and as such restrictions were in place, meaning that all data collection had to be undertaken online. I have already discussed how this influenced the recruitment, sampling, and access and now I will go onto discuss the benefits and limitations of undertaking this research virtually.

8.6.1 Virtual SSI:

Due to Covid-19 and the restrictions in place, both by the Government and by the University of Sheffield, these SSI took place virtually, but were still interactive and synchronous in nature (O'Connor *et al.*, 2008; Janghorban, Roudsari and Taghipour, 2014). There is much discussion in the literature about the benefits and limitations to online / telephone interviews vs face-to-face interviews. Despite the ability for the researcher to create a positive interview environment, and gain rapport and trust easier with face-to-face interviews (O'Connor *et al.*, 2008; Kim *et al.*, 2021), there are increased time and costs to a face-to-face interview (travel and buying food or drink etc), for both the researcher and participant, as well as the fact that sometimes due to geographical

location, a face-to-face interview is just not possible under the current research constraints (Seitz, 2016; Howlett, 2022). However, an online interview could mitigate these issues. By using online interviews there was a decrease in cost for myself, as I did not need to go and stay with the three organisations for an extended period and according to (Deakin and Wakefield, 2014), many participants are choosing online interviews over face-to-face interviews, when given the choice. Reasons for this could be that they feel safer, not having to travel to see the researcher, especially at night or in more obscure areas. They might feel more comfortable only having to share their online ID rather than more personal details or the fact that online interviews are more flexible in terms of time and location of the interview (Kim *et al.*, 2021; Howlett, 2022) which could be worked around the participants jobs or other familial responsibilities and can be done from the comfort of their own home (Deakin and Wakefield, 2014). These are all especially important in this research, as several of the participants across the three organisations were working from home, and since I was working across different time zones, this flexibility helped me collect data across all three organisations simultaneously.

However, despite these benefits and being deemed superior to telephone interviews (Gray, 2017) there are additional constraints to the use of online interviews compared to face-to-face interviews. Firstly, to undertake online interviews, participants need access to appropriate technology (computer, internet, Skype/ Zoom/ Microsoft TEAMS/ Google etc) (Deakin and Wakefield, 2014; Lobe, Morgan, and Hoffman, 2020). This was somewhat of an issue in this research, but for more marginalised members of society this could mean that they are unable to take part in the research altogether, leading to sampling bias (O'Connor *et al.*, 2008; Roberts, Pavlakis, and Richards, 2021; Howlett, 2022). Secondly, are the problems that come with using technology. Laptops or the internet can cut out so disrupting the flow of the interview, alongside interrupting the personal connection between researcher and participant, potentially making it difficult to build a rapport (Deakin and Wakefield, 2014; Seitz, 2016; Jones and Abdelfattah, 2020). This occurred three times during my data collection, whereby I was observing a meeting or conducting an interview and my laptop cut out. The first meeting was still ongoing when I re-joined, the 2nd meeting had finished by the time my laptop had rebooted, and the participant of the interview was happy to resume our chat when I got back online. However, whilst frustrating, it fortunately did not have too much of an impact on my research, with the bonus that everyone was understanding.

Additionally, sometimes to increase their internet connection, participants might decide to turn their camera off, which whilst keeps the interview flowing, the researcher then loses any visual cues from

their body language or facial expressions, and reduces the personal connection gained through visual communication (Gray, 2017). Additionally, it has been suggested, that even if the participants keep their video on (containing just a headshot), the researcher is still losing data on the participants body language or visual cues, that they would have seen during a face-to-face interview (Deakin and Wakefield, 2014; Seitz, 2016; Howlett, 2022). This is particularly important if the participants are more reserved, either through their own nature or because of the interview topic. Because of this, it could be suggested that online interviews are not suitable for all research topics (O'Connor *et al.*, 2008; Seitz, 2016; Howlett, 2022), i.e., conflict or sensitive topics.

8.6.2 Virtual PO:

Virtual PO was undertaken through sitting in on online meetings either between participants within one organisation or between participants from multiple organisations. These were meetings that would be going ahead with or without me, rather than being specifically set up for my research, to be as unintrusive as possible. Due to the virtual nature of this research, there are many elements of PO that I could not capitalise on, such as being able to describe what I am observing with all five senses, instead it being only two sight and hearing (or just one if they turn off their camera) (Howlett, 2022). Within my research, whilst I had my camera on all the time, most interview participants also had their cameras on. On occasion, a participant might turn their camera off part-way through, mostly due to bad internet connection. But this was a minority. However, within the meetings, it was more mixed. I would still say that most participants had their cameras on or turned their cameras on when they were talking. Also, I found that the meetings that had more participants in, tended to have more participants that did not turn their cameras on. However, despite not being able to observe the participants due to their cameras being off, the fact that they turned their cameras off did tell me a great deal about the meeting culture at the organisations, how comfortable they felt, and this might just be my interpretation, but their level of attention during the meeting. So, whilst it would have been different had I been there face-to-face, I do not believe that I lost any significant data.

Whilst it is extremely beneficial that PO could proceed given Covid-19, it was expected that there would be limitations and as such counters were put in place to help overcome them. To offset (Kawulich, 2005) and (Bryman, 2016) limitations mentioned above, about how I would not know the social settings as I was not fully immersed, firstly, due to the PO being synchronous, I could clarify anything that I was confused about during the data collection process. Secondly, triangulation (Rashid, Hodgson and Luig, 2019) of the data occurred using SSI, DWA, and FBS, meaning that any

contradictions occurring in the data were flagged early. Finally, after each recorded interview and meeting was transcribed, member-check by the participants to ensure that the data was correct and then confirming that it can be used within the research (Moon *et al.*, 2019). Overall, these steps will enable discussions around my interpretation of the data.

8.6.3 Virtual DWA and RD:

Within my research, I do not believe that the online approach influenced the DWA analysis, but I do believe that if I had been there face-to-face, there would have been more opportunities to gather documents, such as pamphlets or more internally focused reports that I did not know existed and so could not ask my Gatekeepers for. This stems back to the issue around access (Singh and Wassenaar, 2016; Howlett, 2022) and reliance on Gatekeepers (Crowhurst and Kennedy-macfoy, 2013). Additionally, by undertaking the research virtually, made my reflexivity within my research diary more prominent (Howlett, 2022), because as I mentioned above, it extended my data collection time and raised unprecedented issues, meaning there was more for me to navigate and thus a greater level of reflexivity.

Overall, despite the extensive impact that undertaking this research virtually has produced, technology has still fundamentally ensured that the research could progress in an adapted fashion. It might have influenced my methods of data collection and access to the data, but it has not influenced my WSC position or the data that I did collect, as that was still directly from the participants using their language and within their own natural setting (Burr and Dick, 2017). Also, I think it deserves repeating that whilst individual methods have been undertaken online before, although not to any level compared to the last couple of years, FE has not been undertaken virtually which makes this research exciting and something that I evaluate within Chapter 8. Overall, despite this research being influenced at nearly every stage of the design process (Roberts, Pavlakis, and Richards, 2021) of the data that I did collect, I do not believe that it had any negative impact.

9.0 Research Analysis:

During the data collection period, audio recorded interviews, meetings, and feedback sessions were sent off for transcription by an external service recommended by the University of Sheffield Management School.

9.1 Pre-Analysis:

I chose to have the interviews, meetings and feedback sessions transcribed externally because of Covid-19. As originally planned, I was meant to travel to the organisations face-to-face which would

have cost money. However, as that did not occur, alongside Covid-19 slowing down the research, instead of having more time than money, I now had the opposite, so I took the initiative to spend my RTSG funds on a transcription service. I am aware that by not transcribing them myself there is the possibility that I will not be as familiar with the transcript as I would otherwise be (Braun and Clarke, 2006). However, since I undertook the SSI, PO, and FBS as well as undertook several rounds of analysis (see below), it seems an appropriate risk as I could save myself up to 8 hours per 1 hour recording which I feel would be better spent on reading through and analysing the transcripts (Bryman, 2016).

9.2 Thematic Analysis:

This research used Thematic Analysis (TA), to analyse the data across all three organisations where it was used to identify, analyse, and report patterns within the data (Braun and Clarke, 2006). TA was chosen for the analysis as it complements the research, including its qualitative nature (Vaismoradi and Snelgrove, 2019) as well as the research methods (Braun and Clarke, 2006). Additionally, as emphasised strongly by (Braun and Clarke, 2021a), TA is not atheoretical, and as such my subjective understanding around knowledge and reality is used to make assumptions about the data and what can be claimed from it. This aligns well with the WSC position that this research is using as a lens. Finally, TA has been undertaken in FE research by (Kilian *et al.*, 2008) to interpret their results after using FE on perceiving falls within a family context. This demonstrates TA's appropriateness for this research across all aspects of the methodology.

TA was undertaken using the instructions from (Braun and Clarke, 2006) as well as the guidance given by the University of Sheffield Methods Institute, in their Qualitative data Analysis workshop. Gray, 2017 suggested that there are two possible but not exclusive approaches to data analysis. Firstly, is to see what there is and build from it, this is very much TA, which I used to explore patterns etc. Secondly, is comparing the results to the literature. This is something that I undertook post analysis, by comparing my data to previous works on KM, KS, the GN and GS partnerships, alongside power and technological factors influencing KM and KS. However, whilst this research did use the 6-step process produced by (Braun and Clarke, 2006) as a guide, it was not followed verbatim. Instead, there were parts of it that were loosely followed, as due to the nature of the research, flexibility was required (Braun and Clarke, 2021b). I provide details of this in the following sections. However, based on (Braun and Clarke, 2021a, 2023) this data was analysed using the '*Codebook*' approach to TA. What I mean by this, is as linking back to my WSC position, this TA took a balanced approach combining structural procedures from the more positivist '*Reliability TA*' with more qualitative research values of '*Reflexive TA*' (Braun and Clarke, 2023). What this means is that some themes

were developed early on based on the predetermined information needs of producing the feedback reports for the three organisations (Braun and Clarke, 2021b). The *Codebook TA* approach is more pragmatic (Braun and Clarke, 2021a) and suited this research well due to fixed deadlines regarding the organisations. However, there is also the understanding that the analysis is being influenced by my subjective understanding (Vaismoradi and Snelgrove, 2019). Moreover, it is suggested that through using the *Codebook TA* approach, your themes will be more like topic summaries (the main things that participants said about the given topics) instead of meaning-based interpreted stories (Braun and Clarke, 2023). This is certainly the case here. Overall, this research undertook a flexible approach to Braun and Clarke, 2006 TA, which will be acknowledged and justified within the following section. Within the following section, I will detail the TA process, using Braun and Clarke, 2006 6-step process as a guide.

9.2.1. Familiarising yourself with your data:

Firstly, Braun and Clarke, 2006 recommended becoming extremely familiar with the data, including re-reading it multiple times, with the possibility of being the one who transcribed it. Within my research this was something that I undertook within the process of prepping my data for analysis. Firstly, I was the one who collected the data, and then once I had received it back from being transcribed, I listened to the recording and made sure that the transcript was correct and filled in any bits that weren't clear in the recording. After I got the transcripts and any comments back from the participants, I went through made any changes and then anonymised the documents. This involved going through the transcript and checking that there weren't words that could directly (name of the organisations), or indirectly (name of conservation focuses) identify any of the organisation's participants or the shared project. Only after this had been done and I had an anonymised version of the transcript could it then be analysed in NVIVO R.1.6. As such I became very familiar with my data despite not being the one who transcribed it.

9.2.2. Generating initial codes:

The next step is to organise the codes into meaningful groups. At this point, I systematically worked through all pieces of data across my organisations and coded for as many potential patterns as possible (For example, under a *Knowledge Management* code, I have *KM definitions*, *KM people* and *KM technology*). As part of this broad approach, I originally analysed the organisational documents and assigned codes such as those focused on the project and databases (E.g. under a databases code, I had a list of all the different databases mentioned within the research). At the time this was with the aim to help me understand the projects and the organisations' role in their fully capacity.

However, these were then filtered in the following stages. Predominantly, this stage involved pieces of data being assigned to multiple codes. For example, if there was a technological factor that influenced the KM or KS, this was coded into *'Barrier'*, *'Technology'*. Or sometimes if I was coding the terms GN and GS within the organisation, they would be coded to *'GN'* codes as well as *'power'*. At the end of this stage, all data had been worked through and coded across multiple codes. Additionally, for each piece of data (I.e., Interview or meeting transcript), I created an attached memo document within NVIVO to provide a summary of their key points and to add my perspectives on what they said. This was for my own benefit to keep track of my data. See the appendix for my data's codebook which presents the final interpretive phrasing of my coding process.

9.2.3. Search for themes:

This third step involves sorting the different codes into potential themes. It is strongly suggested by Braun and Clarke, 2006, that you only start this stage once you have all the data collected, but that was not possible within my research. As I was collecting data across all three organisations, with a deadline for January 2022, to collect, analyse and feedback my results, I could not wait until late December 2021 to start my analysis as I would not have enough time. So instead, I undertook stages 1,2 and 3 of Braun and Clarke, 2006 as I was collecting the data. Once I had collected all the data and got it all up to this stage, I continued onto step 4.

Within this stage I started looking at the relationship between my many codes grouping them into potential themes. Some were easy, for example, *'KM definitions'* was under *'Knowledge Management'*, but others were more complex such as within *'Knowledge Sharing'* is *'Facilities KS'* and I have *'Accessibility'* which contains *'Access'*, *'Format'*, *'Language'* and *'Target Audience'*. I ensured that I did not go across four levels, so this is as complex as it was. These themes, as above are, more like topic summaries (Braun and Clarke, 2023), whereby anytime a participant gave their perspective on the definition of KM, this was placed in the appropriate code. It became clear at this stage that the themes were not just emerging but were identified and filtered based upon my own role as the researcher (Braun and Clarke, 2021b). E.g. the code *'Technology'* was placed under *'Underlying mechanisms'* which was created when I was undertaking a Critical Realist position.

9.2.4. Reviewing themes:

Within this stage, I explored similarities and differences across the codes and themes and found that there was some overlap and rearranging that could be done. For example, certain factors could both hinder and facilitate KM and KS, so these I separated these out. For example, the code of *'power'* can

be found within *'Barriers to KS'*, *'Facilitate KS'*, as well as in its own code under *'Partnership'*. I did this for all the data to ensure that all codes were linked within themes but distinct from other themes. Additionally, during this stage, certain themes developed and became more detailed. Under the code of *'Language'*, originally there was *'Non-positivist language'* and *'Positivist language'*. This was then reviewed and reduced further to include *'Acronyms'*, *'Global'*, *'GN and GS'*, *'Literal Language'* *'Positivist Language'* and *'S.C Language'* It was also at this stage that I reviewed the analysis of the documents. I knew that the quotes from the documents could not be used within the thesis due to confidentiality. As such I deleted the sections that were assigned to codes but kept the memos attached to each document. Additionally, I was aware that some of my codes were extremely broad. For example, I originally created the Code *'Challenges'* and placed within it any quote which demonstrated challenges the participants had around KM or KS or their partnerships. It was at this stage that I worked through my codes again and either uncoded or moved the quotes to more specific areas, such as barriers to KS.

Moreover, some of these codes were aimed at the organisation's reports, rather than the thesis. For example, there is a *'Key words'* code. Within this I placed the key words that the participants gave within the interviews to describe their organisations (when I asked the question of can you describe your organisation in 3 words), to help gain an understanding of what it is like to work at each organisation as I could not experience it for myself face-to-face. A memo was attached to this with a summary of all the keywords to help me keep track of them per organisation. Overall, by the end of this stage, there have been multiple iterations of codes, sub-codes that I had reviewed using either the organisation's report as a lens or the thesis.

9.2.5. Defining and naming themes:

At this stage the themes need names and definitions. I worked through the themes and chose appropriate names and defined them within NVIVO code properties (please see the codebook in the Appendices for an overview of my codes). Due to the expansive data collected during this research, not all the themes, codes and data have been used within the research (for example the keywords from the participants have not been used within the thesis), but I have kept them within the analysis because some I have used within the organisational feedback reports, some I have used within the thesis and others I could use within further publications, depending on the chosen narrative and topic. Due to there being different focuses of the analysis, the organisational reports originally and then the research questions, there was lots of back and forth between stages 3-4-5. **Ultimately this**

has results in 80 codes, 7 parents codes, 21 Child codes, 31 Grandchild codes, and 9 great grandchild codes. See the appendices for a project map of all codes.

9.2.6. Producing the report:

As mentioned earlier within this chapter, I provided feedback for my organisations in the form of four reports (one per organisation and then a shared report), alongside 2+ feedback sessions, one taking place before the full analysis (Parts 1,2 and 3 completed) and then one after completing the full analysis. Moreover, I have then used this analysis to answer my three research questions within the following three empirical chapters. Overall, my data was analysed concurrently with the data collection across all three organisations, to produce the codes and themes that help answer my research questions and to provide feedback to my organisations.

10.0 Ethical Considerations:

Ethical consideration within social science research expands across several different areas, including *Deception, Invasion of Privacy, Informed and voluntary consent, Harm to participants and Confidentiality* (Eriksson and Kovalainen, 2015; Bryman, 2016). Additionally, different elements of the research methodology hold reference to specific ethical considerations (e.g., ethnography and interviews) (Gray, 2017). This is particularly the case when data is collected virtually, bringing more importance to certain areas (Roberts, Pavlakis, and Richards, 2021).

Specific to this research, there was **no deception** with any of the organisations or participants involved, with me being transparent, honest, and open regarding all communication so that expectations could be managed by all and at all stages of the research. This was demonstrated by the clear and accurate information sheets and consent forms that were provided to all the organisations and participants (**see Appendices**), plus the extensive administrative steps to ensure all organisations agreed about copyright etc. This is in addition to the comprehensive presentation that I gave to each organisation before the start of each data collection. There was **no invasion of privacy** to participants as due to the current global situation, all data is collected online, so no physical invasion of privacy could occur. Additionally, I am not exploring any topics which might be deemed private or invasive, nor collecting any data that is personal to the participants.

Informed and voluntary consent was gained from all organisations and the participants separately, so that the employees did not feel they have to take part in the research just because the organisation has, ensuring that participation is truly voluntary (Singh and Wassenaar, 2016). It is acknowledged, both from the literature and current experiences, that within ethnographic research, consent can be difficult to gain (Gray, 2017), particularly as informed consent in organisations is an

ongoing process, due to the constantly changing power dynamics between the researcher, the organisation, and the participants (Plankey-Videla, 2012). However, consent for the research was gained by each of the organisations, as well as by each individual participant, where before each of the recordings took place (for the interviews, meetings, and feedback sessions individually), I asked whether they were happy with me recording, to ensure firstly that the participants knew it was taking place and secondly decline it if they so choose. There was **no harm to participants** in any capacity (emotional, financial, physical, mental, or developmental). The only area that might cause issues here is when I am asking questions about Covid-19 and how that has impacted the project, partnership, and KM within and between the organisations. This might be deemed a sensitive topic to the participant depending on their own experiences of the global pandemic (Orb, Eisenhauer and Wynaden, 2001). As such, this potential for harm was managed through stating on the Information Sheets and Consent forms that this topic could arise, asking whether they are comfortable with this line of questioning on the Consent forms and again asking participants in the interview whether they are happy to proceed with the line of questioning.

Finally, regarding **confidentiality**, due to the nature of the research, and currently being in contact with the conservation organisations, there is no possible way for the organisations or their employees to be anonymous, as me and my supervisors / members of the University will know who they are. However, my aim is to maintain the confidentiality of all organisations by describing them in as much detail as possible whilst keeping their identity concealed. This is the same for the participants. Confidentiality will be attempted but cannot be guaranteed due to the size of the organisations and the project of focus. I cannot guarantee that other employees at any of the organisations will not assume certain participants are involved (particularly as I will be using the Gatekeepers to help me identify participants, and the participants will be seen at the presentation and in meetings or feedback sessions). However, I can assure that the specific details given in SSI and recorded through PO and the FS, whilst being shared, will not be linked back to the specific participant. Once the data has been collected it will be kept secure, on both my university Google drive and an encrypted external hard drive. Either way all data will be kept confidential and, in a password, protected location.

Overall, there were no areas of ethical problems during this research, for the above reasons as well as this research follows the University of Sheffield Ethics and Integrity policy and was approved by Sheffield Management School ethics committee (**see Appendices**). However, as the research is exploratory and progresses, ethics was continually reassessed throughout data collection (Orb, Eisenhauer and Wynaden, 2001) as was the case where several emails were sent to the Sheffield

Management School ethics committee for responses before further steps were taken (please see administrative edits in **Table 2**).

11.0 Research Quality:

I wanted to ensure that this research was of high quality and whilst in the beginning I wanted to do this using '*Reliability and Validity*', I learnt quickly that these terms and approaches to ensure high quality research stemming from the natural sciences, weren't suitable to measure qualitative research (Burr and Dick, 2017; Braun and Clarke, 2021b). In the following section I will be discussing the approaches that I took to ensure I was producing high quality research, including the use of Triangulation, Member-checking, and Reflexivity (Eriksson and Kovalainen, 2015; Burr and Dick, 2017) before moving onto evaluating my research using appropriate measures, including Trustworthiness; Dependability, Credibility, and Transferability (Guba and Lincoln, 1994; Eriksson and Kovalainen, 2015).

11.1 Triangulation:

One approach to maintaining research quality and some would argue researcher objectivity is using Triangulation (Bryman, 2016). This involves collecting multiple perspectives to refine and clarify research findings (Eriksson and Kovalainen, 2015). Traditionally, it is argued that Triangulation is a positivist approach, used to ensure the reliability and validity of the research (Bryman, 2016). However, (Gergen and Gergen, 2007) suggest and I agree that it can be used to disclaim validity. For this research, Triangulation is being used to explore the participants' perspectives in the creation of the organisational shared social reality (Vaismoradi and Snelgrove, 2019). From my WSC position, everyone creates their own reality based upon their own experiences. However, as established within Chapter 2, there is also a shared socially constructed reality, which can be seen within the shared experiences of people in organisations. As such, I am using triangulation of the data to gain an insight into the socially constructed reality within each of the organisations based upon the participants perspectives.

As described by (Rashid, Hodgson and Luig, 2019), Triangulation in collaboration with FE can come in several different forms, including *Method Triangulation* (using different methods to collect data and confirm findings), *data source Triangulation* (using lots of different data sources i.e., participants), *Investigator Triangulation* (having multiple researchers collecting and interpreting the data) and *Theory Triangulation* (using multiple theories as lenses to understand and interpret the data). This is supported by (Eriksson and Kovalainen, 2015), although they also add Triangulation of Methodology

whereby the researcher used quantitative and qualitative approaches to collect data. Either way, there are several forms of Triangulation that can ensure high research quality.

For this research, I have certainly used *Method Triangulation*, since I used SSI, PO, DWA, FS and RD. This I have undertaken specifically in the language used by the participants within the documents, and that which they used within the meetings and interviews (Madill, Jordan, and Shirley, 2000). I also used *data Source Triangulation*, as I have over 44 participants across my three organisations. I did not use *Triangulation of Methodology* as I did not use quantitative methods to collect or analyse the data. Regarding *Investigator* and *Theory triangulation* it could be argued that I used these, although not as strongly as *Methods* and *data Source*. Whilst I was the only researcher collecting the data, there were intensive and extensive discussions with my supervisors about the data that I had collected and it was interesting to hear their opinions, so in a small manner I did undertake *Investigator Triangulation*. And for *Theory Triangulation*, the fact that I am using the KM Discourse Framework, which holds four discourses in which to view the data, it could be argued that I am undertaking this Triangulation within my research.

Finally, Triangulation is suitable for this research on several levels. Firstly, Triangulation is a large part of FE due to the potential subjectivity from the immersive nature of the data collection (Higginbottom, Boadu and Pillay, 2013), and as such it helps to bring some objectivity to the research, if the researcher has become too much of an insider (Eriksson and Kovalainen, 2015). It has also been used with DWA, using the documents to provide a wider context to the research and when used in collaboration with other more primary research methods (such as interviews and observation) (Mackieson, Shlonsky and Connolly, 2019), and can be used as a form of Method Triangulation (Bowen, 2009). Finally, it has also been used in KM research (Venkitachalam and Willmott, 2015), and TA (Vaismoradi and Snelgrove, 2019). Whilst these researchers have used different theoretical backgrounds, and the use of triangulation being known to be a more positivist approach to ensuring reliability, based on the use of triangulation within this research as described above, it is suitable here to explore the shared socially constructed reality of KM between my participants within their organisations and its partnership.

11.2 Member Checking:

Within my research I have undertaken member-checking with every recorded and transcribed piece of data (Burr and Dick, 2017). Member-checking involves giving the participants the chance to provide feedback on the findings (Moon *et al.*, 2019) and allow them to check your interpretation of

the data. This involved giving my participant the chance to read over what was said in the meetings or interview and clarify, remove, or add anything. Additionally, this was also undertaken during the feedback sessions – both preliminary, formal, and joint, where my participants were able to comment on what I had found and my interpretation. The aim of this was three-fold. Firstly ethically, it was to ensure that my participants were happy with what they had said during the meetings and interviews, minimising any potential harm to themselves. Secondly, was to ensure that my participants' voice was still heard after my interpretation to give us all a chance to discuss my interpretation of the data ensuring that it was representative of each organisation and their partnership (Eriksson and Kovalainen, 2015). And finally, it was to increase the trustworthiness and quality of my research (Burr and Dick, 2017), through ensuring that the data faithfully represents their experiences (Vaismoradi and Snelgrove, 2019; Braun and Clarke, 2023). Overall, I undertook member-checking with all my recorded and transcribed pieces of data across all three organisations. This provided greater clarity around the data, and I also believed that it gave the organisations more confidence and comfort in my research as they knew they would have a chance to vet it before and after it was analysed.

11.3 Positionality and Reflexivity:

Throughout my research I have fully acknowledged that my position such as age, gender, class, race, ethnicity, orientation, and experiences can influence my research (Cunliffe, 2004; Eriksson and Kovalainen, 2015). Due to the qualitative and WSC nature of this research, this is extremely important to firstly acknowledge but secondly to understand, as since reality and knowledge are socially constructed (Delamater and Hyde, 1998; Marshall, Kelder and Perry, 2005; Moon and Blackman, 2014; Burr, 2015) how have I influenced this construction just by undertaking research and engaging with my participants? (Burr and Dick, 2017). This is especially true due to my both insider and outsider position in undertaking the research using FE (Cruz and Higginbottom, 2013) and the understanding that each role within the research entails different levels of power dynamics which can affect the data (Eriksson and Kovalainen, 2015).

One of the ways I have attempted to counter this influence is through being reflexive throughout the research, in the form of a Researcher Diary. Within this research diary I would discuss the data collection undertaken that day, how I was feeling, work through any issues that I was having and how to solve them and create a to-do list for the following day. It helped me keep track of my research and my thoughts and feelings around the research. According to (Delamont, 2009), is a combination of auto-ethnography and reflexive ethnography, whereby Auto-ethnography is focused solely on the

research, whereas reflexive ethnography involves the researcher studying a setting, subculture, activity, or something other than themselves. This was interesting, as I had been undertaking both approaches simultaneously depending on the day and how the research was going. For example, when the research was going well, the focus was more on the research, data, setting etc, but when issues arose, there was greater focus on myself, my thoughts, and feelings around the research. So, Reflexive on good days and Introspection on bad days.

Whilst it might be naive to suggest, I do not believe that I have fundamentally influenced the research with my position. There is a possibility that within my research and the language used that I was leaning more towards a Neo-functionalist perspective based upon my natural science background and the organisation's assumptions themselves, but I don't believe that my assumptions or position influenced the organisation's conceptualisation and approach to KM. Whilst I accept that every role entails a different power dynamic (Eriksson and Kovalainen, 2015), and there were times when the participants would ask me what I am specifically looking for when asking a question in the interviews (as predicted by (Svensson, 2017), but as I responded I wanted their opinion and that there was no right or wrong answer, I consider that my power and position was not overly influential. Overall, within this research and even throughout this thesis, I have been aware of my own position, assumptions, and beliefs, and using the researcher diary have reflected on these and how I have influenced the research.

Finally, research quality is key and can be reflected upon at different stages of the methodology, from exploring the qualitative nature of the research, undertaking FE, and within individual research methods. For this research, instead of terms such as *Reliability and Validity* (internal, external and construct), due to their positivist connotations (Gergen and Gergen, 2007), I will be using an overarching term of *Trustworthiness* (Burr and Dick, 2017), which will include terms such as *Dependability* (in place of reliability), *Credibility* (in place of internal validity) and *Transferability* (instead of external validity) (Eriksson and Kovalainen, 2015; Bryman, 2016; Gray, 2017). I have chosen these criteria, because it is well established within the literature that the 'traditional' evaluation terms such as reliability and validity, are measuring aspects of research that qualitative research is not in itself working towards, (Guba and Lincoln, 1994). As such the use of them to evaluate qualitative research seems void. Instead, terms such as *Dependability*, *Credibility* and *Transferability* have become well established within the literature to evaluate qualitative research against more suitable criteria. However, that's not to say that all qualitative research is evaluated this way. Some is evaluated against reliability and validity (Venkitachalam and Willmott, 2015) which

is fine, but as I am taking on this research via a WSC position, this research should be evaluated against the *Trustworthiness* (Fossey *et al.*, 2002).

11.4 Dependability:

For this research, Dependability is expressed as the degree to which a study can be replicated (Bryman, 2016). It is unlikely that this research could be replicated by another researcher regardless of the level of transparency and detailed notes provided, as the research takes place in distinct organisations, in a specific context in an ever-changing society. Additionally, due to the level of confidentiality around the project and the organisations, these details will not be available to future researchers. Despite attempts to increase the Dependability of the research (through having meticulous notes, using triangulation, and using protocols within the research methods) (Bryman, 2016) it is advised that the Dependability in this research is low. However, within the literature, it is proposed that where repetition of the whole research is unlikely due to the influences of human behaviour confidentiality etc., certain constructs of the research should be refined and controlled, meaning that these constructs could be replicated rather than the whole research settings. Whilst this does seem like a balance, and is being utilised within the research (e.g., using interview protocol and triangulation), this does not take into consideration the researchers' philosophical position and influence within the research, which also cannot be controlled or replicated by other researchers (Gray, 2017). Due to all the above, and with some approaches put in place, the Dependability of this research is deemed **medium**.

11.5 Credibility:

Credibility investigates causality, specifically of whether X leads to outcome Y within the research setting (Bryman, 2016). However, it is not the aim of this research to prove any causality but more to explore what is here and provide a platform for my participants' voices (Eriksson and Kovalainen, 2015). However, there are several measures that can be undertaken that could bolster the Credibility, such as observing individuals within their natural setting, spending long periods collecting data, with continual analysis, alongside triangulation of multiple sources (i.e., participants) and methods of data collection (SSI, PO and DWA) (Gray, 2017), and member-checking (Bryman, 2016). Additionally, Credibility could be increased through the comparison of the results to the literature, whether these results have been seen before, alongside exploring for inconsistencies and alternative explanations for the results and acknowledging the evidence that does not support the research (Gray, 2017). Despite most of these measures being put in place within the research, it is unlikely to increase the credibility, as without running a concurrent study, it is unlikely that I will be able to

demonstrate causality rather than inference within the research. As such this research's Credibility is **low**.

11.6 Transferability:

Transferability explores the generalizability of the research (Bryman, 2016). Collectively, many elements of this research's methodology are not transferable, from its Qualitative nature (Fossey *et al.*, 2002), WSC position (Burr, 2015), Purposive sampling (Bryman, 2016) and FE (Knoblauch, 2005). Additionally, as mentioned in the literature review, neither KM or Partnerships as a concept or approach are generalisable (Edwards, Hulme, and Wallace, 1999; Connell, Klein, and Powell, 2003). However, it has been suggested (like Dependability), that if the research cannot be fully transferred, then maybe certain aspects or results could be transferred. (Bryman, 2016) describes this as "*Moderatum generalisation*", and if applied in a similar manner to Dependability, there could be some low level of *Transferability*. This could occur specifically within the organisations themselves, either with other projects that they are undertaking, or between other partnered organisations they are working with. Or if results were compared to the literature (Eriksson and Kovalainen, 2015) then maybe small elements could be applied further into development or third sector research (Brockington and Scholfield, 2010), with more *Transferability* than first thought. Due to the above, the transferability of this research is classed as **medium**.

Overall, this research aims to be of high quality in its overall *Trustworthiness*, in that the study research what it claims to (Gray, 2017). The primary aim of this research is to answer the Research Questions, as presented at the beginning of this chapter and concluded in Chapter 8. Consequently, the entire research methodology, has been designed around the Research Questions and as such, it is hoped that I have presented a consistent link throughout each section of this chapter, demonstrating that each stage of the research relates to multiple strands of those before and after, all being drawn together to answer the Research Questions. In addition to this connectivity, (Gray, 2017), also suggests that I provide clear definitions of keywords, provide multiple sources of data, and evaluate my research post data collection, all of which I have incorporated into my research. Due to this, the Trustworthiness of this research is presented as **high, and the overall quality of my research is medium-high**.

12.0 Conclusion:

Within this chapter, I have aimed to firstly provide great insight to ensure that the reader can understand the whole methodological process, the reason behind my choices and overall increase its

transparency and trustworthiness. I have also aimed at presenting a balanced picture, by discussing the impact of Covid-19 and how my research adapted from the original plan to what occurred both before and after data collection and analysis. This impact was extensive, but at each stage of the research I adapted as required to ensure that I have undertaken the whole data collection and analysis process to a high degree of quality.

The following chapter, I will be exploring my data, with the aim to answer the research question of *1. How is Knowledge Management conceptualised within and between conservation organisations and what impact does this have on their project partnership?* Within this I bring in the KM Discourse Framework as a lens to explore how my organisations have conceptualised their KM and subsequent KS, before elaborating on the potential impact on their partnerships.

Chapter 5 Research Question 1

1.0 Introduction:

Through the analysis of 34 interviews, 27 meetings, 19 documents and 8 feedback sessions across 3 organisations, the aim of the next three chapters is to examine and answer my research questions. This chapter will address *How is Knowledge Management conceptualised within and between conservation organisations and what impact does this have on their project partnership?*

As you would expect from research undertaken using a WSC philosophy, I will be exploring the conceptualisation of KM within my organisations through my participants' interpretation of reality (Burr and Dick, 2017). The raw data I have collected are my participants' socially constructed reality, and as such I will be using these uninterpreted quotes throughout the chapters. Alongside this, there will be times where I will be interpreting the data using themes taken from my analysis. However, I will clearly outline where my interpretations start and end. This will not only help to understand my participants' perspectives, but also the influence that I as the researcher can have on both the data collection and analysis (Orb, Eisenhauer and Wynaden, 2001; Braun and Clarke, 2021b). Finally, as I will be using the KM Discourse Framework to aid in structuring my data around answering my research questions.

Originally, I was going to analyse my organisation's conceptualisation of KM using all four discourses. However, through the analysis of the data and the literature within Chapter 3, whilst it is possible to view KM through all four of discourses, as demonstrated by Schultze and Stabell, 2004, when it comes to the conceptualisation of KM, my organisations predominantly viewed KM either through a Neo-functionalist discourse and Codification strategy or through a Constructivist discourse and Personalisation strategy or a combination of both (Hansen, Nohria and Tierney, 1999; Greiner, Bohmann and Krcmar, 2007; Bolisani, Padova and Scarso, 2020). As such these are the discourses that I will be using for this chapter. Firstly, I will be exploring whether and how Organisation 1 conceptualised KM from a Neo-functionalist and/or Constructivist discourse. I will then repeat this process for Organisations 2 and 3. Finally, I will be contrasting and discussing my three organisations' perspectives on knowledge and KM and relating this to previous arguments within the literature. It is important to highlight that the Critical and Dialogic discourses are important for this research, but not specifically in answering this research question around the organisation's conceptualisation of KM. This is because, across all three organisations, when discussing their conceptualisation of KM, there is a unified approach, that KM is a tool that can be used by organisations to help improve the

organisation, rather than being used as a means of challenging the established (Alvesson and Deetz, 2000).

Before I begin, I would like to raise some points to keep in mind across the chapters. Firstly, there might be times where the data from my participants might not fit within any of the discourses. This is something that I will be highlighting throughout, as, this framework is not all encompassing (Schultze and Stabell, 2004). As such, I am focusing predominantly on the Neo-functionalist and Constructivist discourse and am not attempting to fit my participants' voices into either the Critical or Dialogic discourses. Finally, the following quotes were chosen because they provide the most appropriate explanation and representation of reality to support the reality my participants presented. Whilst it could be argued that this is influenced by my interpretation of the quotes, I have tried to use quotes that directly and obviously support the point being made so that there can be little confusion and interpretation if you are using the words and language of my participants literally.

2.0 KM Conceptualisation and Strategies within Organisation 1:

Firstly, I am going to explore the use of the term KM within Organisation 1 situated in the GN across the 29 pieces of data (9 interviews, 11 meetings, 6 documents and 3 feedback sessions). Please refer to **Table 3**, within Chapter 4 for a data map. I question whether the term KM has been heard of or used either in a written or verbal format in everyday language within Organisation 1. Through this I will explore the language of '*data*' and '*Information*' across the documents and interviews, as well as other terms around KM that might be used under either a Neo-functionalist or Constructivist discourse. This is significant because the use of the term KM or any other terms in its stead, could indicate how the organisation conceptualises KM. This is particularly important when undertaking research from a WSC perspective, as language is key to constructing realities (Amineh and Asl, 2015; Burr, 2015). After this I will be discussing the KM processes and strategies that I observed my participants undertaking within their everyday work (Hansen, Nohria and Tierney, 1999; Bolisani, Padova and Scarso, 2020) and how these align with what one might expect from an organisation that views KM using the associated assumptions.

2.1 Awareness and Use of the term KM within Organisation 1:

Firstly, from my observations of the 11 meetings within Organisation 1, which included technical, thematic and coordination meetings, **the term KM was not used within the meetings**. Moreover, within the interviews I asked the question of whether the term KM was used, either within

Organisation 1 or within the specific project (depending on the participant, and their relation to the project). Most participants I asked, **had heard of the term KM, but did not fully understand it and so tended not to use the term in everyday language**. This is despite them being a part of the organisation's KM unit, as described in Chapter 4. However, due to this the term KM was used more in relation to Organisation 1 than the project:

“Well, I'm not even sure that we all know what knowledge management is”. (O1 I0).

“So in the beginning, I heard several people asking what does it actually mean”...“knowledge management is maybe used more in [ORG 1] itself, because we are in a [DEPARTMENT], so to speak. So it's mentioned everywhere, yes. So more in [ORG 1] than in the project”. (O1 I1).

These participants' perspectives demonstrate that within Organisation 1 the term KM is known but is not particularly used. However, for those that had heard of the term, how is it understood and what does this mean for the language used across the organisation?

2.2 Written KM Language:

Within this research, I wanted to explore the understanding of KM, both in terms of written and verbal language used across Organisation 1. As such I analysed the six documents provided by Organisation 1. These were all reports, providing summaries for their partners across a singular year or technical reports for their stakeholders across multiple years. As part of my analysis, I explored the terms used within these reports. These reports are how the organisation presents itself to their partners, and stakeholders, and whilst the content might be angled, the language used will be relatively natural to the individual, organisation, and their target audience. I.e., The reality of these organisations is mediated through the language used (Jacobs and Manzi, 2000; Eriksson and Kovalainen, 2015). Furthermore, I will be triangulating the language used within the meetings and interviews (Madill, Jordan, and Shirley, 2000) and as such I think it is appropriate to say that the language used in these reports is representative of the language used in the organisation when it comes to KM. As a basic overview of the language used within the organisation, I analysed how many times the terms *Data, Data Management, Data Sharing, Information, Information Management, Sharing, Knowledge, Knowledge Management and Knowledge Sharing* occurred within these six documents as shown in **Table 5**.

	Meeting reports			Technical reports			
Terminology	Doc 1 2018 (40pg)	Doc 2 2019 (26pg)	Doc 3 2020 (38pg)	Doc 4 2017 (88pg)	Doc 5 2018 (77pg)	Doc 6 2020 (41pg)	Total
Data	34	26	66	138	35	81	380
Data Management	0	5	1	0	3	2	11
Data sharing	0	1	5	4	2	13	25
Information	20	27	48	94	55	94	338
Information Management	0	0	0	1	1	2	4
Information Sharing	0	2	0	0	0	0	2
Knowledge	1	3	4	7	10	15	40
Knowledge Management	1	0	0	1	0	0	2
Knowledge Sharing	0	1	0	0	0	0	1
Total	56	65	124	245	106	207	803

Table 5: Presenting the number of times nine key-terms have appeared in the six documents provided by Organisation 1. These are three meeting reports and three technical reports which include their year of publication and number of pages.

Within **Table 5**, the term *data* (380) is used more often than *information* (338), which is used more often than *knowledge* (40). Additionally, KM was only used twice, and KS only used once. From this, there does not seem to be any connection between the dates of publication and increase or decrease in terms, only that there are more mentions of these terms in the technical reports rather

than the meeting reports, which could be explained by the technical reports being larger documents, with an average of 68 pages compared to the meeting reports 34 pages respectively. **Overall, from the Documentation, it seems that the language used around KM focuses around 'data' and 'information', which is aligned more strongly with an Objectivist ontology.**

2.3 Spoken KM Language and Strategies:

During the interviews with those participants that had heard about KM, I progressed the questioning to ask what KM meant to them. Furthermore, within the scope of the interviews some individuals used the terms *data*, *information* and *knowledge* interchangeably and as such I queried about this terminology and what the difference was between these three terms, to explore if there could be an understanding around the conceptualization of KM in relation to *data*, *information* and *knowledge*, as there is in the literature (Davenport and Prusak, 1998; Mårtensson, 2000; Alavi and Leidner, 2001; Serban and Luan, 2002). These questions were not undertaken on all the interview participants, only those that spoke about *data/information* management in their own discussion around KM. This was to ensure that the participants were happy talking about these linguistic differences, because if they didn't know what KM was, then I did not want to make them feel uncomfortable or uncertain in their understanding of the difference between *data*, *information* and *knowledge*.

Within 5 of 9 interviews, participants discussed *data* and *information* when asked about KM, speaking about it to emphasise that their work and understanding around KM was more focused around *data* and *information* rather than *knowledge*:

"But we actually not often refer to this terminology. We talk a lot about data infrastructure or [MAIN DATABASE] services. That is a technical way to talk about transferring of knowledge, but in a very technical way". (O1 I0).

"Well, knowledge is made up of the data and information that you have at your disposal. So, we need to be able to manage the data to be able to get the knowledge". (O1 I7).

This seems suitable given that the participants focus on the storage, sharing, and application of data and subsequent knowledge in numerous databases and web pages. So, they would have been working with *data* rather than *knowledge*, by their own definition:

"Maybe in my work I better use data information management more than knowledge, but in my task, in my work. So knowledge is important, knowledge management, but, for example, my work I work mainly with data information". (O1 I4).

In addition to the preference for *data* and *information* over *knowledge*, there was also the greater use of language that as discussed within Chapter 3 one might expect when undertaking KM through a Neo-functionalist discourse (Kamara, Anumba and Carrillo, 2002; Schultze and Stabell, 2004). With this objective view of knowledge, terms such as ‘*standardised*’, ‘*scientific*’, ‘*quantitative*’ and ‘*procedure*’ are more common than within the other discourses (Von Krogh, 1998). Many of these terms were identified within the interviews, not when participants were discussing KM, but when they were discussing aspects of their roles:

*“So the platform is very strict. Not very strict, but there is a procedure to upload data.”
...So there is a **standardised procedure** to upload data.”. (O1 I4).*

*“It depends what knowledge we are talking about. We are talking about **technical knowledge, scientific knowledge**, knowledge on life. Well, it depends. We normally exchange quite a lot also in technical terms”. (O1 I6).*

*“I’ve made a lookup table that adopts seven different global country **standards**, so as long as it uses any of the global standards for identifying a country, it is supported. And that’s to be as flexible as possible”. (O1 I7).*

From this, it seems that there is emphasis around language that from the literature would be expected under the Neo-functionalist discourse (Schultze and Stabell, 2004). My interpretation of this is that my participants within Organisation 1 views knowledge as an object (Sveiby, 1996b), that can be moved around (Hurley and Green, 2005) and ‘uploaded’ onto online databases. They are interested in undertaking the project in a more ‘scientific manner’, using standardised processes, and collecting quantitative data over qualitative context specific knowledge. This is not surprising given that Organisation 1 is a scientific organisation by their own definition and in charge of the technical online aspect of the project, in the creation and maintenance of their online databases. They are involved with identifying, collecting, storing, and sharing knowledge within their databases and webpages for the project. Based on this, plus the Neo-functionalist discourse being strongly aligned with the ontological and epistemological views of natural science (Burr, 2015; Park, Konge and Artino Jr, 2020) the above emphasis on the more technical and Neo-functionalist language is unsurprising.

Alongside the language that was used in the documents and spoken during the interviews, I will now discuss my observations of Organisation 1. This will be presented in my own words of what I observed, alongside quotes from participants. From my observations, I recognised that there was a reliance on technology within Organisation 1, in terms of them using technology to create, store,

share and manage their knowledge. This seemed to be the case both for the project and for their everyday work. However, I will put a caveat here, that because my data collection was during Covid-19, many of my participants within Organisation 1 were working from home, making their reliance on certain aspects of technology understandable. However, even taking that into consideration, Organisation 1 had technology as a central focus when discussing the project, KM and KS.

Within the project, as I have discussed previously, Organisation 1's role was one of technical expertise and coordination of creating and maintaining the Main database as well as coordinating the project and engaging with their stakeholders. As such it is not surprising that there is such emphasis around technology. This includes using databases, websites, datasets etc, as well as the standardisation and interoperability:

“So, it's like a portal with different modules. And there it contains a data catalogue. So, a place where us, as scientists, but also managers of the [PROJECT FOCUS], whoever ask for the credential can login and can input and upload some relevant data”. (O1 I0).

“The original idea was that we had the [MAIN DATABASE] and we had the [MAIN SUB DATABASE] and they are actually synchronised. We would have the same information in both [MAIN DATABASE] [MAIN SUB DATABASE]”. (O1 I2).

Furthermore, when it came to the meetings, of the 11 that I observed, 3 were what I would class as thematic, 4 classed as technical and 4 as coordination meetings. Moreover, even the thematic meetings that were focused around non-technical areas of the project, the work that the participants were doing would have had input onto the websites, databases etc. Additionally, from my observations of the meetings, there was a greater time spent talking about the technical side of the project, the interoperability of databases etc.:

- PA3 PA5, I have a few questions about, first of all, [SOFTWARE] repository. Is it the [MAIN STAKEHOLDER] repository or the normal [SOFTWARE]?
- PA5 It's the normal [SOFTWARE].
- PA3 Okay, and is it synchronised with [SOFTWARE] as well or no?
- PA5 It does synchronise with [SOFTWARE], yes. We are not using a synchronisation system because that's actually an extra cost, so I've imported all of the repositories from [SOFTWARE] into [SOFTWARE]. And the idea is to not use [SOFTWARE] anymore and just use [SOFTWARE], since it has the version tracking tool. (O1 M7).

Moreover, when focused on the wider organisation, rather than just the project, there is also a strong focus on technology, especially when I asked the participants about KM. Obviously Covid-19 has influenced the level of technology required as they now cannot turn to their colleague sitting

next to them in the office and ask a question. Plus, since their project has a global focus, technology is essential if they are to communicate to their partners worldwide. Within Organisation 1 there is an Intranet which is used to share knowledge across the organisation. They also use Microsoft Teams as a tool to communicate with one another, either on a specific project or about wider organisational issues, as well as use Teams to store and share documents. Finally, they also had an internal social media, which changed to Teams as well.

"We have an intranet. People use it more or less." (O1 I1).

"So now we have the system in TEAMS, we do have a lot of files on TEAMS and we use that quite well". (O1 FFBS).

"Okay, so well, first of all we have the [DELETED BY RESEARCHER] platform to share the knowledge". (O1 I8).

Overall, across both the project and organisation there is a much greater reliance on technology and its role in storing, sharing, and managing knowledge within Organisation 1. This aligns well with our understanding of the Codification strategy (Hansen, Nohria and Tierney, 1999) with it being focused on the easy storage and quick dissemination of knowledge (Hurley and Green, 2005; Greiner, Bohmann and Krcmar, 2007) and strongly supported by technology (King, 2009; Ng *et al.*, 2012; Venkitachalam and Willmott, 2015). Through the project databases and the intranet there is the easy storage and global dissemination of the project data, which proposes that it could be described as EK (Serban and Luan, 2002; King, 2009; Coakes, Amar and Granados, 2010) and as such is easily accessible (Raymond *et al.*, 2010) Moreover, there is an understanding within Organisation 1 of reusing forms, case studies and presentations for future use, so as not to waste time working from scratch unnecessarily, which is a key criterion of the Codification strategy (Hansen, Nohria and Tierney, 1999; Venkitachalam and Willmott, 2016; Bolisani, Padova and Scarso, 2020). And finally, this understanding of knowledge and so KM is not reliant on humans' construction of knowledge and so is not reliant on people.

However, this is not the only understanding of knowledge and KM that I identified within Organisation 1. Whilst less common, there were three participants that specifically discussed knowledge and KM in a manner that aligns with the Constructionist ontology. These participants were undertaking the thematic side of the project (i.e., nontechnical), and subsequently used language more reflective of social science with its alignment with people and qualitative methods (Alvesson and Skoldberg, 2017).

“But I’m the only person who has had previous experiences with stakeholder workshops, and so facilitating workshops and using flipcharts and using different means for facilitating the dialogue and so on, while most of my colleagues are not. Some are more very technical people”. (O1 I0).

“I don’t know if you’ve had a look at the [QUALITATIVE DATA]. Also, they are part of the outreach. Through the [QUALITATIVE DATA], we try to spread the [PROJECT] product, to communicate our product, and share our research”. (O1 I5).

Through the participants' perspective, whilst technical and quantitative seems to be the norm within Organisation 1, there were still individuals who view KM and KS as a social process (Blair, 2002; Allix, 2003; McKinlay, 2006). This is particularly the case when it comes to the smaller but qualitative side of the project. The few individuals that I spoke to, who were working on the qualitative aspects, seemed extremely passionate not only about their work but demonstrating that it was just as or differently useful as more technical and quantitative work:

“So the presentation was to make the developers and the technical officers aware that there is this functionality to embed [QUALITATIVE DATA] in the system....It’s very powerful so there’s many things you can do with that in terms of interactivity, otherwise it’s just a presentation. And the other thing is that I wanted also to make other people, the non-technical audience let’s say, aware of the content of the [QUALITATIVE DATA]”. (O1 I3).

Actually reach out a lot of people because [QUALITATIVE DATA] combines complex data, complex scientific data with text and nice media. So we can translate. (O1 I4).

This demonstrates that whilst Organisation 1 and the project is predominantly Neo-functional in its views and approaches to KM, there is a minority who view knowledge from a Constructivist discourse. It is evident that people are just as important as technology when it comes to KM (King, 2009) and that managing and sharing knowledge, especially with external individuals, is much more complicated than putting data in databases (Davenport and Dörflinger, 2001; Allix, 2003). Beyond the importance of people in KM, there is also the importance of understanding that under the Constructivist discourse that knowledge can be interpreted differently, all unique to the individual (Delamater and Hyde, 1998; Jacobs and Manzi, 2000; Fopp, 2008). As discussed within Chapter 1, it is important to ensure that the knowledge being shared or used is in a format (Young *et al.*, 2014) that is accessible to a wide variety of audiences (Pullin *et al.*, 2004; Cook *et al.*, 2013) as to ensure that it has the greatest chance of conservation impact (Nguyen, Young and Cooke, 2016). This is discussed further in Chapter 7.

This is particularly important, as the project is globally focused, working across numerous countries

worldwide. As such from a Constructivist discourse, it is important to understand that through each of these countries, there is a different socially constructed reality around the project and so one approach does not fit all:

“So, it's not becoming just cloning something that was done at the central level and then adding that at the regional sites, but obviously trying to address the priorities for each region”. (O1 I0)

“Repository. Is a very technical term, we know what it means but I'm not sure that everybody out there really gets it. I would try and find synonyms in here ...Catalogue is probably better than repository”. (O1 M2).

“Probably someone else would disagree, but every region has different needs and they know better than us what these needs are”. (O1 I3).

The participants understand the differences between local and global knowledge (Raymond *et al.*, 2010) and acknowledge that knowledge can be contextual and socially constructed based on the national culture and experiences (Gadgil, Berkes and Folke, 1993; Huntington, 2000) which sometimes gets forgotten (Boreux, Born and Lawes, 2009). This understanding of context was identified within Organisation 1, unsurprisingly within the individuals who were discussing the qualitative side of the project. These few participants understand that knowledge is a social process (Alavi and Leidner, 2001) subjective and contextual to the individual and their experiences (Nonaka and Peltokorpi, 2006). These assumptions around knowledge can also be seen in the actions and approaches to KM that these individuals have undertaken within Organisation 1.

Firstly, from my observations, there is an understanding across my participants at Organisation 1 that people are important to KM. When asked about KM, participants primarily discussed the databases, and the meetings and online communication that they have through either Teams or social media platforms. This demonstrates that they know the importance of people in managing and sharing knowledge both within and between the organisations. It became apparent to some participants that as well as people and a subjective approach to KM being important, particularly having a relationship with colleagues, and building trust was essential. This is particularly the case for working with external partners within the project:

“That has been perceived as very beneficial for the workplace, but also socially. It's also easier then to get to know the partners, to build the trust between [ORG 1] and the [MAIN EXTERNAL PARTNER] and then the [FIELD OFFICES], just to better understand the work culture, but also the individual habits”. (O1 I2).

“Before the [BIG YEARLY MEETING], I didn’t have the possibility to have direct contact with all the people of the [FIELD OFFICES], not just the contact points. It was good to have the chance to introduce myself to everyone, because I’m new. It was the first contact and I learnt a lot, so it was very productive”. (O1 I5).

Having this trust and relationship between individuals was considered critical to building up the networks and connections required for a global project. Whilst the project work can be done asynchronously online as detailed in the previous paragraphs, having that face-to-face, synchronised, and social aspect of meetings was believed to be extremely useful to the KM and KS:

“I would still rather prefer giving it another try to engage in a call than email communication because I think it’s much more efficient having the option to ask questions a bit back and forth than just typing a lengthy email with a lot of questions”. (O1 M1).

Possibly stemming from these connections with other partnered individuals, within interview (O1 I4), the participant discussed how they use Teams as a tool for creating this community of likeminded people, sharing knowledge around the project or any other related topic:

“Now we have 250 members from each regions among each region, and in this community we have a main channel, a global channel where people can share, for example, new papers or a new article or new information knowledge about conversation biodiversity”. (O1 I4).

Some would argue that this is a Codification strategy because it is using technology to facilitate KM and KS, and whilst this technically isn’t incorrect, I would argue that in this case because it is building up a network of like-minded people (Davenport and Völpel, 2001; King, 2009; Powell and Ambrosini, 2012) the technology in this case is more of a tool than the leading factor in the KM approach. If all these like-minded people, all worked in the same area then this community might not use this online platform and might instead meet face-to-face to share their knowledge. It just so happens that because the individuals are separated geographically that they require the technology for this community. Therefore, I propose that the community is the primary focus with technology as a facilitating tool within Organisation 1 (Greiner, Bohmann and Krcmar, 2007).

Furthermore, there is an understanding that it is easier to share knowledge with people through meetings than other formats (Davenport and Völpel, 2001; Pierce, 2002; Powell and Ambrosini, 2012). This assumption is supported by the fact that the participants within Organisation 1 discussed the high level of meetings that they had, especially since the beginning of the pandemic, accumulating in several meetings per week between my participants. Whilst I acknowledge that I did

not sit on and observe the majority of these, it was my understanding that these meetings occurred several times a day:

“We have meetings. We have twice a week for [PROJECT]. Twice a week for the [NAME OF PROJECT]. Once a week for the [PROJECT FOCUS DATABASE 2]”. (O1 I6).

“No, we have too many meetings. ... Every organisation, especially in the pandemic, has too many meetings. And particularly now has too many virtual meetings. Then we have the organisational level, where we have a certain way of doing things”. (O1 PFBS1).

Whether there are too many meetings or not, if these meetings weren't at least considered somewhat useful for KS, then they might not be held as often. From my own observations and interpretations of the meetings within Organisation 1, I would consider them to be a productive platform for sharing knowledge. This is not based on an arbitrary set of criteria for 'a successful meeting', but more my own understanding of the KM and KS processes and my observations of these meetings. I.e., there was a chance for everyone to speak should they want to, to ask questions and get clarification. There was also an opportunity to ask for help with work. Interestingly, whilst most of the meetings were what you would class as a typical meeting of several people discussing a topic, there was a meeting (O1 M8) between two participants where they were collectively working on a piece of work that they were both struggling with and working through it together. Finally, in addition to these internal meetings, within the project, there was also a big yearly meeting, that was used as a touchpoint for all partnered organisations, as an opportunity to discuss the past year and future steps, plus sharing knowledge between them on the progress that has been made:

“It has grown bigger every year. The last physical meeting was 2019. I don't remember the numbers, but you've received the report, so maybe the participant list is there, but around 50 participants altogether... It makes it easier to work with, but also nicer when you know the person a bit more. Usually there are plenary meetings happening with everybody involved”. (O1 I2).

“And there were some trainings, capacity building on the technical side. So there was also the opportunity for the developers to present new developments in the [MAIN DATABASE], for example, and to do some hands on sessions on the different bits of it” (O1 I3).

These are clear examples of KM and KS which strongly align with the Constructivist discourse and Personalisation strategy (Hansen, Nohria and Tierney, 1999; Schultze and Stabell, 2004; Bolisani, Padova and Scarso, 2020). This includes the management and sharing of knowledge via presentations and face-to-face meetings (King, 2009). Moreover, there are clear examples of building up networks both within the project big yearly meeting and using social media to manage

and share their knowledge between individuals and organisations (Davenport and Dörflinger, 2001). This is a well-supported approach within the Personalisation strategy (Hansen, Nohria and Tierney, 1999; Venkitachalam and Willmott, 2016) and is clearly being undertaken within Organisation 1.

Overall, within Organisation 1 the term KM is known but is not commonly used. Furthermore, those that do understand KM as a term describe it using terms such as *data* and *information* rather than *knowledge*. This can be seen in the meetings, interviews, and the documents and suggests a Neo-functional discourse being the primary lens for knowledge within Organisation 1. Moreover, there is a greater emphasis around technology and how they can be used to store and share knowledge, primarily within databases and online platforms. However, whilst the participants describe knowledge using more technical language and place an emphasis on technology, certain participants show a more flexible understanding of knowledge, whereby the participants understand that their partners might interpret knowledge differently particularly when working on a global project and so a more contextual approach to knowledge is required. However, there is also an understanding that people are important to the KM and KS within the organisation, and so whilst technology is used as a tool to build networks and connect people to enable a greater KS both within the organisation and externally to their partners. Overall, Organisation 1 predominantly conceptualises knowledge using a Neo-functional discourse, but they utilise approaches from both the Codification strategy and the Personalisation strategy (Hansen, Nohria and Tierney, 1999) to enable and support the KM and KS within and between their organisations.

3.0 KM Conceptualisation and Strategies within Organisation 2:

As with the previous section, I will now explore whether the term KM is known and used in a written or verbal format in everyday language, or whether it is presented under different languages within Organisation 2, which is my Global Organisation. This is alongside how KM has developed in terms of people's conceptualisations of it within the organisation and whether this has influenced how it is perceived by the participants. This will be across the 32 pieces of data (15 interviews, 10 meetings, 5 documents and 2 feedback sessions), and is important because how the term was used or how it has changed could indicate how the organisation conceptualises KM both past and present. Afterwards I will be demonstrating various KM strategies observed within Organisation 2.

3.1 Awareness and Use of the term KM within Organisation 2:

From my observations in the 10 meetings, I did not notice the term KM being used. However, that is not to say that KM wasn't occurring within Organisation 2, only that it was not spoken during

attended meetings. However, relating specifically to the interviews, I asked most participants (13/15) whether the term KM was used within Organisation 2 and there were mixed answers. One participant hadn't even heard of the term but knew that it existed, whilst 5 participants had heard of KM, they did not use the term KM personally or specifically and then there were 7 participants that had heard of KM and believe it is mentioned lots within the organisation:

"Immediately to my memory I can't think of seeing the term knowledge management but I'm sure it's in there somewhere, I think I'm just having a brain lapse". (O2 I5).

"But basically no, we don't use that term all that much, although it does come up, but we don't use a different term at that scale, it would be more nuanced and specific". (O2 I1).

"I think knowledge management is used quite a bit. Maybe just a bit more recent, in the last few years we're using it much more than previously, but yes". (O2 I4).

This variety of awareness of KM, could be explained by the development of KM within Organisation 2. In recent years there has been an advancement around KM derived from 'data Management' which they continue to use, but now subsequently have a KM role within the organisation, who was interviewed as part of this research:

"We do in [ORG 2], but only in the last few years has there been a particular focus on it, I think. Prior to that there was a data manager, we still have a data manager, but the focus has moved more towards knowledge management". (O2 I2).

"But we do have a formal data manager role. And so, the knowledge manager role came in to help facilitate that. The data manager was a little bit more focused while the knowledge management role was much broader, trying to figure out all the pieces of the organisation that relate to it". (O2 I15).

Since the term KM is relatively new within Organisation 2, previous terms used such as 'data management' are still being used by participants. This supports the variety of awareness and use of the term within Organisation 2 as since KM is not used within their everyday work, they are unsure of the terminology used to describe it and so refer to what they know – *data management*. Overall, within Organisation 2, according to the participants' views, KM had varying levels of recognition. This is surprising as there is a KM focus within the organisation, as I will discuss shortly, which those 5 participants who had heard of KM but not well, spoke about often.

3.2 Written KM Language:

Organisation 2 provided me with 5 documents to analyse, two of these were not suitable for analysis

due to their confidentiality. These three analysed documents were manuals for their employees, with varying focus across the organisation. As part of my analysis, I explored the terms used within these manuals. Similarly, Organisation 1, the language used will be relatively natural to the organisation and its values (Marshall, Kelder and Perry, 2005; Amineh and Asl, 2015) as well as can be used within triangulation to provide representative KM language used in the organisation (Madill, Jordan, and Shirley, 2000). As with Organisation 1, the same 9 key words were analysed within the documents. See **Table 6**.

Terminology	Doc 1 2021 (35pg)	Doc 2 2021 (32pg)	Doc 3 2020 (93pg)	Total
Data	314	3	59	376
Data Management	84	0	23	107
Data sharing	12	0	1	13
Information	36	7	46	89
Information Management	0	0	2	2
Information Sharing	0	0	0	0
Knowledge	28	5	3	36
Knowledge Management	17	0	2	19
Knowledge Sharing	0	2	0	2
Total	491	17	136	644

Table 6: Presenting the number of times nine key-terms have appeared in the three documents provided by Organisation 2, including their year of publication and number of pages.

Within **Table 6** the term *data* (376) was used more often than *information* (89), which was used more often than *knowledge* (36), with KM used 19 times and KS only twice. This general preference for the term *data*, especially within the first manual, could be explained by the topic of the first manual being extremely data orientated, whereas manual 2 was more people

focused and manual 3 was project focused. Overall, from the documentation, it is noted that the language used around KM is focused around 'data' and 'information' which is more aligned with a Neo-functionalist discourse, but how does it align with the verbal language used within Organisation 2?

3.3 Spoken KM language and Strategies:

Of those participants who had heard of the term KM within the organisation, I progressed the line of questioning for them to describe what KM is within Organisation 2 and again received a variety of answers. Firstly, there were 2 participants who, like the documents, were using language such as *data* rather than knowledge when I asked them about KM within the organisation:

"Yes, we do talk about it, but it quite often ends up being more data focused rather than knowledge. We have a section on the [LOCATION 5 DATABASE] called knowledge Products, so they are talking about it, but we don't consistently use the term knowledge management". (O2 I3).

"We've been asked for support with knowledge management capacity building. And we have done that with countries, often framed around environmental data management". (O2 I15).

When asked about KM, there were participants discussing knowledge products focusing on data management and capacity building. Obviously, this isn't a majority within Organisation 2, but it is interesting that there is this level of variety within the participants' perspective around KM. However, despite this variety, all participants answered the question from the organisational perspective rather than their own role in KM. Some individuals explicitly said that it was something they did not deal with and there were other people working on it, whilst others described KM by talking about the overall work that Organisation 2 does:

"Yes. I've come across it as in, I know it's something that the [ORG 2] does. We have people working on knowledge management. But it's not something that I feel that I work with personally. My understanding of what that involved in the [ORG 2] was always around how you manage databases and how you manage the dataflows and things like that". (O2 I9).

"I don't really know because I'm not involved, but we have a few people at [ORG 2] who are trying to build the knowledge management aspects of [ORG 2]. Information sharing within [ORG 2], improving how we store and share data internally, and then also looking at licensing and how we can share data externally as well, which is still in the process of happening". (O2 I2).

“So, we generate a lot of information and knowledge from different sources and package it and synthesise it in a way that's digestible to decision makers”. (O2 112).

For Organisation 2, the participants have presented that there are varying levels of awareness around the term KM, and even with those who have an awareness of it, there is very little consistency in how they would describe it. However, there is consistency in that the individuals feel that this is something that the organisation or other colleagues do, rather than the individual does, and so possibly do not see it as part of their remit, which can be common within KM (Roberts, 2015). Moreover, within the above quotes, when attempting to describe KM, the participants are using terms such as ‘*databases*’, ‘*dataflows*’, ‘*information sharing*’. The use of this language aligns with what I identified within the documentation and supports the idea that Organisation 2 conceptualises KM from an objectivist ontology. In further support of this, it was strongly noticed within Organisation 2, that participants also used more technical language when discussing KM, using terms such as ‘*standardisation*’, ‘*interoperability*’, and ‘*consistency*’ when discussing their roles and working within the project:

*“So it is about **standardising** the approach that we take and moving towards **interoperability**, which is one of the key things that's on our mind at the moment”. (O2 16).*

*“But, also, that we are embedding that expertise, so that there are people who can promote, say, quality assurance, best practices, **standards**, templates, again, to ensure that this **consistency** and access to knowledge”. (O2 115).*

The language that the participants use when describing their work and KM, demonstrates that they view knowledge using a Neo-functionalist discourse (Schultze and Stabell, 2004), that knowledge is an object (Sveiby, 1996b) that can be stored online and transferred as they see fit (Davenport and Völpel, 2001). This is not surprising as Organisation 2 was brought into the project to aid and facilitate the management of project *data* and *knowledge* within the main and sub-databases. Whilst it is not the only discourse within Organisation 2 as I will demonstrate below, particularly when it comes to their management of their knowledge, they are particularly Neo-functionalist in their understanding – quantitative, technical, scientific, consistent. Based on this, plus the Neo-functionalist discourse being strongly aligned with the ontological and epistemological views of natural science (Burr, 2015; Park, Konge and Artino Jr, 2020) the above emphasis on the more technical and Neo-functionalist language is unsurprising.

Alongside the language that was identified within the manuals and used by my participants, I will now examine my own observations of the participants within Organisation 2. As with Organisation 1,

there seems to be a heavy reliance on technology for their KM and KS. Within the project, Organisation 2 is there to assist in the data management, which includes databases and datasets containing global data, information, and knowledge. As such, I observed within meetings their discussions around their databases and communication with their partners. On top of this, Organisation 2 was also using technology to facilitate the storage of the relevant data, information and knowledge related to the project:

"I'm also meeting with [EXTERNAL COLLEAGUE] on Thursday, just to chat about general [DATABASE 5] coordination, upcoming events and concepts or proposals that she has in the pipeline". (O2 M9).

"We have a shared [SOFTWARE] that we keep a lot of information in that pertains to the data in the database. To keep updated on the [PROJECT FOCUS DATABASE] [DELETED BY RESEARCHER], our liaison with countries, how often we've been speaking to governments and things, so we all know what's been happening in other regions". (O2 I2).

Moreover, it is Organisation 2s' work to be using technology to store, share and create new knowledge for partners across the world:

"Because I feel like so many projects always start with looking at what data is already out there, what can we build off. And so this data inventory is trying to make that easier, so people know already, okay, this exists". (O2 I4).

Finally, something that I observed across most of the participants, is that there was more attention and time put into work that I would align with the Neo-functionalist discourse. Within the meetings, they were discussing the databases, the data, interoperability, and standardisation. In the interviews, often the participants would discuss their work and the KM and KS in relation to the databases and use of technology. This is in comparison to more meetings, training, and face-to-face catch ups:

"And there's still a bit of reluctance to accept qualitative information as data as well" (O2 I9).

However, this is just one participant's perspective within Organisation 2. Whereby whether this is because of the participants having a natural science background or whether it is due to the nature of the work that Organisation 2 does, but either way, I strongly support the quote above and the preference of Organisation 2 participants for quantitative, scientific, and technical work, over subjective, qualitative, and social science work. This is despite Organisation 2 having a comparatively

better understanding of the social aspect of conservation and KM than Organisation 1. Overall, across both the project and the Organisation there is a strong reliance on technology and its ability to store, share and manage the *data, information, and knowledge*. This is particularly important as it is part of the aims around KM that Organisation 2 have:

“But it has been about how we ensure the sustainability, retention of institutional knowledge. The easy access to institutional knowledge across all of our different knowledge, including, but not limited to data. And ensuring that the centralised resources, including the policies, the programs, as well as the technologies we use, are fit-for-purpose to do that. And that in and of itself has been an interesting process, particularly as an organisation that’s growing super quickly”. (O2 I15).

This strongly supports my understanding that Organisation 2 is undertaking KM using the Codification strategy (Hansen, Nohria and Tierney, 1999). Through the above online platforms my participants can store, edit, and update their knowledge. Moreover, they can share this with any of their colleagues within the organisation as well as with their external partners. This links well to the Codification strategy in their easy storage and quick dissemination of knowledge (Hurley and Green, 2005), and strongly supported by technology (Connell, Klein, and Powell, 2003; Bolisani, Padova and Scarso, 2020). This would be described as the *Management of Information*, not the *Management of People* (Sveiby, 1996b). **However, whilst the above is an accurate presentation of the KM at Organisation 2, it is not the whole picture.**

One of the predominant Constructivist aspects of Organisation 2, was the almost universal acknowledgment that language can be interpreted differently by different individuals, that their partners have all different experiences, and that a more personal and bespoke approach works best. Firstly, whilst the language used around KM tended to be Neo-functionalist, the KM might not be the most suitable term when talking with their partner organisation and so suggests that it could be hidden under different terminology, to firstly ensure that it isn’t hindering the partnership process, but also to ensure that it is still undertaken:

“knowledge management may not be the catchiest of phrases, I think. And it might be that you could repurpose that, reframe that, to better reflect the outcomes and what knowledge management is meant to do. I think knowledge management in and of itself sounds very procedural and it sounds a little bit like an administration role. And I think there’s two sides to it, there’s the procedural, institutional structures that are necessary to do it, a lot of which I just talked about”. (O2 I15).

In this case, KM was captured and presented in the form of capacity building for the project partnership. This is interesting because it demonstrates that they know that KM is important, but

also that it can be interpreted negatively by their partners and so must be presented carefully. This supports the Constructivist discourse that reality is socially constructed and there can be several interpretations of the same thing (Delamater and Hyde, 1998; Von Krogh, 1998; Jacobs and Manzi, 2000; Fopp, 2008; Burr, 2015). The other aspect this highlight is that there is no clear definition, at least not one that the participants could establish for what KM is or how it is undertaken at Organisation 2. There is no consistent definition of KM, but rather a flexibility around it, with some participants suggesting a more Neo-functional perspective, some a more Constructivist perspective depending on the context. This aligns strongly with the Constructivist understanding of knowledge, where there is not 'either/or' (Schultze and Stabell, 2004), and no set definitions of things (Deetz, 1996) because it does not provide the flexibility required for researching social processes.

This leads to my main point that the participants at Organisation 2 actively and repeatedly discussed being flexible around their partners. This is in the language used, whether focused on KM or their everyday work, as well as the methods of work and approaches to KM and KS. The different interpretation of language occurs both within the organisations between colleagues of different expertise, as well as with their partners, and is also relevant to their project that works worldwide. Firstly, within Organisation 2, participants highlighted that there can sometimes be barriers between themselves and their colleagues if they are interpreting the same thing differently based on their own experiences and background qualifications:

"I think it's inevitable because often people just naturally understand things differently or come at them from different perspectives. And then it's sometimes quite difficult because something that seems very clear and obvious to me when I'm explaining it, and someone else says, yes, this is what I understood. And what they give back to me sounds completely different to what I was thinking. That happens quite often, and you are left thinking, are we on the same page or are we not?". (O2 I9).

This was further discussed within a meeting where the participants discussed the language they use when sharing documents or proposals with their partners or potential partner organisations and they understand that certain terms can be off-putting, despite essentially being the same:

"The other thing is if you talk about mandatory information, they don't like mandatory. They'd rather you said required. So I've been chatting to [EXTERNAL COLLEAGUE] about it. Because the [AGREEMENT] thing I changed ages ago, but he's, like, there's one thing I noticed that you do that makes them stop wanting to talk, and it's if you talk about anything that's mandatory they're going to switch off". (O2 M1).

Finally, it was expressed by another participant and within the feedback sessions, that this is an important aspect of conservation work, when working with different cultures. That it isn't just a language issue, but a socioeconomic, and cultural issue, that is particularly important for conservation (Roux *et al.*, 2006; Raymond *et al.*, 2010).

"So, we have to be really mindful of the context that we are working in. And even though we believe in one thing, it's not necessarily true for that particular context. So, I think we also provide that contextual information. It has to sit within a broader picture." (O2 I12).

"I think this is an absolutely fundamental challenge to conservation in general because it's admitting or being aware of the extent to which our data, or the way we're presenting it, are actually guided by our own cultural values, and also the cultural values and priorities. And it's very, very frequent occurrence, isn't it, that people from one country will be communicating issues to another, and it actually is not aligning with the actual cultural, social and economic values and context of that country" "I was at a workshop once that was 50% conservation people and 50% fisheries people, and right at the beginning they did one of those icebreaker things and we went around the room and everyone had to say what their favourite fish was. And it was so interesting because 50% of the people were like, oh, I really like the anglerfish because it looks funny, and the other 50% were like, I actually like a bit of cod. Just completely interpreted in opposite ways". (O2 FFBS).

Understanding that conservation, whilst is about saving, protecting, and restoring nature, it is also about engaging with humans and tackling conservation from a social perspective (Berkes, 2007; Cvitanovic *et al.*, 2015; Toomey, Knight, and Barlow, 2017).

"I think, historically conservation has been very focused on the nature element of it. I think the awareness that the social side has to come in and has to play a role has been growing over the last years, decade or so, that I've been involved. But it's still in the minority, I think". (O2 I9).

From this we can see that there is also a Constructionist understanding of knowledge within Organisation 2. These participants understand that knowledge is social and subjective to the individual (Taylor, 2018), with each having a different interpretation (Jacobs and Manzi, 2000), depending on their own experiences and beliefs (Moon *et al.*, 2021). This is supported by the Constructivist discourse viewing knowledge through the '*mind*' metaphor to emphasise that people's minds construct their own reality and interpretation of it and so a flexibility is required when using certain language or approaches to KM as we shall see below (Schultze and Stabell, 2004).

Moreover, throughout my data collection I observed several behaviours which aligns with the Personalisation strategy (Hansen, Nohria and Tierney, 1999). Firstly, like Organisation 1, there were

many meetings that I attended and even more that I did not. These meetings I observed to be productive platforms for KM and KS:

“So we share information like that, but also of course meetings, we have stand-ups, there’s the team stand-ups but then also lots of projects stand-ups. You’ve attended the [WIDER PROJECT] one, but we have a very similar one with [OTHER WIDER PROJECT], where we gather shortly every two weeks, and then we also meet and everyone shares what’s been the progress in the last two weeks, and what’s on for the next two weeks, and we try to communicate about it in that way”. (O2 14).

During my observations I noticed plenty of actions and processes that could be classed as KM. These included the ‘stand ups’ which were regular updates between individuals on previous weeks progress and what they were working on this coming week, asking questions of others during the meetings and volunteering time and help to others. The meetings that I observed were just within the department, but I was repeatedly told about a weekly informal meeting that they had across the whole organisation called ‘Tea at three’, whereby it was a chance for people within the organisation to get together and have a catch up, both in terms of work but also socialising:

“When we were in the office, in every tea get-together a programme would be presenting something. So, that was a nice way”. (O2 17)

“And then obviously, the [ORG 2], you’ll have been told lots of times, there’s the afternoon tea on a Wednesday”. (O2 111).

This was face-to-face when possible and then moved online during Covid-19. This demonstrates the importance that Organisation 2 put on interdepartmental sharing and relationship building. Moreover, it was said that during these weekly catch ups, one team would take the lead and they would present something that they wished to share. This reinforces that this is a good platform for KS, as well as used methods that are indicative of the Personalisation strategy (Argote *et al.*, 2000; Sharratt and Usoro, 2003; Venkitachalam and Willmott, 2016). Alongside these meetings, my participants also spoke about the use of online platforms to create communities where they could ask for help, discuss their work, and plan projects:

“Basic communication is done through email and Teams. We have a mixture of Teams group with different teams based on our regions, and then we have annual meetings”. (O2 12).

“In terms of communication, not really because in-person meetings would only happen when there’s a workshop a couple of years ago. But other than that, we’ve always used email, Skype”. (O2 17).

As with Organisation 1, this use of technology could be indicative of the Codification strategy, but due to the communities and COP's (Davenport and Völpe, 2001; Pierce, 2002) that are being created on these online platforms, and that they are mainly only needed due to the pandemic making people work from home, that technology is just a tool to facilitate this KM process, and that it is still being undertaken from a Constructivist and Personalisation strategy:

Yes. And the technology is one thing, but it's the human resources and the knowledge that's crucial. Because if you provide a technology solution without the knowledge required to work with or troubleshoot it- it will not be useful". (O2 I15).

Moreover, the fact that they understand that having multiple platforms to facilitate the sharing of knowledge between themselves internally and externally depending on their connection and preference, demonstrates this flexibility and understanding around KM and it being a social process:

"There's also thinking about different connection issues. In areas of the world and some platforms work better than others. So, it's quite handy in some ways having that variety, so you can switch between the ones that work for the different people that you're engaging with". (O2 PFBS).

Finally, there is also an extremely high level of collaboration between individuals within teams. This was observed in weekly meetings where participants stated what they were working on that coming week, and it was extremely common for multiple people to talk about work they were doing with someone else either in the meeting or within the team:

"[PA8], [ORG 2 COLLEAGUE] and [PA3] continue to be busy with final stages of submitting the [DELETED BY RESEARCHER] proposal to [ORG 2 PARTNER]. So, that needs to be by the end of the month". (O2 M2).

"So, [ORG 2 COLLEAGUE] and [PA9] hosted, and [PA13] and myself, hosted a [DELETED BY RESEARCHER] brainstorm last week with external experts". (O2 M5).

This demonstrates that some participants view knowledge using the Constructivist discourse and undertake KM using the Personalisation strategy (Hansen, Nohria and Tierney, 1999). KM under this discourse and strategy is about building networks of individuals (Connell, Klein, and Powell, 2003; King, 2009; Powell and Ambrosini, 2012) either through meetings or online platforms and having the flexibility to adapt around technological issues. Moreover, having a recognition that quantitative, natural science is not the only way to undertake a piece of work and a qualitative approach can help

KM, seeing as humans are crucial (Wilson, 2002) but also get alternative and supplementary evidence for their work and projects.

Overall, within Organisation 2 the term KM has mixed recognition but tends not to be used in everyday language. Those that did describe KM used language such as *data* and *information*, as was also seen within the documents. Moreover, there seems to be an understanding that KM was undertaken at the organisational rather than at the individual level. This alongside the emphasis and reliance on technology for their KM, leads me to believe that Organisation 2 at least in part conceptualises knowledge and KM using the Neo-functionalist discourse and Codification strategy. However, in contrast to this are my observations and discussions around the importance of contextualising knowledge and using different languages depending on the target audience. Particularly when engaging with global partners. There is an almost universal awareness that knowledge and language can be interpreted differently, and each person is creating their own reality based upon their own experiences and background. As such it is evident that both the Neo-functionalist and Constructivist discourse can be seen within Organisation 2, with the Neo-functionalist discourse being dominant, with an underlying Constructivist discourse. Supporting this is use of approaches and strategies within Organisation 2 that reflect both the Codification and Personalisation strategy. This includes the use of databases for the quick and easy storage and dissemination of knowledge, as well as the building up networks of people both internally and externally. Overall, Organisation 2 views knowledge primarily using the Neo-functionalist discourse and secondarily Constructivist discourse. Additionally, they use both the Codification and Personalisation strategies within Organisation 2.

4.0 KM Conceptualisation and Strategies within Organisation 3:

As before, across the 26 pieces of data (10 interviews, 6 meetings, 8 documents and 3 feedback sessions), I will explore whether the term KM has been heard or used within the project or Organisation 3, which is my GS organisation. This is important to understand, as how the organisation conceptualises KM can be influenced by current and past projects, plus by the organisation itself. Afterwards, I will then be exploring the language used around KM within documents, as well as the terms participants used when describing KM. Finally, I will be discussing the approaches to KM that were observed and discussed by my participants within Organisation 3.

4.1 Awareness and Use of the term KM within Organisation 3:

Firstly, from my observation of the 6 meetings within Organisation 3, the term KM was not used

within the meetings. However, within the 10 interviews with my 9 participants, when asked whether they had heard of the term KM, all my participants had heard of the term KM:

“Definitely. It’s used a lot. That’s a big component of our work”. (O3 I8).

“Yes, it’s used quite often by our comms department, or I would say comms division or unit you can call it. I would say department”. (O3 I4).

But as was the case for the participants within Organisation 1 and 2, the terminology isn’t overly used in everyday language, with only 5 interviews suggesting that it was used within the Organisation. (O3 I1, I3, I4, I6, I8). Moreover, it was mentioned by a participant that they first came to hear of the term KM only once they had joined Organisation 3, rather than having heard it in their previous GS organisation:

“For me, it’s something new, to be honest. I just found that out after joining [ORG 3], because I found out there is a knowledge management team at [ORG 3] ...For me, it’s something new when I heard the term. I just found out after joining [ORG 3], in the past few months”. (O3 I5).

This demonstrates that the term KM is known within Organisation 3. This is supported by other information gathered from a non-recorded interview (O3 I6), whereby it was stated that within the last few years, Organisation 3 has gone through a change where KM was given greater capacity and resources. This can also be seen through the answers participants gave when I asked them about whether the term KM was used within the organisation:

“Yes, we haven’t always used that term, but it has come to the fore in the past few years as a term that is quite important for us to take on”. ... “No, not really new. I’d say it’s probably in the last ?? years for us, yes. Otherwise, before, it was just information management”. (O3 I1).

Prior to this emphasis around KM, it was detailed that the term *information management* was used instead, during a period when there was less time, energy and resources afforded to the management of *data, information, or knowledge* in any capacity at Organisation 3. However, within recent years, significant attention has been paid to KM, in their Communications, HR and IT departments, to create a new KM Department and KM strategy (ongoing), with interoperability of KM across the different departments and integrated into the Organisational strategy (O3 I6). Due to this current and ongoing priority change, it is understandable that the participants have heard of the term KM within Organisation 3, but not necessarily prior to working at Organisation 3, or being able to provide details on what KM means, as it is a new term.

4.2 Written KM Language:

As with Organisations 1 and 2, I analysed the documents for specific language use. Organisation 3 provided me with 8 documents, with varying structure, target audiences and objectives. I was given three small documents, that included a leaflet, diagram, and a summary document, alongside 3 newsletters and 2 reports. These documents and language depict how Organisation 3 represents itself internally to its own employees, but also externally to its partners and stakeholders (Jacobs and Manzi, 2000; Amineh and Asl, 2015). As with Organisations 1 and 2, the same 9 key words were analysed within the documents. See **Table 7**.

	Leaflet, diagram, and summary document.			Newsletter			Report		
Terminology	Doc 1 2019 (2pg)	Doc 2 2019 (1pg)	Doc 3 n.d (3pg)	Doc 4 2021 (9pg)	Doc 5 2021 (10pg)	Doc 6 2021 (9pg)	Doc 7 2020 (60pg)	Doc 8 2021 (13pg)	Total
Data	12	6	4	2	0	1	50	33	108
Data Management	0	0	0	0	0	0	1	0	1
Data sharing	2	1	0	0	0	0	1	1	5
Information	11	0	6	0	0	0	41	20	78
Information Management	1	0	0	0	0	0	1	1	3
Information Sharing	0	0	3	0	0	0	3	3	9
Knowledge	1	0	1	0	1	2	16	3	24
Knowledge Management	0	0	0	0	0	0	10	1	11
Knowledge Sharing	0	0	0	0	1	0	1	0	2
Total	27	7	14	2	2	3	124	62	241

Table 7: Presenting the number of times nine key-terms have appeared in the eight documents provided by Organisation 3. This includes a leaflet, diagram, and summary document, 3 newsletters and 2 reports, including their year of publication and number of pages.

Table 7 demonstrates that the term *data* (108) is used more often than *information* (78), which is used more often than *knowledge* (24), with KM used 11 times and KS only used twice. There does seem to be a preference of the term *data*, over *information* and *knowledge*, across all the different types of documents. This might not be surprising due to the relative newness of the KM term within the organisation. Overall, the 8 documents present that the language used around KM is more focused around '*data*' and '*information*' which is more aligned with a Neo-functionalist discourse, but how does this align with the verbal language used within Organisation 3?

4.3 Spoken KM Language and Strategies:

Firstly, when I asked participants within their interviews about the KM in the project or Organisation, participants predominantly spoke about KM in relation to the Organisation, rather than the project. Whilst this could have been influenced by the angle in which the question was asked (if we had already been talking about the Organisation or project etc.), I do not believe that this is the case. Those spoken to about the KM at Organisation 3, generally discussed KM in relation to the administrative teams within the Organisation – Communications, IT, HR, KM team, rather than specific individuals, projects, or any other departments:

"Yes, it's used quite often by our comms department". (O3 I4).

"We have a Knowledge Management Unit, that's the one that manages our information resourcing. They also hold publications and content for us to share externally. But they also are responsible for managing our internal content as well". (O3 I8).

"Yes, internally. We do have a knowledge management division, department here. And we currently work with their.... They do quite an excellent amount of work. So, what they do is, they really help manage everything that's been passed around at [ORG 3]. (O3 I10).

Linking this back to KM being a relatively new term within Organisation, it would make sense that the new KM approach within Organisation 3, was coming from within and as such participants have heard of the term, particularly in relation to the internal teams that are leading the change. However, these individuals who I asked what KM was to them, were not overly able to explain what KM was:

“But yes, I mean I would not say that we haven’t heard of those words before. We did, but in actual context what it really means, how that is defined, what it means, what sort of activities includes knowledge management, I have never come across”. (O3 I4).

“It’s just how you manage knowledge within an organisation. As the word says, it’s how you manage knowledge, knowledge management in terms of how you communicate maybe, how you interact with colleagues or with other organisations, or departments within the bigger organisation”. (O3 I5).

Unless prompted, participants would not discuss their own role in KM, just what the organisation is doing through these departments. My interpretation of this is that KM was something separate from their own everyday work until the KM team (or other departments), asked something of them in relation to KM. As with Organisation 2 this disconnect is common within organisations (Roberts, 2015). Due to this, those subsequently asked about their role in KM provided a variety of answers involving anything from getting notifications from the KM team to the work that the Organisation does around knowledge Storage and KS:

“They’re really just daily reminders of just housekeeping rules and stuff... So, they’re just reminders of us to please respect the use the intranet, don’t mess it up when we go in there....And if we have a conference and everything, please ensure that we pass over all the information from that conference onto them so that they can register. So, a lot of the information is stored with them”. (O3 I10).

“but we understand that maybe we have done a press release to capture some good stories. Maybe we’ve done some bulletins. Maybe it’s a website. Maybe it’s some sort of a data storage that would be in our captured some sort of a server or something”. (O3 I4).

Overall, the Organisation 3 participants have heard of the term KM, but this is mostly within the Organisation, and in relation to the departments that are leading the KM change. As such there is little ownership over KM at the individual level and so confusion over exactly what KM is. However, something that became apparent during the Interviews is that when any of the participants spoke about the KM within Organisation 3, they spoke about data and technology – *virtual library, intranet, servers.*

“we have the [DELETED BY RESEARCHER] data portals in which actual data can sit”. (O3 I2).

“For example, we convert them into PDFs and we upload it on the website. There’s a specific platform that is designed by [SOFTWARE] it’s called”. (O3 I4).

“So when one of the masterpiece I guess for the knowledge sharing and the knowledge management at [ORG 3] is the library”. (O3 I9).

From my perspective having collected data from Organisation 3, their approach to knowledge is like that of Organisations 1 and 2. They believe that knowledge is an object (Sveiby, 1996b) that can be collected from their employees, captured, stored, and shared back to others within their region (Hurley and Green, 2005). And possibly due to their geographical location, scope of projects or because of Covid-19, there is a significant reliance on technology to do so (Hansen, Nohria and Tierney, 1999; Ng *et al.*, 2012; Venkitachalam and Willmott, 2016). Additionally, they use similar technical language as did the other organisations:

*"We want to have a **standardised format**, so that all the data have the same standard. Standard is the word, so that everything, it's easy to interpret, easy also to record and also input as well". (O3 I5).*

*"Yes. So, I feel like the organisation share knowledge in a **systematic way**". (O3 I3).*

From this, I would surmise that Organisation 3 views knowledge using the Objectivist ontology. This is based upon the Organisational perspective of KM, the emphasis placed on technology when discussing KM and the language that one would expect around natural science and the Neo-functional discourse. Moreover, as I will explore in the following chapter this could be due to the partnership with Organisations 1 and 2 influencing the KM within the Organisation.

Alongside the language identified, I will now examine my observations of the participants engaging with KM within Organisation 3. Firstly, as with Organisations 1 and 2, there is a strong reliance on technology for the storing and sharing of knowledge both internally and externally. There is a tendency to use Teams within the organisation alongside email, whereas externally there is greater emphasis around the use of social media to share knowledge:

"I also just communicate through email, through Teams, messages through Teams, and meetings with the programme that I'm in". (O3 I5).

"And so we also do a lot of things on social media. We grew our social media, we did a lot on social media actually". (O3 I8).

There is also the use of online platforms for the storage and sharing of data related directly to the project. Ensuring that it is standardised across the platforms and that there is interoperability and synchronicity between them:

"So, whatever data that's provided, because the data are synchronised directly into the portal, my role is just to ensure that this data is updated before it's uploaded into the portal". (O3 I5).

Moreover, there is an understanding of reusing forms, case studies, presentations etc. for future use so that there is no wasted time, recreating from scratch. Also, to facilitate the sharing of this, various forms of the same document are stored so that they are easily accessible in the future depending on the target audience:

“And we keep it for use in the future, where we can share these lessons learned, the examples, the case studies, and we keep it in different forms”. (O3 I4).

Overall, across both the organisation and the project there is a heavy reliance on technology and the storage of knowledge for future use. These are key criteria for the Codification strategy and the reuse of knowledge (Hansen, Nohria and Tierney, 1999; Bolisani, Padova and Scarso, 2020) and as such facilitates the easy storage and dissemination of knowledge (Greiner, Bohmann and Krcmar, 2007). Through the standardisation of data, stored within these online platforms, they are easily accessible and shared both internally and externally, and can be reused with multiple external partners.

Whilst this Neo-functionalist and Codification strategy, is a probable reality, it is not the only reality within Organisation 3. As alongside this emphasis placed upon technology, through my observations within meetings was the emphasis around people, their local and regional community, and having that level of awareness others. However, this was not made explicit within interviews unless specifically asked, unlike within Organisations 1 and 2 whereby they spoke about it more naturally. This was surprising, as I felt like I was observing behaviours reflecting a Constructivist discourse but being told about a Neo-functionalist discourse. For example, within meetings participants might be discussing an event between themselves, emphasising the importance of community and people. However, when asked about KM, they predominantly spoke about the online library, rather than meetings etc. As such I raised it within the Feedback sessions with my participants and they clarified. Within the Preliminary feedback session one participant discussed the culture at Organisation 3 and within the region and how it is embedded in everything they do:

“I have two words for your, [LOCATION 3 CULTURE]. That’s the [LOCATION 3 CULTURE], that’s the way we do things in the region. We’re very relaxed and we value each other and respect each other’s viewpoints, opinions, but at the same time, we are very hard working also. That’s how we conduct business, that it’s incorporated quite a lot into our organisational values and code of conduct. But that’s the overarching way we do things, the [LOCATION 3 CULTURE]. Which is best, respect and humility, free and open communication”. (O3 PFBS).

However, they also mentioned that it was so embedded that they almost don't see it anymore. This was also reiterated within the Formal feedback session, where I mentioned the point again as I had detailed in their report:

"Thank you. I really value that last part of the organisational culture. It's something that internally we know it's happening, but now we've finally heard it from an external source". (O3 PFBS).

"It's nice to see it from your perspective too, [RESEARCHER], because although we know the [LOCATION 3 CULTURE] and how we interact, it's nice seeing it from, or hearing it from you". (O3 FFBS).

At this point, participants started having a conversation amongst themselves discussing whether People or Technology was more important within their Organisations' KM:

- PA4 *"It seems to me that technology provides a vehicle to actually share information and knowledge across borders in a way that wasn't there before. But technology to me does not seem like a living factor. It's a cultural business practices shift, that's the challenge".*
- PA3 *"Okay, we can have the most sophisticated information system but if we don't, like, if the people aren't willing to use and also to share information and using those tools then I don't think that there is no use of spending a lot of money on buying all this expensive equipment Like what PA4 was saying".*
- PA5 *"I was just saying that technology is a means to an end and for the purposes of Knowledge Management and Knowledge Sharing, technology is only as good as what you put into it. So the people part of it is quite important, cause you know technology requires a degree of babysitting at this point in time and with Covid now we are increasingly, we arguably, shifting more towards our reliance on technology for communication is shifted more to ... yeh online approaches and stuff like that so". (O3 FFBS).*

To summarise, the participants do not believe that technology is more important than people when it comes to KM. KM uses technology as a tool to implement its storage and sharing due to the abundance of knowledge and difficulty connecting its partners due to location and Covid-19, but that the main area of importance is people. It does not matter how well technology is integrated, if people aren't willing to share their knowledge, then technology is useless (Alavi and Leidner, 2001; Serban and Luan, 2002; Venkitachalam and Willmott, 2015). From this people are so intricately linked to the work and how KM technology is a tool, whilst the main approach should be more personal, sociable, and subjective. As such I can say that Organisation 3 also strongly views knowledge using a Constructivist discourse.

To support this, one participant, raised the important point of traditional conservation knowledge (Gadgil, Berkes and Folke, 1993; Huntington, 2000), alongside ‘scientific knowledge’:

“So, ensuring that the traditional knowledge is featured in some of the work that we are doing. For example, under the species work, where [DELETED BY RESEARCHER] have cultural significance or legends which some of the fish would have in some of the countries. So, we tend to use these to promote how the [LOCATION 3] is unique in terms of having that legend where a species for example, capturing that knowledge and also when we’re doing...” (O3 I3).

It was evident that the participant understood the importance of traditional knowledge across their region, (Gadgil, Berkes and Folke, 1993; Roux *et al.*, 2006; Hulme, 2010). They understand that there are customs, cultures, traditions, and different perspectives around knowledge within their region in the GS and these need to be considered when undertaking KM and KS. This can also be seen in the ways that partnerships are built across the region, how each country and organisation have their values and habits and so a flexible approach is required to be able to adapt to these customs and build strong connections. This is not only across diverse countries but also between individuals with different backgrounds, experiences, and educations:

“It’s really important, but there has to be the formal communications. You have to be able to do absolute formal, circular to the minister, proper salutations, deference, etc. Plus, make the ground-level officer, who maybe has three or four years of schooling, limited English, feel comfortable enough to do the work, and want to interact with you. The whole gamut of that formal to informal is necessary for any successful coordination. You’ve got to do all of it”. (O3 I7).

“To simplify the language and the very scientific publications and especially in the [CONSERVATION TOPIC] area and you can see that from our website. We have a lot of factsheets, newsletters, brochures and so forth”. (O3 FFBS).

As such it is suggested that Organisation 3 views knowledge as something that can be constructed by individuals or groups (Alavi and Leidner, 2001), being subjective and contextual to that individual or region (Nonaka and Peltokorpi, 2006). Moreover, the participants that viewed knowledge from a Constructivist perspective also spoke about KM and KS approaches that aligned with the Personalisation strategy (Hansen, Nohria and Tierney, 1999). Firstly, in the observed meetings, examples of KM and KS such as updating each other on their progress, asking questions (Sharratt and Usoro, 2003) around the various projects and sharing useful details:

“a quick look at my calendar to see what we’ve got coming up this week. There’s still a lot of that in-house training with the communications team, monitoring, evaluation,

HR". (O3 M2).

"So, last week we were able to have the [LOCATION 3 COUNTRY] workshop which finished on Friday, it ran throughout the whole week. And it was a busy week trying to get all things sorted". (O3 M4).

These training and workshops undertaken internally within Organisation 3, are examples of sharing TK between individuals (Argote *et al.*, 2000) whereby there can be individual and collective learning (King, 2009). This approach was further supported by a couple of participants within their interviews discussing the teamwork and collaboration that they undertake with their colleagues within Organisation 3:

"there's always that opportunity to reach out to one another and see whether there's possibility for synergies and working together on that, because obviously, as I said, some of our issues, there is a big overlap, so it makes sense to work together and pool resources and demonstrate partnerships". (O3 I1).

Furthermore, it was identified both within the meetings and interviews that training on a variety of topics is available to the participants. Some were mandatory but it still is an example of KS with a focus around people (Szarka, Grant, and Flannery, 2004):

"Everyone, just check that you've done one of those HR-staff regulation meetings, workshop trainings". (O3 M4).

Finally, there could be an informal COP (Davenport and Völpel, 2001; Sharratt and Usoro, 2003), within Organisation 3 in which they gather for tea every day at 10-10:30am. This involves those who are in the building heading to the kitchen for a drink and provides a place to talk with their colleagues. This isn't just an update with their team but a social gathering across the whole organisation:

"We have a social meeting area where we have a morning tea every morning, and then that gives us a chance to interact with our colleagues from the other programmes and share ideas. It really helps for bonding, and also for joint collaboration and just fostering those relationships". (O3 I1).

"Yes, we have morning tea every day. So, everyone just go up and just mingle for half an hour before coming to work". (O3 I3).

Based on this data, Organisation 3 are undertaking KM using the Personalisation strategy. Through their projects they have created networks of countries and organisations that they are in regular contact with, KS in both directions (Blair, 2002; Hurley and Green, 2005; King, 2009). Internally, they are undertaking organisational training (Szarka, Grant and Flannery, 2004), as well as forming

informal COP with their morning tea (Davenport and Völpe, 2001; Sharratt and Usoro, 2003). Moreover, whilst they do use technology within their KM and KS as mentioned in the Neo-functional section, it is not their priority and more of a tool when it comes to KM (Hansen, Nohria and Tierney, 1999). Overall, there is a strong Constructivist and Personalisation strategy occurring within Organisation 3.

Overall, within Organisation 3, the term KM had been heard of recently but was not used within the organisation. Those that had heard of the term KM, tended to describe it using terms such as *data* and *information*. This was the same in the documents. Moreover, there was an understanding that KM is something that other departments within the organisation did rather than undertaken at the individual level. This alongside the reliance on technology to retain engagement with their partners, suggests that Organisation 3 at least in part conceptualises knowledge and KM using the Neo-functional discourse. However, contrastingly, there were several observations and participants discussing people and relationships both within Organisation 3 and between their partners. They understood the importance of people in KM and KS and were working towards building a community suitable for this. As such both the Neo-functional and Constructivist discourses are observed within Organisation 3, possibly with a slightly greater emphasis on the Constructivist discourse. Supporting this is the strategies within Organisation 3 that reflect both the Codification and Personalisation strategy. Whilst this does include the use of databases and online portals, technology within Organisation 3 is more used as a tool to connect people within their region, to ensure that relationships and engagement continue, thus enabling continued KM and KS both within and between the organisations. Overall, Organisation 3 views knowledge using both the Neo-functional discourse and Constructivist discourse (Schultze and Stabell, 2004). And undertakes KM using both the Codification and Personalisation strategies (Hansen, Nohria and Tierney, 1999) with an emphasis around people being utilised within Organisation 3.

5.0 Discussion:

Within this section, I contrast my three organisations, including the level of familiarity the organisations have with the term KM and whether they use any other language instead. Also, I will be comparing the written language used across my three organisations from their documents plus the spoken language. Finally, I will finish by exploring the KM strategies identified within my organisations. Before that I am going to provide a short summary of each of the organisations within **Table 8** reviewing each of these areas.

	Organisation 1	Organisation 2	Organisation 3
Awareness and Use	KM term not used in meetings. They have heard of the term KM but unsure what KM means and so is not commonly used.	KM term not used in meetings. Mixed levels of awareness, possibly due to KM being built upon <i>data Management</i> .	KM term not used in meetings. Heard of but not used possibly because it is a new concept within the organisation.
Written Language	data used more than information, which is used more than knowledge.	data used more than information, which is used more than knowledge.	data used more than information, which is used more than knowledge.
Spoken Language	Uses data or information over knowledge. Technical language used. project focused. Understanding that knowledge can be interpreted differently.	Variation in language used on KM. Technical language used. Organisational focused. Different language used, depending on target audience due to different interpretations.	Unsure of the definition of KM. Technical language used. Organisational focused. Different languages depending on their partners, and consideration of local knowledge.
KM strategies	Technology used for both the project and Organisation. Internal and external focus. Re-use of data and documents. Communities and networks built to connect people.	Technology used for both the project and Organisation. Internal and external focus. Re-use of data and documents. Technology used to connect people worldwide.	Technology used for both the project and Organisation. Internal and external focus. Re-use of data and documents. Building communities and collaborating internally and externally.

Table 8: Summary of the awareness and use, written, spoken language and the KM strategies that my three organisations are using that align with a Neo-functional discourse and the Codification strategy and the Constructivist discourse and the Personalisation strategy.

5.1 Awareness and Use:

Firstly, something that I would like to highlight is the rise of KM within each of my organisations and how this compares with Chapter 3. For Organisation 1, situated within the GN, KM within the organisation reflects the literature well, although up to a point. Organisation 1 still predominantly views KM using a Neo-functionalist discourse whereby knowledge is an 'Asset' for the organisation and should be harnessed by the organisation to maintain its competitive advantage (Chase, 1997; Corfield, Paton and Little, 2013; Roberts, 2015). However, in more recent literature there has been a move away from this view of KM into one that places emphasis on People (Wilson, 2002; Allix, 2003; McKinlay, 2006; King, 2009). Organisation 1 did not adapt in the same way and as such there is less Constructivist discourse found within the organisation but still some. Organisation 2 on the other hand, as my Global organisation, reflects the literature more strongly. Organisation 2 prior to KM has *data* and *Information management*, both in terms of systems but also people within the organisation. However, more recently they have moved away from strictly *data management* and brought in KM. So, it is still through a Neo-functionalist discourse with knowledge being an 'Asset' to help improve the Organisation (Mårtensson, 2000; Serban and Luan, 2002; McKinlay, 2006), but they are actively raising awareness of a more People and Constructivist approach to KM. So, they are managing the knowledge through managing the people (Sveiby, 1996b; Blair, 2002). As such, the KM and KS being split equally between the Codification and Personalisation strategies. Finally, Organisation 3 is different again. Organisation 3, situated within the GS, is like Organisation 2 in having a previous use of data and Information Management before KM, and so a Neo-functionalist understanding around knowledge. Additionally, Organisation 3 already places strong values on People and Community, so, Organisation 3 KM has almost occurred in reverse. Whereby there is an understanding on the importance of people, but KM has come in secondary, with an emphasis around technology (Connell, Klein, and Powell, 2003), which Organisation 3 is attempting to balance both equally.

This is interesting as it highlights the similarities and differences in how KM developed and is conceptualised within the organisations in relation to the literature. This is particularly the case for GS organisations which might not reflect the literature due to its GN focus and origins (E.g., USA (Carrillo and Chinowsky, 2006), Europe (Davenport and Völpe, 2001), as well as Japan (Nonaka, 1994) and Australia (Venkitachalam and Willmott, 2016). Moreover, as the KM literature is not predominantly focused on NGOs or the conservation sector, this reflection is particularly engaging as it demonstrates the potential application of KM for the conservation sector and whether the conceptualisation of KM can be influenced by their and partnership, as I will discuss within Chapter

6.

5.2 KM Assumptions and Strategies:

Secondly, within the original literature many of the articles suggested that you can either manage the people or manage the information (Sveiby, 1996b), or you start with managing the information and move onto managing the people (Orange, Burke and Boam, 2000; Allix, 2003; McKinlay, 2006; King, 2009) or you use the Codification strategy or the Personalisation strategy with Hansen, Nohria and Tierney, (1999) suggesting it needs to be all or nothing and at most an 80:20 split. However, that is not what I have found across my three organisations, as described above.

Additionally, it is not just the conceptualisation of KM that has this problem but also the KM strategies implemented within the organisation. There is a general and limited understanding that if you are undertaking KM from a Neo-functionalist discourse, you are using the Codification strategy, and if you are undertaking KM from a Constructivist discourse you are using a Personalisation strategy. However, I have found this not to be the case, and for it to be a lot more complicated than *either/or* (Burrell, and Morgan, 1979). I have found examples of both the Codification and Personalisation strategies in all three organisations, and it does not seem dependent on whether they align with the Neo-functionalist discourse or the Constructivist discourse. My findings here are supported by more recent research into the Codification and Personalisation strategy (Kumar and Ganesh, 2011; Ng *et al.*, 2012; Bolisani, Padova and Scarso, 2020) which argue for a more flexible and pluralistic approach of KM strategies within organisations, across both time and location (Scheepers, Venkitachalam and Gibbs, 2004; Kumar and Ganesh, 2011).

So, whilst the literature would argue that your assumptions around knowledge can influence your philosophical position (Morgan, Smircich and Morgan, 1980; Deetz, 1996; Moon, Adams, and Cooke, 2019) and enforce your approach to KM, this is an oversimplification based on my three organisations. Instead, I argue that your approach to KM is not fixed by your assumptions around knowledge, possibly guided or influenced, but not that it is predetermined, with your assumptions changing with time and location (Burr and Dick, 2017). Meaning these assumptions around knowledge do not force a certain type of behaviour when it comes to KM and can only guide the organisation. As such an organisation that views knowledge through a Neo-functionalist discourse could still undertake KM with a focus around people and community. This is because it could be argued that both the Neo-functionalist and Constructivist discourses are for the benefit of the organisation - a *consensus* approach - and the main difference being whether they are focusing on

Technology or People to conduct organisational KM. As such, of the several approaches and strategies mentioned in Chapter 3, I do not believe they should be prescriptive. Each organisation is different and what occurred in one organisation might not work in another due to different understanding and agreement around the assumptions of knowledge. Overall, KM frameworks, and KM strategies from the literature, should be more flexible to adapt and respond to real life organisations and organisational KM, across different sectors, countries, cultures, and structures, and should be thought about critically before any changes are made within an organisation on a case-by-case basis.

5.3 What does it mean for their project partnership?

Each of my organisations conceptualise and undertake KM using a Neo-functionalist and a Constructivist discourse (Schultze and Stabell, 2004) and using the Codification and Personalisation strategies (Hansen, Nohria and Tierney, 1999) with different emphasis on each across the three organisations. However, due to their partnership being based upon a global project, and my three organisations being in widely different geographical locations, the impact on their partnership seems to be limited.

Due to the nature of KM, it is expected that there is a *consensus* view to KM, with the organisations exploring the ways KM can help them improve (Von Krogh, 1998; Alavi and Leidner, 2001; Navimipour, Jafari and Charband, 2016). And because of the nature of the shared project there is a greater emphasis around *data* and *information* than knowledge as highlighted in the language used within each organisation. And with the focus around global datasets then it makes sense that this is strongly supported by technology to ensure that it can be stored and shared across the world. However, because it is a global project with multiple partners, there is also an understanding that knowledge can be interpreted differently by different organisations and countries depending on their culture, experiences, and values. As my three organisations tend to view knowledge in a similar way using both the Neo-functionalist and Constructivist discourse, in differing levels, it is only the emphasis around certain strategies which vary between the organisations. However, one aspect that is important, although cannot be verified at this stage, is that this is only the case because all three organisations have been working on this project for several years and so the terminology of KM has been presented and used within all the organisations. As such, I would anticipate that the knowledge conceptualisation and approach to KM being more of an issue with newly formalised partnerships if they do not know how the other partner's work. My organisations have been partners for several years and so have had time to adjust to one another, whereas newer partnerships might find issues

when they are sharing knowledge and go through teething issues of what format, language or approach is better for each organisation. Overall, whilst the conceptualisation and approaches to KM have not had much impact on my Organisations project partnerships, on other partnerships within the future it should certainly be considered before the project starts (Bennett *et al.*, 2016), ensuring a smooth partnership, as I discuss in Chapter 8.

6.0 Conclusion:

In conclusion, all three organisations view knowledge using the Neo-functionalist and Constructionist discourse and undertake KM using both the Codification strategy and Personalisation strategy, in varying emphasis and focus. Organisation 1 predominantly views KM using the Neo-functionalist discourse, with there being less but still some Constructivist discourse found within the organisation. Organisation 2 is slowly moving their understanding from a Neo-functionalist to a Constructivist discourse with equal use of the Codification and Personalisation strategy. Finally, Organisation 3 is balancing their strong values around people and community, with their Neo-functionalist understanding around KM. This challenges much of the current literature. Firstly, it challenges the literature on its belief that our assumption around knowledge dictates our approaches to KM. Whilst there is most certainly a connection between the two, it is not necessarily as fixed as the literature would present. For example, whilst Schultze and Stabell, (2004) suggest that there is overlap between the discourses, as discussed within Chapter 3 and supported by this research, there is a need to develop this framework further to acknowledge that an organisation can actively be in more than one discourse simultaneously due to the complexities of the people within their organisations. Not all employees are going to think alike and so there will be cases like with Organisation 1 where there is a dominant discourse and a secondary discourse found in fewer people. Additionally, there is a need to extend and build upon the framework to ensure that it has practical application at an organisational level, rather than just in theory. Due to the exploration of KM across the different discourse, this framework has the flexibility required for a KM framework to be suitable across conservation organisations, but it needs a high level of detail to establish its practical application. Additionally, the literature needs to be less rigid in its assumptions around knowledge and KM and be more flexible to ensure its reflexivity organisations. This is something that I expand upon within Chapter 8, regarding my research's contributions. This could then be extended further to the wider KM literature, where, as stated in Chapter 3, there are several KM frameworks across the last two decades, which present their approaches to improving KM within organisations. However, as described above, one size does not fit all, and KM needs to be specific and contextualised for the organisation (Powell and Ambrosini, 2012; Venkitachalam and Willmott, 2015).

Finally, as my organisations viewed knowledge in a similar fashion, and all undertook KM using both the Codification and Personalisation strategies that this conceptualisation does not have a large impact on their partnership. However, that it could have a greater impact if the organisations conceptualisation were extreme opposites with very little overlap, or if their partnerships were more recent, and they had not had time to adapt to one another's assumptions and approaches, as my organisations had.

Chapter 6 Research Question 2

1.0 Introduction:

Through the analysis of 34 interviews, 27 meetings, 19 documents and 8 feedback sessions across the 3 organisations, the aim of this next chapter is to examine and answer the question of: *To what extent and how does the use of language such as Global, GN, GS shape the conceptualisation of KM and KS, and what impact does this have on the organisations?*

This is important to this research, as the understanding or use or lack of use of these terms, demonstrate the individuals and subsequently the organisations discourse when it comes to the KM and KS across the three partnered organisations. Additionally, as mentioned within the first chapter, knowledge and power are intricately linked and context dependent (Olsson, 2010; Heizmann, 2011; Engstrand and Enberg, 2020). As such, use of certain language could highlight the power dynamics across the three organisations and how they might have influenced one another through their approach to KM and KS. I will be answering this research question in three parts. Firstly, I will work through Organisation 1, 2, and 3, exploring whether the participants had heard of and used the terms GN and GS either within the project or organisation. Alongside this I will be exploring whether they used any other terms and why these terms might be used instead. Towards the end of this section, I will be investigating the reasons behind the organisation's choices in using or not using these terms and seeing whether this links to their previous conceptualisation around KM. Secondly, I will be analysing the language used within each of the organisations, particularly focusing on the terms they use to describe 'what is classed as knowledge' within the shared project. This is interesting as it seems that the conceptualisation and subsequent language used by Organisations 1 and 2, are influencing the conceptualisation of KM for Organisation 3, which is important due to their close partnerships within the project. This will be analysed in relation to the KM discourses, particularly the Neo-functionalist, Constructivist and Critical discourses (Schultze and Stabell, 2004). I am not including the Dialogic discourse in this analysis because, whilst there are aspects of *dissensus* between the organisations as I will discuss below, they are more focused on the power dynamics within and between the organisations, rather than a more subtle '*Discipline*' approach. Finally, I then aim to take this one step further, by drawing on the Global, GN and GS dynamic of the organisations, and consider how it can be understood that Organisations' 1 and 2 conceptualisations around KM are influenced by their geographical position in the GN. And through their subsequent roles within the partnership, they have the power and control, particularly within the project, to further influence Organisation 3.

Before I go on to explore whether the terms GN or GS were heard of or used within each of the organisations, I firstly wanted to explain my reasoning for this approach to my research. The GN and GS dynamic was important due to the conservation context of this research. Many conservation projects, whilst being focused on specific species, habitats, or regions, are undertaken through a project with several partners worldwide (Roux *et al.*, 2006; Knight, Cowling, Rouget, Balmford, Lombard, and Campbell, 2008; Milner-Gulland *et al.*, 2010; Young *et al.*, 2014; Nguyen, Young and Cooke, 2016). This is due to partnerships being beneficial for conservation work, where there are limited resources (Ferraro and Pattanayak, 2006; Kapos *et al.*, 2008), time, or money (Lister, 2000; Vermeulen and Sheil, 2007). As such it was important to explore the understandings of KM and KS with a collaborative conservation project, and thus explore whether their GN or GS status influenced the understandings of KM or KS within and between the organisations. Finally, when Organisation 2 wanted to be classed as Global rather than GN, despite their GN location, I thought it would be interesting to explore how this term is understood and whether it is used across my three organisations.

2.0 GN and GS language within the Organisations:

To establish whether the terms GN and GS have any influence over the KM and KS practises, it first seems pertinent to explore whether the terms have been heard of within the organisations, and whether they are used in everyday language and under what circumstances they arose. This is important because as we have already discussed, language is extremely relevant when it comes to knowledge, especially from a WSC perspective (Jacobs and Manzi, 2000; Marshall, Kelder and Perry, 2005; Amineh and Asl, 2015). Language can be interpreted differently (Delamater and Hyde, 1998; Von Krogh, 1998; Fopp, 2008) and so the terminology used by an organisation presents the way that they would like to be perceived, as well as creating value in certain aspects of the organisation over others.

2.1 GN and GS language within Organisation 1:

Of the nine interviews undertaken with Organisation 1, just over half of the participants spoke about their awareness and understanding around the terms GN and GS and its use in Organisation 1. Firstly, participants had never heard of the terminology GN or GS, whilst others mentioned that the terminology is not used within Organisation 1:

“No. Actually, first time I heard this Global South and Global North. No, and no north or south, not as such. (O1 I1).

"No. I never use that word. I never hear, listen to it." (O1 I4).

"I think we'll never use this kind of terminology". (O1 I0).

"Not as far as I know, to be honest, no". (O1 I6).

This suggests that from the participants perspective, despite Organisation 1 being a GN organisation, in that they are situated within the GN, there is an uneven understanding around these terms. (O1 I1) went on to suggest Organisation 1 uses more relationship-based classifications, such as 'Partners':

"So, usually, everybody is partners. We're implementing partners... So, no, not really. So we speak about regions, and the regions are different... So never think of those words during the project meetings". (O1 I1).

This is interesting as some participants suggest that they know of the terms, others who have not heard of these terms, but all agreeing that the terms are not used within Organisation 1. I can support this through my observations within meetings, that these terms were not used and that they used organisations names instead, when discussing organisations directly, or partners when discussing their role within the project. This is further supported by this terminology not being in any of the six documents provided by Organisation 1.

2.2 GN and GS language within Organisation 2:

Of the 15 interviews, seven participants provided answers. 3 of the individuals had not heard of the terms GN or GS at all:

"No. The first time I heard about it is when I read the PDF. / No. At least I haven't heard that. / I am not aware of... But perhaps it's just because I haven't run into situations where that differentiation would be made". (O2 I7).

"To be honest it was quite unfamiliar to me when we first started talking. They aren't terms that I've heard used very much in the sector really, in conservation generally". (O2 I8).

However, the other four participants had heard of the terms, but three of them suggested that it wasn't overly used within the organisation:

"I wouldn't, in [ORG 2] as a whole I have seen it used. So particularly sort of when discussing some research papers, a lot of research papers have been using it as a term. I have not encountered it in the [PROJECT] in the short time that I've been here". (O2 I5).

“Well I'm definitely familiar with it, and I've heard it used. But I just don't think it's something that we're using regularly”. (O2 I11).

Whilst the last individual believed that the GN and GS terms were used informally within the organisation:

“So I think certainly in discussions with colleagues, on an informal basis I think they're used relatively frequently. I'm just trying to think whether we use those terms in reports that we generate and I suspect that we do, but I can't think of an example off the top of my head”. (O2 I6).

Despite these are varied perspectives within Organisation 2, the consensus is that whether the terms GN or GS have been heard of or not, that they are not commonly used within Organisation 2. In answering Interview O2 I6, questioning whether they use these terms within their reports, of the 3 documents that were provided by Organisation 2, the terms GN or GS, as with Organisation 1, do not appear. Moreover, within the observed meetings, these terms were not used either.

2.3 GN and GS language within Organisation 3:

Of the 10 interviews that were undertaken with Organisation 3, over half of the participants provided answers relating to the GN and GS language used within the organisation. Additionally, as this topic was also raised during the feedback sessions, there was further discussion between the participants. Firstly, two of the participants had not heard of the terms GN or GS prior to the research:

“Well, actually I've never even heard of that. I've never even heard of that, Global North and Global South. (O3 I3).

No. To be honest, no. That was probably my first time hearing Global North and Global South. The terminology doesn't ring any bells”. (O3 I10).

Secondly, one participant had heard of the terms through their prior careers, but acknowledged that the terms were not overly used within Organisation 3, whilst a 2nd participant had heard of the term and agreed that they were used, although not too often around the organisation:

“I haven't come across that word at [ORG 3], but I have come across that, referred to it when I was working for government, and so I'm familiar that I've used the words before, but not at [ORG 3], but I am sure there are others at [ORG 3] that may be using it, it's just that my work, I haven't used it”. (O3 I4).

"I know we do use them. But I don't use them a lot. I have heard that language that terminology used within our organisation. The Global North, the Global South. South South Cooperation, those kind of terms. And they are involved in the technical aspects of the programme". (O3 I8).

From this, like Organisation 2, there are varying levels of awareness around the terms GN and GS. Moreover, there were individuals who have heard of them and yet still use other terms (O3 I8):

"We have used South-South, South-South corporation or South-South information sharing, transfer of knowledge". (O3 I1).

"No. I mean, if we're receiving funds from them, from the [LOCATION 2] themselves, we'll just refer to the government of [LOCATION 2]. But if it's specific project from the [LOCATION 2] or from [LOCATION 1], for example, then we'll just use whatever the [unclear] is". (O3 I3).

"And we tend to talk about regions, but I also think that comes from the [ORG 3 AGREEMENT] language. No nothing that I can come up with at the top of my head now". (O3 I8).

It seems that if the terms aren't used within the organisation (as suggested in O3 I1 and O3 I3), they use other terms such as *South-South collaboration* or even classify the location based on their funding. Finally, during (O3 I8), where the participant had heard of the terms and suggested that they were used within Organisation 3, they still advised that they used the term regionally rather than these more global terms, as that seems to be the focus of Organisation 3. This limited use is supported by the fact that of the 8 documents provided by Organisation 3, the terms GN and GS appeared in none of them, nor were they mentioned within the observed meeting.

2.4 Reasons and possible alternatives for GN and GS language:

Overall, under half of participants across all three organisations have stated that they have heard of the terms GN and GS. This was the majority within Org 1 (5/9), whilst a minority within Organisations 2 (4) and Organisation 3 (3). Despite being somewhat known by the participants, neither of the terms are commonly used across any of the organisations. There were a couple of frequent reasons for this, including, it being oversimplified, inappropriate and the organisation using other terms that are more specifically focused. Firstly, Organisations 1 and 2 suggested that the terms were oversimplified and did not provide the level of detail they prefer when working with organisations worldwide:

"I mean, it's maybe a little bit too generic. Because [ORG 1] is specifically [LOCATION 1], and [ORG 3] is specifically [LOCATION 3]. I'd maybe go with [LOCATION 1] and

[LOCATION 3] instead. Because northern implies that they would also manage [COUNTRY]. They don't". (O1 I7).

"But I also think it makes often limited sense than the strict two categories of global north, global south. It's not such a clear border, and it's much more a spectrum of income levels of different countries etc". (O2 I4).

Neither Organisations 1 nor 2 support this simplistic global categorisation, which is also supported by several academics (Eriksen. 2015; Wolvers, 2015; Martins. 2020). Instead, they understand that even within the GN and GS, there are differences between regions and countries that should be taken into consideration, rather than ignored (Magallanes. 2015; Lees. 2021). This resistance to oversimplification demonstrates an understanding that the categorisation delineated by these terms is not always the best approach and does not provide the level of detail required for partnership or project work. Using the KM Discourse Framework, this view could support a Constructivist discourse, in that they dislike this generalisation and 'Either/or' dynamic. Or it could be argued that it supports a Critical discourse in terms of challenging this idea of grouping countries together and supporting their individual differences (Alvesson and and Deetz, 2000). Building on this, participants within Organisations 2 and 3 stated that they felt uncomfortable using the terms GN and GS, due to its appropriateness and potential connotations:

"I think people have tried to stop using broad categorisations full stop, and because they kind of changed, and you're not sure what's right or wrong, I've noticed that people just try not to use them at all. There will be some people that do. ... But from my point of view I still am unsure what terminology is best, basically. I think we're going through a bit of a, I don't know, transition phase, where people aren't quite sure". (O2 I3).

"I don't use those words because I think they are pejorative. Because I think [LOCATION 3 COUNTRY], [LOCATION 3 COUNTRY], [LOCATION 5 COUNTRY], they are developed countries - with plenty of money per capita and they are in the South. What makes sense is high income for developed and developing. I think we use those words regularly to mean the same thing. Rich countries like [COUNTRY] and [LOCATION 3 COUNTRY] they're donors, they have more technical expertise often and developing countries like [COUNTRY 3] and [LOCATION 3 COUNTRY] might receive aid. And I think the development status is reasonable and non... there is not a lot of connotation attached to it, skin colour, colonisation etc where North-South does have that feeling to me. So I would advocate developed status, as a less charged terminology to talk about differences". (O3 FFBS).

Participants within Organisation 2 were concerned whether the terminology is appropriate depending on the target audiences, and this is made explicit within the feedback session with Organisations 3 where they were discussing between themselves the use of these terms and how there are negative connotations associated with the use of GN and GS (Wolvers, 2015), rather than

more factual associations. This is particularly interesting because through this awareness around these terms, it highlights that the organisations understand that these terms can have different interpretations based on the individual's background and experiences (Jacobs and Manzi, 2000; Moon and Blackman, 2014; Amineh and Asl, 2015; Burr, 2015). Tying back to the previous chapter, this is a key assumption of the Constructivist discourse, which all organisations at least partially used to view knowledge and KM. Finally, Organisations 1 and 3, suggested that they do not tend to use the terminology because they do not have need for it, as they commonly focus on their own region and use more specific terminology:

"We are much more driven by the [MAIN STAKEHOLDER] centric vision, even though our job is going beyond. So yes, I think we never refer ourself as global north, it's more like [MAIN STAKEHOLDER]". (O1 I0).

"I've never used that so far. If necessary I can. I've no problem with that. And I don't know when or where we can use this. Because as I said, as a regional organisation we are really focussed on delivering the best services to the members and [unclear] in the region". (O3 I9).

Both Organisations 1 and 3 focus on their own region, and so there is little need for these terms, especially as Organisation 1 uses terms such as *'Partners'* (O1 I1) and Organisation 3 using their specific name (O3 I1) or related to their funding. This goes a long way to explain the participants' lack of use of these terms.

This is important for us to know because if none of the organisations are using the terms to describe themselves or their partners then it is unlikely that these terms are directly shaping the KM and KS practises within or across the partnership. However, the fact that the terms GN and GS are not overly used does show us something. We can see from the above, that all three organisations have a resistance to the terms GN or GS, which is interesting, as within Chapter 5 all three organisations at least partly used a Neo-functionalist perspective. There is an argument here that the organisations reluctance to use these terms goes against the *'Either/or'* (*Dualism*) side of the KM discourse framework (Schultze and Stabell, 2004). However, the other argument is that they are only against these specific GN and GS categorisations, not other ones suggested such as *South-South*, which does reinforce the Neo-functionalist discourse position with *'Either/or'* thinking within the organisations.

This illustrates how the language used within each of the organisations shapes their understanding, in this case on the GN and GS dynamic. However, the same logic can be applied to the conceptualisation and subsequent approaches to KM and KS. As such, the following section will examine how the use of certain language can shape the conceptualisation of KM and KS within and

between the organisations. It is also my assumption that this use of language by each organisation is not directly linked with their Global, GN or GS categorisation, but their associated role within the partnership, and as such I will be exploring this connection throughout the following section. Despite this lack of connection to the terms GN and GS, the use of these terms is supported within this research, as it is extremely interesting to understand the organisations position in relation to these terms, and subsequently build upon that and explore the other factors, such as their role within the partnership as an influencing factors around their KM. Understanding this is particularly important within partnered organisations, whereby their own understanding and conceptualisation of KM is important (Marshall, Kelder and Perry, 2005; Moon, Adams, and Cooke, 2019). This is relevant relating to how this conceptualisation influences their partner organisations, through asking '*what is classed as knowledge*', with Martins. 2020, suggesting that the GN is in a more privileged position in being able to determine what types of knowledge are valued above others. This will then be linked back to our associated discourses because within this use of language there is power from the organisations to influence others understanding (Burr and Dick, 2017), and as such, I will be exploring whether they view KM and KS using the Critical discourse, particularly between the GN and GS.

As with my previous results chapter, I would like to raise a couple of points to bear in mind. Firstly, I will be exploring the power dynamics between my organisations, specifically in relation to their KM and KS, using the *Power as Entity* and *power as Strategy* lens (Gordon and Grant, 2004). However, it should be noted that there are other examples of power dynamics between the organisations that are not directly related to knowledge or KM, but more to finances, and role within the project partnerships etc. Due to the intricate nature of these in relation to KM, these will be partly explored within this chapter.

3.0 What is Classed as knowledge?

Within the previous chapter I explored how each organisation conceptualises knowledge and KM. This chapter is going to build upon this and explore the subsequent impact that this conceptualisation has on the other organisations conceptualisation of KM. To do this I will be asking questions such as '*how would you define knowledge?*' and '*who decides what is classed as knowledge?*', as well as analysing the specific terms that the organisations use. Within this I will be linking back to the associated discourses where appropriate, and in the later half will be exploring how the Organisations role within the partnership could be influencing the other organisations, particularly Organisations 1 and 2 on Organisation 3. The aim of this section is to explore whether

the language used within the organisations around knowledge, KM and KS, influences any of the other organisations in their conceptualisation of KM and the language they use. Particularly when exploring this influence from a GN and GS dynamic, with reference to the partnership between the three organisations.

Before I continue, I will summarise an overview of the partnership and relationship dynamic between the three organisations. Organisation 1 is positioned closest to the Main Stakeholder and coordinates the project worldwide. Additionally, Organisation 1 is leading the project in terms of the technical capacity by having built and maintaining the Main database. Organisation 2 was consulted to provide technical assistance regarding the Main database, as well as provide expertise within the project and liaising with Organisation 3. This involved the processing of data from Organisations 3s' Sub-database into the Main database, as well as training on how to use them most effectively. More of the day-to-day management of the project. Organisation 3 is the local organisations providing knowledge to Organisation 1 and 2 from their Sub-database to the Main database and back again, as well as sharing and building up capacity within their own region. Moreover, there is the Main Stakeholder, who is the funder and overall administrator for the project, that provides guidance, support, and direction across Organisations 1 and 2 and possibly Organisation 3, although this was not heard of or observed. Finally, there is the Main External Partner, who provides global guidance and structure on the specific conservation issue often helping to provide direction and support to Organisations 2 and 3 but not heard of or observed for Organisation 1.

3.1 What is Classed as knowledge within Organisation 1:

As I explained within Chapter 4, Organisation 1 was the closest of my three organisations to the funders and coordinated the project across all organisations. As such, for Organisation 1, '*power as an Entity*' (Gordon and Grant, 2004) is being used to influence and control the other partners. This presented itself in different formats throughout my data collection. Firstly, as Organisation 1 is coordinating the project and in direct engagement with the funders, there was an understanding that they decide what classes as knowledge for the project. This decision was based upon previous project work and wider topic of focus, but more importantly as Organisation 1 created the project databases, they had the final say in the format that the knowledge took, and so ultimately what knowledge was recorded as relevant for the project:

"Well, I think the system decides, first of all, because you have to be able to do it". (O1 13).

“But usually, we have monthly meetings with them, and we have a list of important indicators that maybe are needed to be stored”. (O1 I5).

However, evident from the second quote above, Organisation 1 does consult with their partners to identify and consider their needs of the database knowledge. As such they do not have full control over the contents of the databases, but through discussions with their partners and stakeholders, they do decide what is classed as knowledge and what is placed within the databases. As such Organisation 1 does have power around what is classed as knowledge within the project, and this is ultimately based around their own assumptions of knowledge and KM (Martins. 2020). As established within the previous chapter, Organisation 1 predominantly views knowledge through a Neo-functionalist discourse. This is supported by the language that they use when discussing knowledge, KM and KS, including terms such as ‘*standardised*’, ‘*scientific*’, ‘*quantitative*’ and ‘*procedure*’, as discussed in Chapter 5. This is particularly important, as it was strongly suggested within an interview (O1 I3), that the knowledge gathered at the global level within Organisation 1, flows to the regional and local levels for Organisation 2 and 3:

“the global [MAIN DATABASE] was developed first and the [OFFICES] are developing now. Then actually most of the information through [MAIN DATABASE] is going the other way around. So it’s going from global to the regional”. (O1 I3).

This is interesting, as it demonstrates the power and influence that Organisation 1’s understanding around knowledge and KM can have across the partnered organisations. In this case flowing from Organisation 1 in the GN across to Organisation 2, influencing their own supporting databases and then to Organisation 3 in the GS, influencing their approach to the project and the identification, storing, and sharing of knowledge. This governing and power from Organisation 1 around what is classed as knowledge within the project, is not surprising, as there is a general understanding that those that control the funding have a majority of say within the project (Kelly, 2007; Martins, 2020; Mahajan, Ojwang and Ahmadia, 2023), which in this case is the GN organisation (Stone, Oliveira, and Pal, 2020; Lees, 2021). However, it should be noted that the knowledge does flow the other way within this project from Organisation 3 in the GS to Organisation 1 and 2 in the GN.

3.2 What is classed as knowledge within Organisation 2:

As explained in Chapter 4, Organisation 2 is engaged with the project through supporting the projects’ Main database. Due to this support of the project, they have some level of control over what is classed as knowledge, in relation to the project database, and what format this quantitative data needs to be in. However, this is strongly influenced by their Main External Partner and their governance of terms and format for this supporting database:

“And this is again where [MAIN EXTERNAL PARTNER] come in, because they write lots of global standards, they define lots of things, they have all of that information, so we pull that in”. (O2 I3).

“So [PROJECT] fitted into a standard that was already there before?... Yes”. (O2 I8).

So, Organisation 2 abides by guidelines pre-agreed by the Main External Partner, ensuring that the global knowledge is standardised, comparable, and categorised in a similar manner. However, it was mentioned by one participant that it was up to Organisation 3 what knowledge is placed within the databases:

“I think the decision is in the [FIELD OFFICES] hands. They have final say but they get input from [MAIN EXTERNAL PARTNER], [ORG 1], and ourselves. I think [ORG 1] has more technical guidance because they helped them develop the platform, so they can say what is possible and not. [MAIN EXTERNAL PARTNER] has more of the high-level oversight of what they want to achieve in the project. Our input is a bit minimal because we’re not an official implementing partner, we’re more of a support role. Although we can offer suggestions and things, ultimately the decision is up to the [FIELD OFFICES], whatever they deem most useful for their region”. (O2 I2).

But within this quote, the participant also suggests that there is input from Organisations 1 and 2 and their stakeholders, leading us to believe that it might not be as open choice as depicted above by Organisation 1. This argument is supported by Organisation 2 when they take it upon themselves to ensure that the knowledge being inputted into the various databases is in the correct format:

We just make sure we have certain rules on each of the fields so that we can actually make the data comparable, because if you have lots of different stuff in there obviously you can’t really summarise it”. (O2 I3).

Meaning that Organisations 3 decisions are being influenced by the ‘correct’ approaches from Organisation 2. Organisation 2’s approach to knowledge and KM resonates strongly with the Neo-functional discourse (Schultze and Stabell, 2004), and *Dualism, (Either/or)*, which many of the options and categorisations within the databases would fall into. This demonstrates multiple levels of *Power as Entity* (Gordon and Grant, 2004) on what is classed as knowledge. Firstly, the main external partner has power over Organisations 1 and 2, over what is classed as knowledge and required for the database and in what format. However, we can then take this to another level, of Organisation 2 then having influence over their partners, including Organisation 3, who are collecting data for the project. We can see this presented in the quote below, that Organisation 2 trained Organisation 3 in the ‘correct’ way for the data to be inputted into the database.

“So we basically had to train [ORG 3] to be able to do all of that work that we do... So we had this in-person training with them over several days where we developed a whole training document, training session that we worked through together”. (O2 I8).

From this it is evident that Organisation 2 does have some power around what is classed as knowledge within the project but more realistically they are perpetuating the control that their main external partner has over the project knowledge, and subsequently those in Organisation 3 undertaking the project work. The language in the above quotes, such as '*standards, information, comparable, rules and categories*', strongly links to the Neo-functional discourse which could be influencing Organisation 3.

One thing that I would like to point out here, before we go on to discuss Organisation 3, is that whilst Organisations 1 and 2 do view knowledge in a way that can be understood congruent with ideas of a Neo-functional discourse and Codification strategy (Hansen, Nohria and Tierney, 1999; Schultze and Stabell, 2004), it was also mentioned or observed within both organisations that they conceptualise KM and its approaches using the Constructivist discourse and Personalisation strategy also. This was demonstrated in Chapter 5, in how both Organisations have an appreciation for the language they are using and how this might be interpreted by their target audiences, (McKinlay, 2006; Nonaka and Peltokorpi, 2006), and as such take steps to adjust the language and tone respectively. This is also something that both organisations consider when sharing knowledge within their own organisations. Interestingly, from my observations across the two organisations, Organisation 2 had a wider awareness of this than in Organisation 1 (in terms of the number of participants who mentioned it), and whilst not verified, it could be based upon or linked to their insistence of being a '*Global*' organisation, and as such within their organisation, there is a stronger emphasis placed upon understanding, patience and flexibility when engaging with their external partners. Overall, despite viewing KM from a predominantly Neo-functional discourse, both Organisations 1 and 2, do view knowledge using a Constructivist discourse, although to a lesser extent based on the number of participants that mentioned it.

3.3 What is Classed as knowledge within Organisation 3:

As a recap, Organisation 3 views knowledge, KM and KS using a Neo-functional discourse (Schultze and Stabell, 2004). They view knowledge as an object that they can store and share as well as use terms such as *standardised, systematic* etc. when describing it. And finally, they place a great emphasis on technology within KM and KS both internally and externally, all supporting this Neo-functional perspective. However, as highlighted in the feedback sessions in the previous chapter, whilst they are using technology, it is more in the capacity as a tool to facilitate their KM and KS, whereas the people, trust, and community within the organisation, is what Organisation 3 holds as important. This is further supported by their understanding around their regional traditional

knowledge, as well as ensuring flexibility around language and format to ensure that others within their region can access the knowledge.

“So, ensuring that the traditional knowledge is featured in some of the work that we are doing”. (O3 I1).

“So, we’re quite specific so that we can just cater the presentations and the workshops itself to the type of people who are coming to the workshop”. (O3 I3).

All of which is based on assumptions from the Constructivist discourse and Personalisation strategy (Hansen, Nohria and Tierney, 1999; Schultze and Stabell, 2004). From this I would argue that Organisation 3’s Constructivist assumptions reflect their regional culture, whereas I would argue that their Neo-functionalism assumptions around knowledge reflect their collaborations with Organisations 1 and 2. And with the concept of KM being so recent to the Organisation (O3 I6), alongside this recent and ongoing partnership, including influence and control from Organisations 1 and 2, it could be suggested that Organisation 3 is being influenced in their conceptualisation by those they are in collaboration with, specifically Organisations 1 and 2.

4.0 Discussion of Power as Entity on KM Conceptualisation:

So far, I have established that the terms Global, GN and GS do not shape the conceptualisation of KM, but other terminology particularly that aligned with the Neo-functionalism discourse (Schultze and Stabell, 2004) when centred around what is classed as knowledge can be influential to shaping the conceptualisation of KM, specifically between Organisations 1 and 2 and then Organisation 3. However, I would like to develop this argument further and suggest that it is due to each Organisations role within the partnership. Firstly, Organisations 1 and 2 have a position of power (*Power as Entity*) regarding the coordination and expertise within the project over Organisation 3. Secondly, Organisations 1 and 2’s Neo-functionalism conceptualisation of knowledge and KM could be suggested to be shaped by the dominant Positivist traditions which originated and are still commonly found within the GN (Martins, 2020). Which due to the roles and partnership dynamic of the project could be influencing Organisation 3’s conceptualisation of KM and KS (*power as Strategy*) (Gordon and Grant, 2004). Linking back with Chapter 1, power is not a simple concept, let alone when discussing it across organisations in different levels of society and geographical locations (Burr and Dick, 2017; Martins, 2020), and when involving knowledge production (Eriksson and Kovalainen, 2015). As such within this final section, I will argue that Organisations 1 and 2 have several levels of power, control, and influence over Organisation 3 via the project and as such it is through this that

they are influencing Organisations 3's conceptualisation of KM.

4.1 Power as Entity:

As discussed within Chapter 1, there are two forms of power that this research will be considering, in answering this research question. Firstly, is *Power as Entity* or *Power as a Resource* (Gordon and Grant, 2004; Olsson. 2010; Heizmann, and Olsson, 2015), whereby power is overt, and is referred to as a 'thing' that somebody can have and exercise over others. As Dahl, 1957 pg. 202-203, defines, *A has power over B to the extent that A can get B to do something that B would not otherwise do'*. In this case I would argue that Organisations 1 and 2, have power over Organisation 3 in that Organisation 3 is undertaking the project in a manner that they might have not done so, without Organisations 1 and 2's involvement. Organisations 1 power over Organisation 3 is in the coordination of the project directing them in the manner that the project should be undertaken, within a certain timeline and expected results and impact. Moreover, Organisation 2 has power over Organisation 3 in that they provide the guidance and expertise on the databases, i.e., the format that they should be managed in (O2 I8). Both of which could be used to explain why Organisation 3 are undertaking the project in a manner that might not be the most suitable to them, as I will discuss below.

4.2 Organisation 1's power and Influence over Organisation 3:

Firstly, as an example of this power, participants from Organisations 1 and 3 suggested that the project design might not be well coordinated for all parties, particularly Organisation 3:

"So that there's sometimes even a gap between the governance of the project at a very high level. And then, what's the needs for the region. And there's clashes in our meetings about this. It's like the donor somehow is asking for something.....But then, at regional level, this is being interpreted differently, in the different regions". (O1 PFBSO).

"I think that's one of the issues that has been floating around in our region for a very long time now, especially mainly to do with poor project design. Top-down development of different initiatives. We're not really looking at that long-term sustainability and examining the structures and systems that are in place within the region, within countries. Making sure that whatever's developed or whatever the project outcomes are, objectives, that they are suited to the context.... Because the countries and the region, they're not a once-size-fits-all, although there are common issues, they are differentiated at the local level. What you call common, but differentiated, the issues and priorities. Those have to be approached on a case-by-case basis.". (O3 PFBS).

This demonstrates that Organisation 1 predominantly designs and coordinates the project (in conjunction with the stakeholders and funders), with input from Organisation 3, but it does not always produce the design that either side requires, thus creating issues (Lannon and Walsh, 2020; Martins, 2020; Mahajan, Ojwang and Ahmadia, 2023). This results in the project being designed in a manner more suited towards Organisation 1 or their stakeholders' requirements. This is supported by a participant in Organisation 3 who reiterates this point, that each location is unique and should be treated as such:

“Point to note, those countries differ from each other dramatically, from [LOCATION 3 COUNTRY] with ? million people and some serious governance issues. So [LOCATION 3 COUNTRY] with ??? people and a pretty stable government so even amongst the region it's really complicated. Try to throw [LOCATION 5] and the [LOCATION 4] in there, maybe is a stretch. Another challenge is a lot of the, this is an [LOCATION 1] funded project, a lot of the money from the project has stayed in the [LOCATION 1] to do [LOCATION 1] things. Which is great, not so beneficial to the developing [LOCATION 3] whose needs are dramatically different from the [LOCATION 1] and different from the other countries they're more used to working with”. (O3 I2).

Overall, being in the GS when it comes to the conservation sector, means much of the projects are organised, coordinated, and funded by the GN (Lewis, 1998; Malhotra, 2000; Odeh, 2010; Martins, 2020; Mahajan, Ojwang and Ahmadia, 2023) who as described above have their own ways of taking a project through from start to finish (Lister, 2000; Mahajan, Ojwang and Ahmadia, 2023). This controls and influences the way the project is undertaken, in this case the format of the databases in relation to the project, the timeline of the project etc.

However, there were also examples of Organisation 3 pushing back on certain aspects driven by their Global/ GN partners and stakeholders, such as the issues around an excessive number of databases that were strongly presented by one of my participants in their interview and the feedback session:

“Every project wants to make their own database and their own portal. And there's a bunch of zombie portals that still kind of exist or that we think exist or that don't all throughout the region. And it's terrible because each one takes a huge investment of time and effort and there's a lot of zombies and very few functional ones. A colleague at [DELETED BY RESEARCHER] did their own assessment, they found ??? portals that either should exist or do exist. I've only seen like ten of them and at [ORG 3] we've got two or three dozen which we're trying to consolidate but there's project, ego, funding and who's responsible for pulling them all together issues...And every time you pop up a new one we expand the problem”. (O3 I2).

“We do have an internal policy within [ORG 3] itself. We have a moratorium on creating any more additional portals because it seems on every project that comes in, especially

[MAIN FUNDER] projects, they always seem to want to have a portal or an information management system". (O3 PFBS).

This demonstrates that Organisation 1 can and does influence Organisation 3 through their projects, and that in the last few years Organisation 3 has challenged this, ensuring that they only take on new projects where the databases or online portals can sit within their current systems. Just a point here, that the participant was not talking specifically about Organisation 1 or 2 or even the shared project here, but other projects that they have undertaken in conjunction with GN organisations. This is significant because it is a demonstration of Organisation 3's power (*as Entity*) (Gordon and Grant, 2004) and influence back over Organisation 1, thus demonstrating that power can be used both for emancipation and control depending on your perspective. Overall, Organisation 1 has power over Organisation 3 in the coordination of the project knowledge, but Organisation 3 also presents their own power in their resistance to some project designs.

4.3 Organisation 2's power and Influence over Organisation 3:

For Organisation 2, the power and control that they have over Organisation 3 was focused on their expertise rather than coordinating power as it was for Organisation 1. Here it could be argued that Organisation 2 are the specialists providing training and capacity building, thus having influence and control over Organisation 3's approaches:

"Train them on basically how to format data and the key issues that they were going to encounter". (O2 I8).

"So we have quite a defined procedure for all of them about what is and is not included and the minimum amount of information that we require for each entry. And that's as a result of very long time of development the [PROJECT FOCUS DATABASE]". (O2 I5).

However, specific to this project is that whilst the GN are coordinating the project and the GS is sending knowledge from their region to the GN, it is then presented back to the GS regions within the databases:

"And then that information is then fed up to the global level into the global databases that we manage. And that that information then is presented back to the regions in ways that are useful for them to analyse the state of their [PROJECT FOCUS], and to do things like prioritising where new [PROJECT FOCUS] should be". (O2 I8).

So, it is not a one-way flow of knowledge from the GS to the GN, it is a sharing of knowledge in both directions. The other aspect that I mentioned above but would like to reiterate again is that supported by my data analysis, that Organisation 2, as well as being influenced by its GN position, as

discussed above, is also being influenced by itself having a Global classification; possibly due to them embracing this as an organisation compared to Organisations 1 and 3, who are rejecting their classification for one of more location centric. Multiple times within data collection within Organisation 2, there was mention of being understanding, flexible, and aware of the differences in interpretations and approaches when they were engaging externally with their partners:

“I think the thing that we have to always be conscious of is around presenting a whole world approach, and not just the [LOCATION 1] approach to knowledge and data”. (O2 I11).

“We’re not coming up with an idea and telling the countries that we’re working with that they really ought to do this. We try very hard to make sure that actually the genesis of a project is at least the basis of a discussion to understand what will be most helpful to the countries we’re working with”. (O2 I6).

As such, whilst Organisation 2 acknowledges that they have power over their partners, they are taking steps to ensure that it does not negatively affect their partnerships. However, despite these steps, both Organisations 1 and 2 still have a position of power over Organisation 3, which is evident across the project and its KM.

4.4 Power dynamics between Organisations 1 and 2:

There are fewer power dynamics seen across Organisation 1 and 2 in either direction because there seems to be less direct contact between the two, with Organisation 2 suggesting that they only have monthly meetings.

“And [ORG 1] let’s say once a month too, because it’s peaks and troughs really.” (O2 I1).

Moreover, within the structure of the project, Organisation 1 is influenced by the Main Stakeholder whilst Organisation 2 is influenced by the Main External Partner:

“from a high level governance structure you can align the organisations, primarily [MAIN EXTERNAL PARTNER] and [ORG 1] as implementing partners, and then us as the satellite body, and then all the [FIELD OFFICES] beneath them.” (O2 I1).

“Okay, so [ORG 2], we are contracted by [MAIN EXTERNAL PARTNER], that’s how we fit into the structure, the governance structure. And they’ve hired us to, in a nutshell you could describe it as supporting countries and the regions in collecting and reporting data, that’s really what it is”. (O2 I1).

“We are much more driven by the [MAIN STAKEHOLDER] centric vision, even though our

job is going beyond.” (O1 I0).

So overall limited power dynamics directly between Organisations 1 and 2, but they are being strongly influenced by the Main Stakeholder and Main External Partner which has a strong impact over the project and Organisations 3 as I have detailed above. Overall, this demonstrates that Organisations 1 and 2 have power and influence over Organisation 3, stemming from their positions and partnership with the Main Stakeholder and Main External Partner. This supports the assumptions that power and control is not based around their position within the GN or GS, as first thought, but is connected to their roles and positions within the partnership.

4.5 Power as Entity Discussion:

These examples of overt power across the three organisations present a strong picture of how Organisations 1 and 2 have power, control, and influence over Organisation 3 regarding the project management and its knowledge (Gordon and Grant, 2004; Heizmann and Olsson, 2015), as well as Organisation 1 power and influence over Organisation 2 regarding the project’s coordination. I have demonstrated that Organisation 1 hold power over Organisation 3 in terms of influencing their day to day and long-term timelines for the project, whereby Organisation 2 provide expertise focused power on how things should be done, in line with Organisations 1 and their stakeholders criteria (Mahajan, Ojwang and Ahmadia, 2023). This strongly influences Organisation 3 in how they should be undertaking the project, which would not be undertaken in this manner if Organisations 1 and 2 were not involved. However, due to the funding and resources required for the project, without Organisations 1 and 2, the project might not exist in the first place. As such it seems to be a key element of the organisational partnerships. Additionally, it also demonstrates that Organisation 3 has power over their GN partners (maybe not Organisation 1 specifically, as mentioned above), whereby Organisation 1 might be coordinating the project, but Organisation 3 uses their own form of power to pushback on some ideas and approaches that do not suit them.

This form of power between the Organisations is expected based upon the literature around partnerships within the GN and GS, as detailed within Chapter 1 (Lewis, 1998; Lister, 2000; Derkzen, Franklin and Bock, 2008). Historically and currently many of these partnerships between GN and GS organisations are based around control of funding (Malhotra, 2000; Reith, 2010; Mahajan, Ojwang and Ahmadia, 2023) with the GN having the funding and so power and control over the actions of the GS organisations. And whilst these partnerships dynamics have developed (Mawdsley, Townsend and Porter, 2005; Lannon and Walsh, 2020), there are still several forms of power across different

levels and foci between partnered organisations, as we can see here (Kelly, 2007). However, it is generally understood that power can be used to both control and emancipate depending on who is wielding it (Pfeffer, 1992), which can certainly be seen here, with it being used against Organisation 3 as a form of control and influence by Organisations 1 and 2, but also then used by Organisation 3 as a form of emancipation. Finally, it should be noted that these power dynamics within this research are not believed to be influenced by the geographical location of the organisations, but more by their roles within the partnerships. This is particularly the case, as the power dynamics centred around funding and expertise would occur regardless of the geographical locations of the organisations, as can be seen between Organisations 1 and 2. And as such, whilst the power dynamics as detailed within the literature around GN and GS partnerships can be seen within my three organisations in this case it is more due to the role in the partnerships than the GN-GS dynamic itself.

5.0 Discussion of Power as Strategy on KM Conceptualisation:

As mentioned in Chapter 1, there are also examples of *power as Strategy* and *power as knowledge* within the results (Gordon and Grant, 2004; Heizmann, and Olsson, 2015). This can be seen in the second half of my argument that Organisations 1 and 2 control and influence, are linked to their role within the partnership, where there is more covert power over Organisation 3 in the GS. Whereby the dominant discourse of Neo-functionalism is influencing the approaches and conceptualisation of KM in Organisation 3 based on their historically and culturally constructed discourses and assumptions (Hansen, Nohria and Tierney, 1999; Marshall, Kelder and Perry, 2005; Moon, Adams, and Cooke, 2019). This builds upon Foucault's understanding that knowledge and power are mutually constituted in the form of discourses (Heizmann, 2011), which cannot be studied or understood separate from their sociohistorical contexts (Olsson. 2010). As such, these are likely to influence an individual's conceptualisation (Burr and Dick, 2017) in this case, of KM and KS, which is reflected in this research.

5.1 Organisation 1 and 2's power and Influence over Organisation 3:

Within the GN, both within management and conservation there are dominant assumptions around how research or projects should be undertaken, which stem from a Neo-functionalist discourse (Fopp, 2008; Moon and Blackman, 2014; Burr, 2015; Bennett *et al.*, 2016). Additionally, with both KM and conservation there has been a mirrored development over the years, from a Neo-functionalist discourse to a more Constructivist discourse (Schultze and Stabell, 2004; McKinlay, 2006; Nel *et al.*, 2015). However, in neither management nor conservation, has this progression

resulted in a change within the dominant discourse of Neo-functionalism (Bennett *et al.*, 2016; Asiedu, Abah and Dei, 2022). And as such, one could argue that most organisations, including my GN and Global organisations, have an objective view of knowledge and a singular view of reality, alongside a belief in quantitative over qualitative data due to its ability to be standardised and comparable. These qualities can be seen within both Organisations 1 and 2, as evidenced within the previous chapter. Firstly, with Organisation 1, who by their own admission work for a bureaucratic organisation are situated within the GN, are technologically involved within the project with their vision focused on data and technical knowledge, centred around standardisation across the project, with this then being conveyed to the regions within the interoperability of the data:

“We work for the world’s largest bureaucracy, and there are certain things that come with that” (O1 PFBS1).

All of this demonstrates that Organisation 1 expresses assumptions that can relate to the Neo-functionalist discourse around knowledge and KM, which developed most likely developed from their specific role within the partnership, being in close partnership with the Stakeholders and coordinating the project. Furthermore, when it came to Organisation 2, it was suggested by a participant that the employees within Organisation 2 tended to have more of a Natural Science background, meaning that they are likely to have Neo-functionalist assumptions:

“Because I think the majority of people at the [ORG 2] have a more natural science background”....

“I come from a social science background and for some reason, in my mind data was always something very abstract and it was always something to do with numbers and spreadsheets. And it took me some time to realise that if I was doing an interview or a survey, I was also collecting data, but that data could be qualitative. It didn’t have to be a number. It could be words, or it could be a picture or a photograph or something. So, it took me some time to learn that and to integrate that into my thinking, that when I hear the word data I don’t just immediately jump to numbers. And I think probably a lot of other people have the same. I think hardcore natural scientists start with... That’s what data is for them. And I think lots of non-scientific people, that’s probably also what data is for them”. (O2 I9).

Whilst this was only strongly mentioned by one participant, it was also something that I observed myself across the organisation. Finally, one of my participants took this a step further and suggested that like in the literature (Bennett *et al.*, 2016, 2017) there is a gap between the assumptions and approaches within Natural and Social science (and their associated discourses Positivist and

Interpretivist), which as I discuss below, might be linked historically to the GN and GS dynamic and subsequent partnership debates.

“And there’s still a gap between I’m going to say the natural science conservation and the social side of conservation. There’s definitely a gap between the two”. (O2 I15).

As such, Organisations 1 and 2 conceptualisation of KM from a Neo-functionalist perspective is being influenced by the assumptions and specific roles that come from this partnership (in terms of the funding and expertise), alongside a link to the modernist understanding of knowledge within the GN (Stone, Oliveria and Pal. 2020; Mahajan, Ojwang, Ahmadi, 2023). This is reflected across the wider literature within both management and conservation as well as within these organisations (Pullin *et al.*, 2004; Raymond *et al.*, 2010; Bennett *et al.*, 2017). Finally, this is somewhat different from Organisation 3, that when presented with their Neo-functionalist perspective within the feedback sessions, they accepted this but went on to discuss their embeddedness within their local and regional culture that was important to them. As such I propose that Organisations 3 conceptualisation of knowledge, in terms of the Neo-functionalist assumptions, is being influenced by the Neo-functionalist language and approaches that Organisations 1 and 2 are undertaking within KM and KS.

Exploring this further, within this project, Organisation 3’s role is to help their region with planning and decision making, which is centred around managing Organisation 3’s Sub-database and their own local database. This Sub-database feeds into Organisation 1’s Main database across the areas of the project (70+ countries), which also feeds into Organisation’s 2 global database on the conservation issue. Organisation 3’s local database is their own smaller database which is focused on their region and not specifically connected to the project. For example, one participant working on the project discussed their role:

“And my role is just to assist in terms of data management, in terms of [PROJECT FOCUS] specifically, collating the data that’s available and updating it on the [LOCATION 3 DATABASE], which it’s called, also known as [LOCATION 3 DATABASE], assist countries in that, in terms of just getting the data and updating it on the portal”. (O3 I5).

So, if Organisation 3, within this project, is predominantly working with ‘data’, ensuring that it is in a standardised, comparable, objective, and consistent format, this could certainly be seen as influencing how the Organisation might view knowledge. In this case, bringing in more Neo-functionalist assumptions, to challenge the Constructivist assumptions already in place. This could be supported by the development of technology across the world, particularly within the region, enabling greater KM and KS using technology as a tool (Davenport and Völpel, 2001). Moreover, this

is being conveyed to Organisation 3, through the project particularly from Organisation 2, who as mentioned above, train Organisation 3 on the way the databases need to be inputted and formatted:

“Yes, my understanding is to create a standardised format, so that countries would follow that, but also working closely with the [PROJECT FOCUS DATABASE] or [ORG 2], because they are the ones collating the data on [WIDER PROJECT]”. (O3 15).

Furthermore, it is not only this project of focus that is working with databases, as one participant mentions, that the five key areas of focus across Organisation 3, all link to various databases:

“Yes, so these are the five key areas that we focus on. Yes, so under each of our key areas we have different programmes, projects, and activities that we do with the national database”. (O3 13).

As such my argument here is that due to the projects that Organisation 3 undertakes, their conceptualisation of KM over the past years has been influenced by their partners assumptions around knowledge and KM. Whilst I cannot speak for other projects that Organisation 3 is undertaking in collaboration with organisations worldwide, for this specific project, the Neo-functional language and approaches to KM that Organisations 1 and 2 are undertaking via these databases, have influenced Organisation 3’s conceptualisation of knowledge. And whilst it could be argued that the project is only a small part of what Organisation 3 does, if other projects are mirroring this one, using databases, then alongside the sharing of knowledge within the organisation between colleagues on the way they are doing things, could be used to explain the spread of these assumptions:

“we have [ORG 3 COLLEAGUE] I understand is the lead for [PROJECT]. Usually, he would come to me and we’ll have a word, chat, how things are happening in his project, so we share lessons learned across the two different projects”. (O3 14).

“And then just in the past weeks, there was some knowledge management training, and then there was some IT training, and there was some other training. I forgot”. (O3 15).

In addition to the training being supplied by Organisation 3, it is not impossible that the assumptions around knowledge stemming from the projects focusing on databases, is influencing their conceptualisation and approach to KM, more towards the Neo-functional discourse.

5.2 Power as Strategy Discussion:

power as Strategy, is useful for this research as it helps identify the lines of power and control that

are not so easy to observe between the Organisations (Heizmann and Olsson, 2015). By using this form of power, which is based upon Foucault's understanding of discourses and shaped by the historical and cultural contexts, (Olsson, 2010) it allows us to understand why some discourses around knowledge, in this case the Neo-functionalist have become dominant within these organisations, despite them being geographically separate. **Within this research I argue that *power as Strategy* can be seen across my three organisations in that Organisation 3's Neo-functionalist conceptualisation of KM is influenced by Organisation 1 and 2's Neo-functionalist conceptualisation due to their specific roles within the partnership.**

Organisations 1 and 2's conceptualisation and approach to KM is influenced by their specific roles of coordination and expertise within the project, as well as the more modernist discourse which originated within the GN. Moreover, due to the complicated and intricate history of partnership between organisations (particularly those in the GN and GS) (Lewis, 1998; Lister, 2000; Derkzen, Franklin and Bock, 2008; Martins, 2020), there are residual power dynamics of inequity between the GN and GS, which is highlighted within the funding and coordination of projects, as seen here. The complicated history between the GN and GS I argue has had a strong influence over the power dynamics between these two sections of the world and is what can be seen within my research in how Organisations 1 and 2 have influenced the conceptualisation and approaches to KM within my GS organisation.

In relation to the KM Discourse Framework, this links to the Critical discourse, which suggests that *knowledge is power*, whereby knowledge is politicised, and is either used by the powerful to control or by the less powerful as a form of emancipation (Schultze and Stabell, 2004). Based on this it aligns more strongly with the *Power as Entity/ Resource over power as Strategy* (Gordon and Grant, 2004). However, within the 2x2 framework, it is suggested that the Critical discourse is focused on '*dissensus*', as knowledge can be used, not just to maintain the status quo but to incite change (Alvesson and Deetz, 2000). However, from the perspectives of Organisation 1 and 2, knowledge is being used here to maintain and expand the approach to KM which is dominant within the GN. Hence a '*consensus*' approach to KM and maintain the status quo. Whereby from Organisation 3's perspective, it could be argued that it is a '*dissensus*' approach as their traditional view around knowledge and its Management, stemming from a focus on people is being challenged by this new Neo-functionalist discourse. Or with the pushback from Organisation 3, regarding the databases mentioned above, this could also be seen as both *consensuses* to maintain order as Organisation 3 sees fit, or *dissensus*, which is disrupting the natural order as Organisations 1 and 2 might see it. As

such, both forms of power that I have demonstrated between my organisations, can be present and have contrasting opinions and perspectives depending on their position within the power dynamics of these three organisations.

This is interesting because all three Organisations are in a partnership with one another, whereby there is collaboration and cooperation. However, what I have found regarding the conceptualisation of KM between the three organisations, questions this collaboration and brings in an inequality that on the surface is not observable. Moreover, due to the online nature of this research, where I was only involved in meetings that I was given access too, and that I was not face-to-face within the organisation to experience more nuanced conversations or day-to-day aspects of the project, it could strongly be argued that it was difficult to explore the full level of conflict and power if any, within and between these organisations and the project. Had the data collection been face-to-face, it might have been easier to hear what was not said on calls between the organisations, or between colleagues after these calls occurred. As such it could be argued that due to the online nature of data collection, I was not able to fully appreciate or absorb the power dynamics within and between the three organisations. And more research would need to be conducted.

6.0 Conclusion:

The terms GN and GS, are somewhat heard, but ultimately not used across any of the three organisations either verbally or in any of the documents. It is suggested there are two main reasons for this. Firstly, that the GN-GS dichotomy is oversimplified, and not able to encompass the global diversity within two halves. The second is whether it is an appropriate term to use, based on connotations from previous language used. Either way the terms are not used and so do not influence the KM or KS within any of the organisations. However, at this point I would argue that the conceptualisation of KM within Organisation 1 and 2 (being predominantly Neo-functionalist, but still acknowledging the prevalence of the Constructivist discourse), is influenced by their specific roles within the partnership whereas the conceptualisation of KM within Organisation 3, is ultimately being influenced by their partnership to Organisations 1 and 2 within the GN. That Organisation 3's Neo-functionalist conceptualisation of KM, is linked to their partnership with Organisations 1 and 2, who through controlling what is classed as knowledge within the project, are influencing Organisations 3 understanding of KM and the subsequent approaches. Ultimately, I argue that it is the geographical positioning in the GN that influenced Organisation 1 and 2 conceptualisations of KM, which through their position of power (both *Entity* and *Strategy*) (Gordon and Grant, 2004) is also influencing Organisation 3 conceptualisation of KM within the GS. However,

one final point is the lack of consideration for power within the KM literature in either management or conservation (Kelly, 2007; Olsson, 2007; Engstrand and Enberg, 2020). It is clearly a key consideration when exploring KM and KS both within a singular organisation and between different organisations, whether they are partnered or not, and as such I agree with Heizmann and Olsson, 2015, in their suggestion that more KM research needs to consider the implications of power within KM, and not just from a consensus perspective but also a dissensus one too.

Chapter 7 Research Question 3

1.0 Introduction:

Through the analysis of 34 interviews, 27 meetings, 19 documents and 8 feedback sessions across the 3 organisations, the aim of this chapter is to examine and answer the question of *How do technological factors and the associated discourses facilitate and constrain the KS within and between conservation organisations?* This was a decision that was made on several levels. Firstly, based on my participants conceptualisation of knowledge and KM at least partly stemming from a Neo-functional discourse, and the Codification strategy (Hansen, Nohria and Tierney, 1999; Schultze and Stabell, 2004) which is heavily supported by technology (Bolisani, Padova and Scarso, 2020; Asiedu, Abah and Dei, 2022), I thought it important to address this role of technology on the KM and KS within and across the partnered organisations. Additionally, whilst investigating my participants perceptions of what can influence KS within and between the organisations, technology was mentioned by virtually all participants. Finally, due to the topical nature of the use of technology during the Covid-19 pandemic, virtual working was extremely relevant and mentioned several times by individuals within each organisation. However, whilst I have focused on technology, I don't want to be accused of ignoring the social factors that are influencing KM and KS, especially after my critique of the various paradigms and discourses within Chapter 2. Indeed, several influencing factors were found that focused on people, including face-to-face contact, trust and relationships, people, and culture as detailed at the end of Chapter 3. However, due to the reasons mentioned above, I will just be focusing on the influential role of technology, but with the understanding that these technological factors are not exhaustive, only that they were found within both the relevant literature and the data collected across the three organisations (Venkitachalam and Willmott, 2015).

Before we begin, there are two points I would like to discuss. Firstly, is what I mean by technology and secondly why it is important to understand these influencing factors. Firstly, technology can be understood in many ways depending on culture, geographical location, and sector. Additionally, within organisational management technology can also be understood in several manners including through '*Technological Determinism*' (i.e., Organisational changes are caused by technological developments), the '*Social Shaping of Society*' (technology is just one aspect of our lives with social and economic factors playing a part), and the '*Social Construction of Technology*' (whereby technology is the expression of ideas) (Knights and Willmott, 2017). Since it is suggested that both the *Social shaping of Society* and *Social Construction of Society* are at the end of the same spectrum, I find my understanding of technology lies somewhere central. That technology is not neutral and

can certainly be a tool for power, but that it mirrors society, reflecting and enforcing assumptions and worldviews. As such even within an organisation technology can be viewed differently, as we shall see below, but it still leads to one dominant technology (Knights and Willmott, 2017). Finally, I am viewing technology as both hardware (i.e., physical computers) software (online platforms such as the Microsoft Teams), as well as the internet connectivity.

Secondly, as established within Chapter 3, KM, and its individual processes of knowledge Creation, Knowledge Sharing, knowledge Storage and Retrieval and knowledge Application (Mårtensson, 2000; Alavi and Leidner, 2001; Serban and Luan, 2002; Wang and Ahmed, 2003; King, 2009; Corfield, Paton and Little, 2013) can influence organisational performance, including increased productivity, flexibility, innovation, decision making and overall increased efficiency and effectiveness within the organisation (Chase, 1997; Mårtensson, 2000; King, 2009; Zheng, Yang and McLean, 2010). However, these 'benefits' for organisational performance, are not guaranteed. KM can be difficult to implement within an organisation, with there being uncertainty over the use of various KM models and where to start (Earl, 2001; McKinlay, 2006). Finally, there is also the issue of how to measure the outcomes of KM, so that it can be assessed (Sharratt and Usoro, 2003; McKinlay, 2006; Zheng, Yang and McLean, 2010; Wei, Choy and Chew, 2011). As such (from a Neo-functionalist perspective) it is extremely important to know which factors can influence the KM and subsequently KS, to ensure that the implementation of KM is useful for the organisation. However, this following section isn't going to explore what successful KM and KS looks like within each of my organisations. Instead, accepting the assumption that there are factors that can influence the KM and KS, and these can be identified, thus attempting to understand how KM can be influenced by these factors. Additionally, it should be noted that this research and the subsequent influencing factors are context specific to each of the organisations, so in the same way that KM discourses and frameworks cannot be generalised, neither can these influential factors.

With all of this in mind, how does *Technology* influence the KM and KS within and between the three organisations? *Technology* can facilitate KS using various *Online Platforms* and the positive aspects of *Virtual working*, whilst *Technology* can hinder KS through the *Digital Divide*, unsuitability and inaccessibility of *Online Platforms* and the negative aspects of *Virtual working*. I will be going through these themes, providing examples from each of my organisations where appropriate and highlighting where examples are missing.

2.0 Online Platforms:

In the following section I am going to be exploring the influence of *Online Platforms*, which can both facilitate and constrain the KM and KS across all three organisations. At the end, I will then draw together arguments from the literature and link these to the examples that I found within my organisations. Firstly, the organisations use online platforms to store and share knowledge with one another through databases and websites (using the Neo-functionalist discourse and Codification strategy). And as discussed within Chapter 5, these online platforms can also be used to facilitate more people focused KM and KS (using the Constructionist discourse and Personalisation strategy) (Hansen, Nohria and Tierney, 1999; Schultze and Stabell, 2004), through the hosting of online meetings and presentations, enabling the creation of COP and networks of people. However, if the platform does not contain all the relevant information, is not user friendly etc. or people do not have access to it, then individuals might not use it and it can be a barrier to the KM and KS within and across the organisations.

2.1 Online Platforms within Organisation 1:

Firstly, despite Organisation 1 focusing on the technical side of the project, and me observing this first-hand in the meetings, interestingly only a handful of participants within Organisation 1 emphasised online platforms when discussing their work and the various ways they can share knowledge. This was highlighted through direct interview questions, as well as in the meetings where they would be talking about online platforms regarding the work that they were undertaking:

“So, once you have created this platform, and this platform has also been done in a way that the region can replicate it and actually receive [DELETED BY RESEARCHER] information from the global level and update with, upload also regional level information that will be visible only at the regional level”. (O1 I0).

“So we use this platform to share different kind of knowledge, could be training course, webinar, or also information about projects or groups working on the same task or issue. So we have this platform”. (O1 I8).

“We have in Teams, we have this tool called Task Planner where we can add tasks and assign them to people. So they are like cards, we can put as much detail as you want, you can link documents to that. And then you can assign and put deadlines and dates”. (O1 M4).

Within Organisation 1, these online platforms helped facilitate the management and sharing of knowledge with their partners, and within their own organisation. They are aware of their usefulness in facilitating the KS and as such regularly use them in their day-to-day work. We can see that this includes those viewing KM through a Neo-functionalist discourse, whereby these online platforms

hold data and information. As well as those who can be understood to view KM through a Constructivist discourse, whereby these online platforms are used as tools to facilitate discussions with colleagues, whereby TK can be shared between individuals (Inkpen and Dinur, 1998).

However, participants also suggested some ways in which these platforms could hinder the management and KS. For Organisation 1, these include the limitations of the platforms to be user friendly or up-to-date with knowledge (Kapos *et al*, 2008; Sánchez, and Morrison-Saunders, 2011), which is critical within the conservation sector, where acting fast (Martin *et al.*, 2012), with the right information can help save a species from extinction (Linklater, 2003):

*“Some people use it a lot. Some people don’t even go there. So it really depends. And if you’re interested, the information is available. A lot of information is available. But if you’re not, you might miss something. So it really varies who wants to tell and what”. (O1 I1). *(In discussing the intranet).*

“So far, it’s been a bit of a pain in the neck for the synchronisation from an older version with a new one, so, yes, that’s a very tricky part”. (O1 M10).

The online platforms can hinder the KS through the lack of use by participants, which obviously would limit the knowledge being shared. This lack of use is more of an issue when it is only some individuals using the online platforms. And this lack of use, hindering the KS could be caused by the consistent changes to technological tools within Organisation 1:

“I think part of the problem is, and we alluded to this before, is that in our lifetime here in [PROJECT], at [ORG 1], at the [MAIN STAKEHOLDER], the tools changed, the processes changed a lot. And it took a big effort a few years ago to get everybody to, or almost everybody, to use our internal system called [SOCIAL MEDIA], to keep track of planned publications, planned missions, events, and share stuff there.And finally, almost all of us made good use of it, and then from one day to the next there was [unclear], this system is obsolete, we’re moving to something else now. And then you get another message down the line saying here’s a new tool, now use that. But that new tool might actually do the same job the same way, and again it will take some time, I think, to get to use Microsoft Teams effectively, and other things. ... it has definitely not made our lives easier. And the same, of course, applies also for our external partners and clients”. (O1 PFBS2).

So ultimately, is it the changing of platforms within Organisation 1 that could be hindering the uptake of these *Online Platforms* and so hindering the KM and KS within Organisation 1 and between its partners. Finally, technology can also be used to physically limit the access that individuals have to knowledge. This was described within Organisation 1 whereby external partners could not access documents on their servers, as well as when either emails or meetings involved only specific individuals:

“Yeh just a comment on that PA4 comment about the files. Cause in the... We do have outside partners who can't access the files on TEAMS so there you have to use emails or a totally different team on TEAMS so yes it is quite unclear now how to handle these things”. (O1 FFBS).

“I said there were some emails that were only circulating among certain people on the technical side, or on the thematic side, or on the missions to go into a certain place”. (O1 I0).

This would hinder the KS, because without access to the knowledge, it cannot then be shared further (Sunderland *et al.*, 2009). Within Organisation 1 this can produce individuals with a level of power (as Entity) (Gordon and Grant, 2004) and ownership over this knowledge, deciding what its value is and ultimately deciding who has access to it within the online platforms. Moreover, there are more power asymmetries between Organisation 1 and their partners if they are preventing them from accessing documents needed for their collaboration and work on the project (O1 FFBS). It is understandable that not everything is shared as I will discuss for Organisation 2, but this inaccessibility of required documents and data, firstly hinders the KS and secondly could cause an increase in Organisation 1's work to then share the knowledge.

Overall, technology within Organisation 1 can be used to help the KM and KS by creating *Online Platforms* that can be used to store and share knowledge, as well as connect individuals for training (Argote *et al.*, 2000; Szarka, Grant, and Flannery, 2004). However, this can also be used to hinder the participants' understanding of KM and KS, through the online platforms not being user friendly, up-to-date, and ultimately not used by the participants as much as required. This is particularly the case when technology and these online platforms are changing consistently, making their uptake and retention more challenging. Finally, through the intervention of people, these online platforms can be used to hinder KM and particularly KS through the physical inaccessibility to that *data, information, or knowledge*, due to decisions made by other individuals and their assumptions around the value and importance of that knowledge.

2.2 Online Platforms within Organisation 2:

Moving onto Organisation 2, where it was likewise focused on using *Online Platforms* as repositories and databases to store knowledge, meaning knowledge can be shared and accessed as and when required:

“We use a mixture of [SOFTWARE], and things to store information, [SOFTWARE]. And now Teams, since Teams became more of a thing we've now transferred lots of documents, and Teams is now meant to be a kind of platform for us to communicate in real time.” (O2 I3).

“There’s many different systems. We use [SOFTWARE] quite a bit, which is of course a big one for sharing documents. But we don’t use [SOFTWARE] for data”. (O2 I4).

From the above examples, Organisation 2 tends to use technology for the storage of knowledge – i.e., datasets, or metadata, alongside guidelines that can be found in their manuals on how to undertake data management and KM within the organisations. This emphasises the conceptualisation of KM using the Neo-functionalist discourse and the Codification strategy (Hansen, Nohria and Tierney, 1999; Schultze and Stabell, 2004). However, as with Organisation 1, through using these *Online Platforms* in this way, there is the possibility of Organisation 2 limiting access to some knowledge, not necessarily to their employees but to their partners. This was mentioned within one interview and from the below quote, it seems that this is deliberate, but more complicated than just not wanting to share:

“So the [ORG 2 GLOBAL DATABASE], there’s a part that's just internal. Everyone in [ORG 2] has access to that, but I don't think it's publicly shared, because it might also have some sensitive information. But then the [OTHER WIDER PROJECT] library, there we also have two versions. There’s a website, it’s just [OTHER WIDER PROJECT WEBSITE], and there everyone can access it, everyone can have a look at it, and it’s completely public. But then we also have... The database that feeds into this [OTHER WIDER PROJECT] library has some data sets that are marked as internal only, like only including a summary output, and those that are just for our information, because they’re more sensitive data sets, they’re not publicly available, etc”. (O2 I4).

This demonstrates that Organisation 2 is directly limiting access to knowledge by their partner organisations. However, as mentioned repeatedly in the quote above, this limiting of access is more to the raw data and due to sensitivity issues than Organisation 2 not wanting to share. This is something that the literature does not always consider and that in organisations it is usually more complicated than first thought when it comes to KS, whether this be ownership, patents, data protection etc, and is something that was mentioned by one of my participants within their Interviews (O2 I15). As such it would be oversimplified for me to suggest that an organisation can only be classed as undertaking KS if they share everything with everyone, as that will never be the case. This is also the same for Organisation 1 in the previous section.

On the other hand, Organisation 2 also used these *Online Platforms* to greatly emphasise connecting people through technology and the use of these online platforms:

“So I guess in Slack, people will share updates on activities that are going on, any interesting articles or news, updates that they’ve spotted. And there’ll be discussion threads as well if someone has a particular question or interesting idea. There’s also lots

of different sub channels organised by topics and there are channels on, say, gender and biodiversity so there'll be discussions on there on that sort of thing". (O2 I5).

"I think you have a point that we don't want to have endless numbers of platforms but having a few around for to help you engage because we quite often in my region will start off on one and they can't join. Then we have to drop off that one and go onto another platform and it's just really nice. At least having three". (O2 PFBS).

Whilst not having access to other individuals face-to-face, as they would expect within the office, Organisation 2 has emphasised the importance of trying to replicate this connection online through Slack. Slack uses instant messaging and video calls to emulate the connection missing when working from home, thus potentially building, and maintaining trust and relationships which the literature suggests is important to KM and KS (Sharratt and Usoro, 2003; Finn and Waring, 2006; Politis, 2003, as cited by Hume and Hume, 2008). This is also alongside having a variety of platforms to ensure that there is always one platform that will work depending on their external partners, because if a platform does not work, either due to access, or because the platform is not suitable for the user's needs, it can cause issues and hinder the KS as we can see below:

"As I said, [INTERNAL SOCIAL MEDIA] was more of a presence. I miss [INTERNAL SOCIAL MEDIA] to a certain extent, because it provided more of a chat function, which Teams doesn't necessarily facilitate". (O2 I1).

"With Teams, I just haven't found it so user-friendly. It's great for having a meeting, really easy, but I haven't found it so user-friendly for knowledge management and sharing. I think they are planning on using that as the kind of central location for documents, but there's not been very clear communication about that, so I think that a proper plan, and proper communication of that plan, would be useful". (O2 I3).

As was also the case for the inter-organisational meeting that occurred, whereby Organisation 2 used an online platform common to all parties (Organisation 2, 3 and the Main External Partner) to host the meeting and share knowledge (O3 M1). Either way, this approach to KS using these online platforms emphasises the conceptualisation of KM via the Constructivist discourse and the Personalisation strategy (Hansen, Nohria and Tierney, 1999; Schultze and Stabell, 2004), whereby people are integral in the understanding and sharing of knowledge (Davenport and Völpe, 2001; McKinlay, 2006; King, 2009) and where some believe that having a conversation may be the only means of effective KS (Pierce, 2002).

Overall, Organisation 2 uses *Online Platforms* in two distinct ways. Firstly, is the storage of datasets, alongside metadata and guidelines on how to do their work using the Neo-functionalist discourse. The other way is using the *Online Platforms* to facilitate the KS between individuals within the team

and across their external partners using the Constructivist discourse. This seems to facilitate the KS by emulating the face-to-face connection that they were used to within the office. However, sometimes this does not work as planned, especially when platforms change or if they are not functioning in the manner that the individual's needs (O2 I3). However, as was discussed in the Preliminary Feedback Session, by having multiple platforms, one of them will be sufficient and so facilitate the KS. But this KS can only occur if there is physical access allowed to the knowledge, which, like Organisation 1, Organisation 2 is controlling access to knowledge from their partners by using their assumptions around knowledge to make decisions on its value, use and application and ultimately whether this should be shared with certain individuals. In this situation, technology and these *online platforms* are just a tool rather than the driving force behind this hindering of KS.

2.3 Online platforms within Organisation 3:

Finally, Organisation 3, although they don't mention much in terms of *Online Platforms*, whether they facilitate or hinder KS, they did discuss their online library. This is the online library where all their documentation from their various projects is stored, allowing access to these reports and presentations to all Organisation 3 employees and possibly the wider region. It should be noted that due to Organisation 3 being predominantly based within their office during data collection, when discussing the use of technology, this was generally focused on the management and sharing of the knowledge externally to within the region. For example, there were snippets within an interview where they discussed how *Online Platforms* helped them to share their knowledge externally:

"The [ORG 3] library. Virtual one. So, I guess for [ORG 3] it's really the main tool that is used to manage and share knowledge. Either internal at [ORG 3], and with the members, and all virtual users". (O3 I9).

"We coordinate media training. Media interviews. We update the website. Yes, so all of that.....So everything had to be done online. We moved our regional media training. We had something called ??? classes. And those were just short lectures really. One hour sessions on different environment issues. ... And those were open for anybody that were interested. (O3 I8).

This seems to be the main approach that Organisation 3 has regarding using platforms to facilitate their KS. Use it as a literal platform either to present and share knowledge to others, using assumptions around the Neo-functional discourse or connect people and share the knowledge via presentations and meetings, using assumptions around the Constructivist discourse. It is through these presentations that there can be a building of networks between people (King, 2009; Powell and Ambrosini, 2012), which can give rise to discussion so providing access to a broader range of

knowledge. Interestingly, with Organisation 3, they do not discuss their *Online Platforms* in any way that might be construed to suggest that they can hinder the KS within the organisations. Specifically, there was no mention of the individuals at Organisation 3 physically limiting access to knowledge to their colleagues within Organisation 3 or even externally to their partners, unlike at Organisations 1 and 2. And whilst this was not directly asked about within the interviews, Organisation 3 were asked the same questions as Organisations 1 and 2 within the interviews, around possible aspects that can hinder KS, and since this was not mentioned, it can be inferred that at the very least this is not a common occurrence at Organisation 3. This is interesting as it demonstrates a different perspective to the power around knowledge from Organisations 1 and 2. However, one area they did discuss as limiting was their accessibility to technology which we will discuss with the *Digital Divide* section below. This was the main way Organisation 3 participants suggested that technology might hinder the KS across the organisation.

Overall, *Online Platforms* can be both beneficial and limiting to the KM and KS within and across organisations. It is interesting to observe that all organisations use these *Online Platforms* to share knowledge in similar ways that can generally be divided depending on their assumptions around knowledge. Either using a Neo-functionalist and Codification strategy, whereby knowledge is stored and shared through online databases or the virtual library. Or via the Constructivist discourse and Personalisation strategy whereby these online platforms are tools to provide a connection between geographically distant individuals so that they can share knowledge 'face-to-face'.

3.0 Digital Divide:

Next, I am going to discuss a theme that all three organisations suggest to only hinder KS. I have coded this, *Digital Divide*. For the basis of this section, I define the *DD* as not just having the access to the technological hardware (van Dijk, 2006; Knights and Willmott, 2017), but also including the technological software, and technological infrastructure to ensure a quality connection (Cullen, 2001; Roberts, Pavlakis, and Richards, 2021). Specifically, this *DD* theme for Organisation 3 encompasses insufficient internet connectivity and speed within the organisation. Referring to Chapter 1 on the discussions around the GN and GS dynamics (Odeh, 2010) it might not be surprising for this *DD* to be directly impacting Organisation 3 in the GS and indirectly impacting Organisations 1 and 2 who are both situated in the GN. This is demonstrated by all three organisations discussing the issues around internet connection and speed, but with Organisations 1 and 2, discussing it about other partners, including Organisation 3, whilst Organisation 3 was discussing it in reference to themselves:

“So it could be a barrier that people that live in some part of the world the internet connection is not good, they can’t share the data”. (O1 I4).

“I think that the majority of the work or [inaudible] comes from capacity development in the regions because a lot of the regions aren’t working digitally, or if they do have digital access, it’s at a very base level”. (O1 I7).

“There are practical considerations around access the required infrastructure and capacity to manage institutional data”. (O2 I15).

“One issue I’ve had, that it took the countries quite a bit of time to get used to this mode of communication because our region has always been limited by internet connectivity and speeds.” (O3 I1).

“Like some areas of [LOCATION 4 COUNTRY] still have dial up. And then you’ve got [COUNTRY 3] where things are really, really fast, and cheap. And I’m here in the [LOCATION 3 COUNTRY]. Things are relatively fast depending on where you are. But it’s unreliable and the cost is really exorbitant. So I think that there’s that”. (O3 I8).

“I am having some trouble with my internet today, which is not a very unusual case. It happens a lot of times. So sometimes, I get a very faint kind of a background noise or sometimes even I can’t hear properly, so please, I do apologise in advance in case you say something, and I miss it. (O3 M2).

This issue around internet connectivity and speed was discussed more often by Organisation 3 than Organisations 1 or 2, which makes sense as they are the ones being directly impacted. Even before the pandemic, any contact that Organisation 3 had outside of its office would be done via technology, whether this was to a neighbouring country or across the world to Organisations 1 and 2. As such they are much more vulnerable to technology hindering the KM and KS in this way, due to their geographical location (Cullen, 2001; Kim *et al.*, 2021). If the internet disconnected, or there was a storm that was impacting the internet speed, as is what occurred during the preliminary feedback session, they would not be able to communicate externally. And given that much of their work involves coordinating with external individuals, this hinders their KS capabilities. It could also be argued and rightly so that the same could be said for both Organisations 1 and 2, if their internet went down, however due to their location within the GN, this is less likely to occur (Odeh, 2010).

Additionally, as mentioned above, one of the facilitating areas of *Technology* for Organisation 3, is their online library platform. However, with limited internet, this library will not be able to be updated, or accessed, meaning that the KS within Organisation 3 is being directly hindered by this *DD*. This specific issue around the online library platform would mainly be impacting Organisation 3, as with their more likely sufficient internet, Organisations 1 and 2 would still be able to access it. However, where Organisation 1 and 2’ KS could be hindered by this *DD*, would be in their regular

connections with their partners in the GS. Slower email responses, limited or lower quality online meetings etc. This was mentioned as a crucial factor when conducting online interviews, to maintain the physical KS conversation, but also as to not interrupt the building of rapport between individuals (Deakin and Wakefield, 2014; Seitz, 2016). Finally, in some cases, GS partners might not have sufficient internet access or connection to use these online resources supported by Organisations 1 and 2, which is what occurred elsewhere in this project:

“For example, in [LOCATION 5 COUNTRY], the computer infrastructure of the public institutions, it’s very low. It’s very poor. Most people rely on their own devices for internet, and smartphones and that kind of stuff for internet. So the official internet’s never working, and have to have their own private one”. (O1 PFBS0).

“Yes. The other thing is also how to reach out to people who are not able to access or who are not used to much to access computers, for example”. (O1 I3).

Overall, *Technology*, specifically the *DD* owing to internet access, connection, and speed, can negatively influence the KM and KS within and across these three organisations. This is predominantly found within Organisation 3, owing to being situated within the GS where internet connectivity might not be as functioning as Organisation 1 or 2 who are situated within the GN (Odeh, 2010; Eriksen. 2015). Although that does not mean that Organisation 1 and 2 will not be impacted by this. What is interesting about this is that within the KM literature, whilst it was acknowledged that technology could constrain KM and KS (Davenport and Völpel, 2001; Luan and Serban, 2002; Ng *et al.*, 2012; Navimipour, Jafari and Charband, 2016; Venkitachalam and Willmott, 2016; Asiedu, Abah and Dei, 2022), the *DD*, or inaccessibility to the required technology was not mentioned. This is possibly because the research on the factors influencing KM and KS have been undertaken in GN countries and organisations rather than those situated in the GS. And as such this challenges the current literature on the applicability of these research findings on GS organisations.

4.0 Virtual Working:

The other factor that the participants mentioned was *Virtual working*, which was brought up mostly within the interviews, either when discussing factors that could influence the KM and KS through my line of questions, or when discussing the impact of Covid-19. Again, participants across all organisations mentioned ways in which working virtually can facilitate and constrain the KM and KS which I detail below.

4.1 Virtual Working in Organisation 1:

For Organisation 1, working predominantly online has given participants wider access to knowledge,

as more individuals have been able to join meetings both within their own organisation as well as from other partnered organisations. This is particularly beneficial for Organisation 1 because they have strict rules around travel and how many people can attend meetings off-site. So having more online meetings means that more people can attend on a global scale, thus, facilitating KS:

“It was possible for more people from the partner organisations, but also from some external organisations, to join in, in this. ... For example, maybe more people from [MAIN EXTERNAL PARTNER] or even more people from [LOCATION 5 DATABASE HOST] or from the other [OFFICES] could participate at different time”. (O1 I3)

“Because I remember when there was no pandemic and we went to the office and we didn’t get in touch with people so often. So, even though they were in your corridor, but you didn’t have so many chances to interact with them. So, that’s the positive side”. (O1 I6).

From this, Organisation 1, in terms of their ability to share knowledge through meetings, seem to have benefited from this *Virtual working* environment. However, it was specifically mentioned by participants within Organisation 1, that they miss out on the social aspect of being in the office, and KS that way:

“Even just the fact that there was less chance to meet, you go to the next door and ask for something. But if you're not really physically in touch, so, there is a high specificity of roles, I would say, that somehow hinder this knowledge-sharing”. (O1 I0).

“That has been perceived as very beneficial for the workplace, but also socially. It's also easier then to get to know the partners, to build the trust between [ORG 1] and the [MAIN EXTERNAL PARTNER] and then the [FIELD OFFICES], just to better understand the work culture, but also the individual habits”. (O1 I2).

As mentioned above regarding the *Online Platforms*, this lack of face-to-face contact and the possibility of socialisation could be detrimental to the KS process, due to the importance of relationships between individuals suggested both by the literature and my participants (Politis, 2003, cited in (Hume and Hume, 2008; King, 2009; Navimipour, Jafari and Charband, 2016). This was found to be the case within both the management and conservation sectors with Sveiby and Simons, 2002 finding that a conduct of trust and collaboration improved KS within both public and private firms and although this did vary depending on their time in the role, it was still considered an important factor. Moreover, Boreux, Born and Lawes, 2009, found trust particularly important when conducting research and sharing knowledge within the tropics. This was also something that Organisation 1 agreed with:

“Because I guess it’s, yes, either that people like each other or they respect the other person’s capabilities or knowledge. That definitely helps”. (O1 I1).

Now I am not saying that there is no socialisation when working virtually, or that trust, and relationships cannot form when working online, as it certainly can (Roberts, Pavlakis and Richards, 2021; Howlett, 2022). Only that my participants have suggested that there are aspects of meeting face-to-face within the offices that they miss, mainly relating to socialising, especially with their external partners. And on some occasions, they feel that it can limit the KS.

Whilst this lack of socialisation does seem to be an issue for the KS within Organisation 1, a greater issue arising from *Virtual working*, is the increase in meetings. Prior to *Virtual working*, individuals would pop by someone's desk to ask a question, whilst nowadays individuals in Organisation 1 schedule a meeting for the same purpose, which ultimately increases the number of meetings, reducing their time for other areas of their work:

"Just less meetings for me because I know if you work in the office you can share thoughts or information when you want. You knock the door and say, sorry, can I ask you something? Here you have to schedule or ask a meeting, and to be updated because I should be updated from all regions so I follow everyday one or two meetings". (O1 I4).

"But sometimes I feel very tired because we have a lot of meetings to be updated on our work. If you are in the office, you can exchange news and updates with your colleagues. But from home, it's impossible, so we have a lot of meetings scheduled every week". (O1 I5).

"Before this meeting I came from another two meetings. So, I started 08:30 this morning and then I'm still here. I have to be also somehow, sorry for that. But I can't move from the chair, there are many days that you are just stuck, meetings, meetings". (O1 I6).

This overload of meetings was mentioned by most participants within Organisation 1, and it would seem here that whilst the opportunity to share knowledge has increased, that knowledge might be being shared using non-suitable platforms. For example, could some of these meetings not be an email or an instant message on TEAMS? However, Organisation 1 has also said that far too many emails are being sent and received, with it being used like an instant messaging service which is clogging up their email servers:

"And so on Friday, there was something blew up about something and I got over 100 mails on Friday. But they were mostly saying yeah thanks for that, and yeah I will forward you this document. And it was a chat". (O1 FFBS).

But especially within the light of being overloaded by meetings, emails, and just generally having no time to do work, which is something that is clearly occurring within Organisation 1. Interestingly, despite working virtually being focused on technology, both the benefits and limitations of *Virtual working* stems from assumptions from the Constructivist discourse

(Schultze and Stabell, 2004). *Virtual working* is surprisingly focused on the people elements of KS. Facilitating KS in allowing more individuals to attend meetings, and so sharing the knowledge more broadly (i.e., formal KS (Alavi and Leidner, 2001), but then there are also issues in the participants feeling that there is less socialising when working virtually as compared to being in the office and feel that it limits the KS (i.e., informal KS (Alavi and Leidner, 2001). And finally, through working virtually there is an overload of meetings and emails, due to not being able to discuss things briefly face-to-face (i.e., more formal KS due to less informal KS. Overall, from the perspective of Organisation 1, *Virtual working* has been beneficial for the KS between the organisations as more people can attend these virtual meetings and so facilitate KS. But for the KS within Organisation 1 working virtually has hindered KS, because to compensate for not being able to speak to people face-to-face they have been using platforms to share knowledge that are unsuitable for the job and as such their work, time and KS has been negatively impacted.

4.2 *Virtual Working in Organisation 2:*

For Organisation 2, it was interesting to hear within the FFBS that participants did not think that the Covid-19 pandemic had had much of an impact on their work. This was because Organisation 2 were already working predominantly online due to the global scale of their projects. Additionally, they already had internal *Online Platforms*, and access from home, due to the flexibility of staff location. Moreover, Organisation 2 saw the pandemic as an opportunity to explore the feasibility of undertaking workshops online, with the participants being pleasantly surprised with the results:

"[ORG 1] and ourselves joined remotely, it was like a hybrid workshop, which I was really nervous about" ... "In the end, it was quite successful because the [FIELD OFFICES] had to step up and take a lead on that, and they were a lot more capable than I had given them credit for or that I expected. They were able to answer a lot of the questions and lead the training well on their own". (O2 I2).

"I think we did do, I would assume, comparatively well compared to some other organisations in terms of switching, making that sort of immediate switch from office to home working, because we've had to deal with Zoom and everything before to talk to partners. I think we probably did find it easier". (O2 FFBS).

For Organisation 2, it is suggested that *Virtual working* provided new opportunities for different ways of working and KS online rather than face-to-face. Additionally, this minimal impact of working from home, as suggested by some participants is something that I observed, with there being the least technical problems during the data collection. This is interesting when compared to Organisation 1 who also had flexibility from working location, but who I felt were more impacted

when the pandemic hit, due to not having as many virtual working capabilities in place. However, issues with *Virtual working* were also raised by the participants in Organisation 2, stemming from lack of social interactions within the organisation and limitations around relationships and KS outside the organisation. During *Virtual working*, whilst participants can ask their colleagues questions on Slack, many participants suggested that they prefer asking it face-to-face, and having impromptu chats with colleagues from other teams:

“It was really, really difficult at the beginning of the pandemic because it is quite a lot harder to reach out to people virtually, digitally. So, that was quite hard at the beginning and it was quite isolating in a way. And it also made it more difficult for things like procedures or any contractual issues and things like that where you didn’t know who to ask or what to do”. (O2 19).

“Obviously, you would chat more with people in other programmes. It would be easier to run into them during breaks or during lunchtime. That was a good way to know what’s going on in other programmes because you would just chat. I’m doing this or I’m doing that and la la”. (O2 17).

“I definitely think more broadly across the [ORG 2] I haven’t spoken to people as much as I was speaking to them. I’ll quite frequently have a meeting with somebody and realise that I haven’t spoken to them in a year. And there are also people who have joined the [ORG 2], and even people who’ve joined the [ORG 2] and since left the [ORG 2], who I didn’t really know who they were. So people who you’d see at an all staff meeting for example, I’m not sure who they are”. (O2 18).

This face-to-face preference from participants when talking to colleagues, within their own team or within other teams, supports the point that I made above with Organisation 1, that trust, relationships, and face-to-face contact is important for facilitating the KS within the organisations (Davenport and Völpel, 2001; McKinlay, 2006; King, 2009; Navimipour, Jafari and Charband, 2016). This is particularly true for those participants that view KM and KS using a Constructivist discourse. However, for at least one participant in Organisation 2 they got used to communicating and asking questions online and now prefer it to the face-to-face option:

“I found in the office if I had a question for someone, if I sat right beside them and they had their headphones on or something, I didn’t really feel comfortable interrupting them. I didn’t know what they were working on. Then it was a bit awkward to write them a message on Slack because I could turn and speak to them. I was always a bit unsure of how best to communicate with random questions. With the working from home, you just put something on Slack and whoever’s free at the moment will answer” ... “I’m enjoying working remotely”. (O2 12).

Additionally, externally they found that relationships and KS slowed down and changed when working virtually:

“COVID has meant that workshops are fewer and more far between, so a workshop is a really interesting case study of what knowledge sharing is, because it’s a more open, consultative, collaborative mechanism which you would share knowledge as opposed to just sharing a database. Because come obviously to share their ideas. So that format of sharing knowledge has essentially just stopped, in a physical sense. They still continue through webinars, but that’s a different rabbit hole. So I’d say, as a rule of thumb, the amount of knowledge sharing and data sharing hasn’t stopped, but it hasn’t necessarily slowed down so to speak, it’s more the format of it has”. (O2 I1).

This was because without the opportunity for impromptu chats in the kitchen or over lunch, KS between teams within the organisation slowed down, with (O2 I8) presenting this in a sharp light. This type of KS, Alavi and Leidner, 2001 would be described as ‘informal’ whereby knowledge is shared through unscheduled meetings or conversations during coffee breaks. This is excellent for the social aspect but does not spread the knowledge widely as it is just a conversation between a handful of people. However, with Organisation 2 and their focus around people and connections, this social aspect is possibly what they miss the most:

“When you don’t have the chance to meet face-to-face and go for a cup of coffee or beer or something like that. It is a bit more difficult because your interactions do become a little bit more purist, business like. A bit more professional only and actually, trust is built across a number of different facets of relationship”. (O2 PFBS).

Finally, like Organisation 1, there has been an increase in meetings and emails since working virtually, leading to feelings of overload within some Organisation 2 participants:

“I mean, I think it’s probably about right, but at the back of my mind I’m also conscious that the number of meetings have really ramped up, certainly since the pandemic started, and although there’s lots of doing that happens in meetings, I think we could, for example, get a lot tighter in how we run meetings. I think ensuring that we have very clear objectives and agendas. It’s something that we’re not bad at, but we can certainly improve at. I think so often meetings expand into the time that you’ve set aside for them, but they don’t necessarily need to”... “We do have this tendency to copy all and sundry in an email, just to sort of cover all bases, but that means that inboxes tend to be groaning at the seams and actually it is very easy to miss things as you sort of wade through what’s coming through. Yes, I suppose those are some initial thoughts, perhaps”. (O2 I6).

This overload from too many meetings and emails leaves not enough time to do their own work. But from my impression and observations, it is not as wide an issue within Organisation 2 as with Organisation 1. For example, within Organisation 2 there is overlap between an individual's workload, so in many meetings if an individual thinks they are going to have some spare time in the week, they offer it out to help others (Sharratt and Usoro, 2003).

“But [ORG 2 COLLEAGUE] has been an absolute trooper with helping me out with it”. (O2 M10).

PA1 *Definitely helpful to have someone explain it the first time, does anyone want to volunteer?*

PA5 *Yep I can do it. (O2 M8).*

Additionally, these observed meetings are structured with a standard procedure of discussing the week's workload and asking questions to provide help. In fact, during one meeting, it only lasted 4 minutes due to the participants knowing what they were working on that week and not having any questions (O2 M6). This formality of meetings can be beneficial for KS (Davenport and Völpel, 2001; Mitton *et al.*, 2007) through asking questions, and presenting to the group (Argote *et al.*, 2000), but also can hamper creativity (Alavi and Leidner, 2001). Overall, within Organisation 2, despite finding new opportunities for KS in online workshops, based on the preference for face-to-face contact with their colleagues, and there being a reduction in the number of workshops undertaken, plus an overload of meetings, *Virtual working* was a hindrance to the KM and KS within Organisation 2.

4.3 Virtual working in Organisation 3:

For Organisation 3, due to using online meetings and emails prior to the pandemic there was less adjustment in terms of the pandemic, particularly as Organisation 3 was working from their office for most of my data collection. Where Organisation 3 was impacted by *Virtual working* was using online workshops instead of face-to-face ones like they previously did when engaging in their region. Interestingly, Organisation 3 participants were pleased with how well online workshops went in place of face-to-face ones, although this took some time to get used to. Furthermore, these online workshops were found to be beneficial to Organisation 3 in terms of reducing resources and time travelling to other countries:

“When COVID hit, since then to now, all our workshops have been remotely held, and it’s again, very interesting, because I never... The first workshop I did, I did not really enjoy doing it. The reason was I felt I’m talking at this end, and my powerPoints usually go for one hour or so, and these are like whole day workshops, because I’m their training officer, so I do a lot of training, talking and talking and talking. I get tired. And I’m thinking were the people really interested because I can’t even full-time see them, their emotions and the way they feel. It’s very informal and impersonal. But at some stage when I became more familiar with Zoom and different tools that I can use to keep them engaged, I now find that doing a remotely-held workshop is much more interesting than doing an in-person workshop, because it’s just, I mean it’s a complete change of my opinion. I find doing remotely-held workshops more interesting now”. (O3 I4).

“The only benefit... I mean, there are benefits to having these Zoom calls. For example, we’re saving travel time. If we were travelling, I would be travelling a lot to these different countries supposedly, so it’s nice to be at home for a bit. But you can also have regular meetings with them”. (O3 I3).

These online workshops, once it was known how to get the most out of them, directly facilitated the KS between Organisation 3 and their external partners, as well as indirectly facilitating KS, by providing more time for their own work, as they weren't travelling, and increasing the opportunity for more regular meetings. However, as discussed within the previous section, this was only when the internet was sufficient to allow it. Additionally, working virtually has caused an increase in workload, which in the same manner for Organisation's 1 and 2 can hinder the KS. Their workload has increased due to more meetings with individuals, which means that not all meetings are able to be attended:

"Yes, another thing I found, that our workload has increased a bit, because now, you don't have that travel time and downtime in transit somewhere, but you just get straight into the meeting with people". (O3 I1).

"I thought it would work well in the time that I was involved, and apologies, I had other commitments yesterday that I had to attend to". (O3 M1).

"Yes, because we know that our members are really engaged in many, many. So you were talking about the pandemic. They are engaged in so many webinars, online courses etcetera. So we have to be really careful on how we engage them, and what topics". (O3 I9).

As mentioned above with Organisation 2, due to *Virtual working* and an increased number of meetings, there is an understanding that meetings should be on topic and be succinct, especially when engaging externally (O3 I9). However, that does not make the meetings a better platform for KS as it depends on the knowledge wanting to be shared (Alavi and Leidner, 2001). Moreover, in the same manner as Organisation 2, losing the social time that naturally would occur through face-to-face contact, which is used to build up relationships and help make the partnership run more smoothly (Davenport and Völpel, 2001; McKinlay, 2006; King, 2009) is lost:

"But there's a history, and so the people I'm working with already know who I am, and even know if I'm a jerk or not, and they don't have to work that out remotely. But if there's a new project starting, we'd run into trust issues and competence issues, just because the face-to-face stuff does matter, at least initially". (O3 I7).

"And it's also been a bit hard for us to hear. Normally, at a face-to-face meeting we would huddle and find somewhere that needs you actually doing [unclear]. I like just going for, just have a quick conversation like, this is coming up, but I might push for this certain agenda or certain priority. So, you can't [inaudible] do that when you're doing Zoom call". (O3 I3).

Overall, within Organisation 3, *Virtual working* has limited impacted the KM and KS because all data, up until the feedback sessions, was collected where most of the participants were still working in their office. However, this *virtual working* has influenced the KS external to Organisation 3. This virtual working facilitated KS through the virtual workshops, where there was no option for face-to-face contact, but due to this lack of face-to-face contact there has been an increase in workload, as well as a loss of socialness, which helps to build the trust and relationships (Davenport and Völpel, 2001; McKinlay, 2006; King, 2009). As such, this virtual working both facilitates and hinders the KM and KS at Organisation 3.

5.0 Discussion:

I have presented the different ways that these technological factors can facilitate and hinder the KM and KS within and between these organisations, depending on how the KM and KS is conceptualised using discourses (see **Table 9**). Within the following discussion I will be exploring these points in more detail and linking them to the extensive KM literature. Within the second half, I will be discussing the research question of *How do technological factors and the associated discourses facilitate and constrain the KS within and between conservation organisations*

	Organisation 1	Organisation 2	Organisation 3
Online platforms facilitate	databases and Websites used for KS. Online software used to host meetings and share knowledge via people.	databases and Websites used for storing and KS. Use of multiple online platforms to connect people and share knowledge.	Online library used for storage and KS. Online software used to host meetings and KS via people.
Online platforms hinder	Online platforms are not user friendly, up-to-date, and ever changing, causing lack of use. Online platforms can be used to limit access to knowledge for certain individuals.	Online platforms change and people don't know which platforms to use. Online platforms can be used to limit access to knowledge for certain individuals.	N/A
Digital divide hinders	DD hinders KS through engagement with their external partners in the GS.	DD hinders KS through engagement with their external partners in the GS.	DD impacts their technological infrastructure and internet connection. Impacting their engagement outside their organisation both using the Online Library and virtual meetings.
Virtual working facilitates	Virtual working means more people are invited to online meetings and less wasted resources travelling.	Virtual working facilitates successful online workshops for KS.	Virtual working facilitates successful online workshops for KS.
Virtual working hinders	Information, meeting, and email overload, plus missing the social interactions with people.	Information, meeting, and email overload, plus missing the social interactions with people. Fewer online workshops than when it was face-to-face.	Information, meeting, and email overload, plus missing the social interactions with people.

Table 9: Summaries the key points across all three organisations on the manners that *Online Platforms*, the *Digital Divide* and *Virtual working* can both facilitate and hinder the KM and KS within and across the Organisations. *Digital Divide* only has one row as it is only found to be a hindrance for KM and KS across all three organisations.

Online platforms have been extremely useful for KS both before and during the global pandemic. Previously, there was an emphasis around asynchronous KS through emails, online databases etc., and with the pandemic this increased to include the online platforms used to facilitate meetings – TEAMS, Zoom etc. No one is denying that these online platforms are not useful for the KM and KS of the organisations or project, in fact they have been extremely useful within many organisations (Davenport and Völpe, 2001; Serban and Luan, 2002; Roux *et al.*, 2006; Wei, Choy and Chew, 2011; Roberts, Pavlakis and Richards, 2021; Asiedu, Abah and Dei, 2022). One could argue that it is only because all three organisations view KM and KS predominantly through the Neo-functionalist discourse and Codification strategy, that the influence of technology on KM and KS is so strong (Kumar and Ganesh, 2011). However, participants also discussed how technology can hinder the KM and KS. These include not being user friendly, or up-to-date and interoperable. For Organisation 1 this was particularly about them consistently changing platforms that possibly contributed due to their lack of use. What this demonstrates is that under the Neo-Functionalist discourse, technology is used as a tool (Davenport and Völpe, 2001) to store and share the knowledge but without the people, there is limited use. So, people are important within the KM and KS process.

This leads us onto the Constructivist discourse, and how this might be facilitating or constraining the KM and KS within and between the organisations. Despite suggestions around greater accessibility using multiple different online platforms, there are issues that the interpersonal aspect still isn't there which is hindering the KS within and between the organisations (Davenport and Völpe, 2001; McKinlay, 2006; King, 2009). The main hindrances of *Online meetings* and *Virtual working*, whether this is within the organisation or external to it, is the reduction in social time between the participants as compared to face-to-face (Chase, 1997; Davenport and Prusak, 1998; Wilson, 2002). We have already established that having social interactions and engagement with people is important across all three organisations with it being suggested in the literature that meetings and conversations are one of the more successful approaches to KS (Pierce, 2002). So, whether it be Organisation 1 feeling a lack of social interaction within their big yearly meeting, or Organisation 2, losing that feel of community from not being in the office or Organisation 3 who whilst this wasn't felt internally as they were still working in their office, felt it externally with the implications of this

on their relationship and partnerships within the region. And whilst this is being emulated with online meetings, many would argue that it is not the same (Deakin and Wakefield, 2014; Seitz, 2016).

The other argument to the hindering of KM and KS through these *Online platforms* and a Constructivist and Critical discourse (Schultze and Stabell, 2004) is by limiting individuals access to the knowledge. This was through direct inaccessibility due to not having access to the online system (O1 FFBS, O2 I4). This was specifically undertaken within Organisation 1 and 2, but not mentioned by participants within Organisation 3. This is particularly interesting, because referring to the previous chapter around power, knowledge, and influence across the Global and GN and GS, individuals within Organisations 1 and 2 are using their own assumptions and interpretation to value the quality and importance of the knowledge, thus controlling who has access to this knowledge, via the *online platforms*. Within this they are using both *Power as Entity* and *power as Strategy* (Gordon and Grant, 2004; Heizmann and Olsson, 2015), in terms of deciding what is classed as knowledge etc and imposing this on others. This demonstrates the emphasis around people as associated with the Constructivist discourse (Schultze and Stabell, 2004), as well as the importance of individual and organisation power within and between organisations, as associated with the Critical discourse.

Another issue that seems to have come about from *Virtual working* on these online platforms is the increase in meetings, in all three organisations. With too many meetings, the participants become overloaded with information and cannot decide what is relevant for them to attend, lose knowledge either from not attending or not being able to find the email or document, or is then struggling with the amount of work that they must do in such a short space of time (Roux *et al.*, 2006). When exploring the origins of KM, information overload was discussed as a reason that KM was needed, to help sift through the extensive knowledge and find the appropriate and relevant information (Serban and Luan, 2002; Asiedu, Abah and Dei, 2022). It is interesting that turning to *Virtual working* has increased this overload within all three organisations and gone full circle to one of the original problems that required that they develop KM in the first place. This is engaging, as within the KM strategy literature, Kumar and Ganesh, 2011 mention that using the Codification strategy can give rise to information overload, and although they describe this in terms of large unused directories, this could also possibly be linked to the information overload stemming out of working virtually and too many meetings. As such, it could be argued that for those individuals that view knowledge using a Constructivist discourse, see technology as somewhat useful to KM, but the benefits of better accessibility might not outweigh the limitations surrounding less face-to-face contact and

socialisation. This is especially the case when compared to individuals with a Neo-functionalist perspective who prefer storing and sharing knowledge through these asynchronous online platforms.

Finally, as mentioned above, what is interesting about the *DD*, is that there is no acknowledgement within the KM literature that takes into consideration the *DD* issue. There are several arguments around the technology vs people debate (Sveiby, 1996b; Von Krogh, 1998; Davenport and Völpel, 2001; McKinlay, 2006; King, 2009), or ways that technology can help KM and KS (Connell, Klein and Powell, 2003; Navimipour, Jafari and Charband, 2016), or how it can hinder the KM and KS (Luan and Serban, 2002; Pierce, 2002) or even how the Codification strategy can be applied within an organisation based on technology (Hansen, Nohria and Tierney, 1999). However, there are no discussions around the inaccessibility to technology and the impact that this could have on KM or KS, despite there being an acknowledgement that using the Codification strategy is based upon the IT investment within the organisation (Kumar and Ganesh, 2011). I propose that there could be two explanations for this. The first is that the predominant research around KM and KS has been undertaken in Western and GN organisations and predominantly competitive business organisations (Petrash, 1996; Davenport and Völpel, 2001; Salojärvi, Furu and Sveiby, 2005), and so there is very little need for research to explore this *DD* as I would suggest that most if not all GN and Western and private sector organisation have this technical infrastructure in place and as such it wasn't considered and issue and so not explored further. This is supported by the *DD* literature suggesting that to close the *DD* gap it will be up to the Government and NGOs as businesses are not as interested in reaching individuals from lower socioeconomic backgrounds (Rogers, Licklider and Taylor', 2001). The other possible explanation is that this is because there has been very little research regarding the KM and KS between organisations, especially those that might include organisations within the GS (Wei, Choy, and Chew, 2011; Lannon and Walsh, 2020). This is something that is missing both within the management literature as well as within the conservation sector, even when their focus is on KE. Finally, regarding the *DD*, I cannot seem to associate it to any conceptualisation of knowledge and the associated discourses. This is because it is more of a societal impact than an inter-organisational one (Chen and Wellman, 2004). Even with a Constructivist discourse understanding of knowledge where you want to communicate through people, if the internet is not in place, then the engagement cannot occur. This demonstrates that there are more influences than just the conceptualisation of KM, which can influence the KM and KS within and between organisations. Having identified this limitation surround the *DD* within my research, and finding a lack of it with the literature, I would argue that the current literature both in KM and

conservation needs to include more research exploring inter-organisation KM and KS, especially between the GN and GS or even between GS–GS, to explore this issue of *DD* in more detail. In conclusion, technology in its various forms of *Online Platforms*, the *DD* and *Virtual working* can both facilitate and hinder participants' understanding of what KM and KS involve within and between the Organisations.

6.0 Conclusion:

This chapter explored and answered the question of *How do technological factors and the associated discourses facilitate and constrain the KS within and between conservation organisations?* For this I specifically focused on the Neo-functionalist discourse, and consequently technology (including software, hardware, and the skills of how to use it), as firstly whilst investigating my participants perceptions of what can influence KS within and between the organisations, technology was mentioned by virtually all participants. As such I thought it important to address this area of research. Additionally, due to Covid-19, with the reliance of technology being unquestionable, I thought it would be topical to explore its influence on the KS within and between the organisations, particularly as it was mentioned several times across the research. As such I chose *Online platforms* the *Digital Divide* and *Virtual Working* to explore within this chapter.

Overall, all three of these technological aspects influenced the KS within and between the organisations. From this we can see that there are many different assumptions and conceptualisations around KM and that they influence the KM and KS in different ways when it comes to the use of technology. However, even when one would argue from a Neo-Functional or a Critical discourse regarding their influence on KM and KS, it could be suggested that on a fundamental level this is down to people and so a Constructivist discourse. For example, how a database is designed and what knowledge is input, is decided by individuals, in this case in Organisation 1, 2 or their Stakeholders who will have different interpretations of what knowledge is important, which ultimately is a Constructivist perspective. This is with the small caveat of assuming that knowledge is an object and as such can be stored and shared in this manner. However, assumptions might then move back to a Neo-functionalist discourse, when decisions are made on what knowledge databases should contain and the standardisation of input. Moreover, not all knowledge can be stored and shared within these databases, and so there are assumptions from the Critical discourse over what knowledge is important, but also who this should be shared with. Meaning that the knowledge is politicised (Stone, Porto de Oliveira, and Pal, 2020).

In conclusion, it is demonstrated that within each organisation, there are several different discourses driving the facilitation and constraint of technology on KM and KS. But despite what the literature would suggest whereby these discourses are relatively separate (Johnson and Duberley, 2000), I have found within my first research question and again in this one, that individuals' assumptions around knowledge change quite rapidly or exist simultaneously, depending on the situation. And this can then go on to influence how technology either facilitates or hinders the KS within and between the organisations.

As such, as I did within my first research question, I would further challenge the literature around discourses, and epistemological assumptions to become more flexible in their approach. Whilst it could be argued that the Duality side of the KM Discourse Framework does consider this through both/*and* assumptions, it is not all encompassing in its assumptions which still provides gaps and rigidity. With the understanding that the real world with unique organisations and people is more complex than could be presented in theoretical models and frameworks, and as such, having a more flexible approach to individuals' assumptions around knowledge, KM and KS, would provide a more realistic approach to the KM literature. This could involve developing frameworks to demonstrate the overlap between discourses, as well as a greater flexibility when it comes to KM strategies (concurrently using both the Codification and Personalisation strategies), as well as expressing the interdependencies between the discourses. This would allow greater flexibility, as well as encourage greater discussions, around inconsistencies and contradictions thus developing this area of theory development (Kuhn. 1962 as cited in (Willmott, 1993). This will be detailed in Chapter 8 within my contributions and proposed future research sections.

Chapter 8 Contribution and Conclusion

1.0 Introduction:

My research has explored how three partnered conservation organisations, classed as Global, GN and GS, conceptualise their knowledge and how this subsequently influences their KM and KS approaches both within and between their organisations. This has been informed by my WSC position, undertaken using a qualitative manner, with FE being the overarching approach. Through this research, my aim was to answer my three research questions, alongside contributing to both the KM and conservation literature. In this chapter, I discuss how my findings, as examined in the three previous chapters, have addressed my research questions, as well as how my findings have contributed both methodologically and practically.

For Research Question 1, I explore my contribution in terms of evaluating the applicability of the KM Discourse Framework within conservation organisations, especially the Critical and Dialogic discourses as well as challenging the current KM literature on the incommensurability of the discourse approach to KM and KS. This results in some suggested amendments to the KM Discourse Framework, to help ensure wider applicability of the Framework within the conservation sector.

For Research Question 2, I highlight a gap within the literature of KM being studied within GS countries or organisations and as such bring into question KM applicability of current KM literature for GS organisations. Additionally, I highlight the missing topics around power and geo-politics within the KM literature. Finally, for Research Question 3, through the lens of technology, this research has identified a gap of consideration within the KM literature. That whilst technology is considered a significant factor around KM and KS, this does not cover the accessibility to technology as highlighted by the *DD*. Additionally, I will also be discussing my contributions through a methodological lens, as I evaluate firstly the use of FE using a virtual approach, and then the use of FE within the conservation sector. Finally, I will be demonstrating the practical contributions that my research has had on my three partnered conservation organisations, linking back to the SDGs. At the end I reflect upon my research and present some advice and recommendations for future research.

2.0 Theoretical Contributions:

Within this section I will be providing an overview of my findings from Chapters 5, 6, and 7 linking these directly to my research questions before discussing their contribution to knowledge and impact on the wider literature.

2.1 Research Question 1: How is Knowledge Management conceptualised within and between conservation organisations and what impact does this have on their project partnership?

Based upon my findings in Chapter 5, I demonstrate that KM can be conceptualised using two different discourses across the three organisations. Organisation 1 conceptualises KM predominantly using a Neo-functionalist discourse, with certain individuals also using a Constructivist discourse. Organisation 2 conceptualises KM using both the Neo-functionalist and Constructivist discourses relatively equally. Finally, Organisation 3 conceptualised KM using a Neo-functionalist discourse, but with the understanding that people are important and should be involved in the management and sharing of knowledge (Schultze and Stabell, 2004). Along these lines both the Codification and Personalisation strategies are undertaken internally and externally across the organisations to facilitate the KM and KS (Hansen, Nohria and Tierney, 1999). This research demonstrates that KM can be conceptualised using multiple discourses simultaneously, with movement between these discourses being seen in the KM strategies being used. However, as my three organisations tend to conceptualise KM, similarly, using both the consensus discourses, it is more the emphasis placed on each discourse and their subsequent strategy as well as the movement between the two which vary between the organisations. Consequently, this research found limited impact on their organisational partnerships based on their conceptualisation and approach to KM alone.

To answer my research question, the KM Discourse Framework was used to provide a lens of the different ways that KM could be conceptualised as presented by the literature (Schultze and Stabell, 2004). And through this my research contributed, firstly in the KM Discourse Frameworks applicability to the Conservation sector, calling into question the relevance of the Critical and Dialogic discourses and secondly in challenging the incommensurability of the discourses, resulting in some suggested adjustments to the application of the framework.

Firstly, my research has demonstrated that the KM Discourse Framework could be suitable for the conservation sector. Across my three organisations, KM was viewed using a consensus approach, using the Neo-functionalist and Constructivist discourses respectively (Schultze and Stabell, 2004). This is unsurprising given the previous and current philosophical assumptions within the conservation sector (Moon and Blackman, 2014; Bennett *et al.* 2016). Conservation has historically held assumptions aligning with a Neo-functionalist discourse (Objective, standardised, scientific knowledge) (Pullin *et al.*, 2004; Raymond *et al.*, 2010; Cvitanovic *et al.*, 2015) which has been used to drive conservation action (Bennett *et al.*, 2017). However there has been a recent uptake of assumptions that align more strongly with the Constructivist discourse (Nel *et al.*, 2015; Bennett *et*

al., 2016), incorporating aspects of the social sciences such as subjective, qualitative, and local knowledge into the conservation work and decision making (Nguyen, Young and Cooke, 2016; Toomey, Knight, and Barlow, 2017). Despite this recent movement, as reflected within the KM approaches across the three organisations, Neo-functionalist is still the dominant discourse within conservation (Bennett *et al.*, 2017). As such, the KM Discourse Framework is suitable at least in part to the conservation context of this research and reflects well the conservation KM literature.

However, as well as the consensus discourses, the KM Discourse Framework, also has the dissensus discourses of Critical and Dialogic (Schultze and Stabell, 2004). These two discourses were not found as much, across the three conservation organisations, in how they conceptualised KM. This is due to the assumptions that conflict, suspicion, and disorder are the natural states of things, which contradicts the assumptions these three organisations held, particularly within relation to their partnership. Moreover, the assumptions around the Critical and Dialogic discourses deviate from the current literature around conservation partnerships. This is because whilst there might be competition and conflict between conservation organisations especially when it comes to funding allocation (Trauger, Tilt and Hatcher, 1995; Reith, 2010), there is an understanding that conservation partnerships are generally beneficial to those involved in the partnerships (i.e., the conservation organisations) (Berkes, 2007; Smith *et al.*, 2007). These partnerships emphasise cooperation (Berkes, 2007), coordination (Visseren-Hamakers, Leroy and Glasbergen, 2012) co-production (Nel *et al.*, 2015), and collaboration (Kark *et al.* 2015), with them being designed and created to ensure the success of conservation work (Visseren-Hamakers, Leroy and Glasbergen, 2012). Not only this but also to increase the KS between organisations, reducing the number of wasted resources in reproducing previous work (Sánchez and Morrison-Saunders, 2011), and undertaking conservation issues that might not be possible to solve by a single organisation (Trauger, Tilt and Hatcher, 1995; Berkes, 2007; Kark *et al.* 2015). Based on this, half of the KM Discourse Framework is unsuitable to these three conservation organisations based upon their conceptualisation of KM, due to their different philosophical positions and assumptions. As such, the KM Discourse Framework, that was designed for KM typically within the private sector (Easterby-Smith, and Lyles, 2011; Corfield, Paton and Little, 2013), might not be wholly suitable for a different sector such as the conservation sector, and if implemented, should be done with caution.

However, this lack of Critical or Dialogic discourse could be due to the research not being face-to-face which resulted in a lack of nuanced data, as mentioned at the end of Chapter 6. For example, by observing meetings online rather than face-to-face, I was unable to observe discussions before or

after the meeting where more details around conflict and power might have been presented. Moreover, due to the scope of the project and their partners, there was limited engagement with the wider Stakeholders within the research, who if were available to interview might have provided an alternative perspective, again giving deeper insight. Whilst these details around conflict can be hidden if participants want to present their 'best side' it would have been harder to do this if the research had been face-to-face. Moreover, this research was open and exploratory around KM, so whilst I did not specifically ask direct questions around conflict, if it arose naturally, as with Organisation 3, then it was discussed further. As such, I propose that future research on KM within and between conservation organisations where possible should be partly face-to-face and engage with the wider Stakeholders to explore whether the Critical and Dialogical discourses are more applicable than this research has presented.

Another way this research highlights issues with the KM Discourse Framework are through the inflexibility/ incommensurability of the discourses. As found within Research Question 1, within all three of my organisations, they are using both the Neo-functionalist and Constructivist discourses to view knowledge and undertake KM simultaneously. Whilst the KM Discourse Framework provides opportunities to view KM across four different discourses, which is important, Schultz and Stabell. (2004), suggest that KM should not be explored through more than one discourse simultaneously. This is a particular limitation as organisations are complex, and contain a multitude of different people, all who have their own philosophical positions and assumptions around knowledge, whether they are aware of them or not (Olsson. 2007). For example, like Organisation 1 and 2, whereby there was a dominant Neo-functionalist discourse, but certain individuals spoke critically about this and emphasised a Constructivist discourse within the organisations. Whilst there is greater flexibility and overlap between the discourses than Burrell, and Morgan, (1979) *Sociological paradigms*, as I argue in Chapter 2, the KM Discourse Framework does not fully consider the implications of viewing KM from more than one discourse simultaneously, or even the organisations moving from one discourse to another within their underlying assumptions and conceptualisations of KM.

Interestingly, this lack of consideration of the movement between discourses, is also highlighted by more recent literature around the KM strategies within organisations. Originally, Hansen, Nohria and Tierney, 1999 suggested that an organisation should have a dominant KM strategy of either Codification or Personalisation, and at most an 80:20 split. This mirrors the rigidity of the *Sociological Paradigms*. However, in more recent literature, such as Greiner, Bohmann and Krcmar, (2007); Ng *et al.*, (2012); Powell and Ambrosini, (2012); Venkitachalam and Willmott, (2015);

Bolisani, Padova and Scarso, (2020); Asiedu, Abah and Dei, (2022), a more flexible approach to the KM strategy has been suggested, using an integrated approach of both the Codification and Personalisation strategy. This would be particularly useful within the conservation sector and its more developed approach to the incorporation of both natural and social science discourses and approaches (Bennett *et al.*, 2017). As such, my research presents that in relation to Schultze and Stabell, (2004), there is something different going on when understanding the conceptualisation of KM within organisations. This flexibility and development as seen within the KM strategy literature and this research demonstrates what is currently missing from the KM Discourse Framework and should be a consideration for future research.

Consequently, I propose the following amendments to the KM Discourse Framework, to overcome the incommensurability issues identified. Firstly, I would add more practical elements mirroring what I detailed in Chapter 3. Practical examples and detail need to be added to each of the discourses of what KM resembles when undertaken within an organisation. For example, details around the Codification and Personalisation strategy. This would provide, a slightly more prescriptive element to the framework, which would allow an organisation to not only understand their position from one or multiple discourses but provide them a practical step-by-step guide on how to implement this within their organisations. However, it does not need to be rigid, as detailed in Chapter 5. It should also highlight the key factors that the organisation needs to consider when undertaking KM, with the different discourses being used as a critical lens of enquiry for the organisation to highlight the strengths and limitations of different discursive positions to inform their approaches to KM. E.g. if undertaking the Neo-functionalist discourse, then a key element of people is missing which needs to be considered within the organisational context. Or if the organisation is only small then there could be large startup costs around the technological implementation (Migdadi, 2009), if only undertaking KM using the Neo-functionalist discourse. All this extra detail would help the organisation to answer the question of what KM practically resemble under each discourse and the strengths and limitations of taking different approaches due to the related assumptions.

Secondly, I would amend the framework to provide more flexibility around the exploration of knowledge and KM across multiple discourses, both theoretically and practically. This is because as established within Chapter 2, and highlighted within Research Question 1, organisations are a hub of individuals, with a shared reality interpreted differently which can intersect with all four discourses. As such, there need for more consideration around this flexibility and diversity within organisational

KM. This emendation could take on multiple forms depending on which literature is considered. For example, the edges between the discourses could be blurred further, to acknowledge overlap between the assumptions under each discourse, which would reflect the suggestions by Scherer. (1990). This could mean that firstly new researchers feel more comfortable with their own less rigid assumptions, but also that there could be overlaps in research using more than one set of assumptions (Miller. 2007). Or discourses could be explored in pairs, e.g. Neo-functionalist-Critical under an 80:20 split (e.g. viewing KM through more than one discourse), so building upon Hansen. (2004) and the Codification and Personalisation strategies. This could be particularly important through a Critical-Dialogic discourse, where there is an emphasis around power dynamics, which is missing from the KM literature. Finally, there is the possibility of exploring all four discourses using the meta-paradigm approach, as suggested by Gioia and Pitre (1990). This would involve examining a research topic such as KM within an organisation across all four discourses. This approach has been popular within nursing research (Reed. 2020), which as mentioned, has similarities with conservation as a crisis sector. The aim behind this would be to ensure that research on KM was undertaken using the assumptions of all four discourses, not necessary in an overlapping way, but by just having this overarching view of KM within an organisation, there would be a more comprehensive understanding. This would be particularly useful for conservation organisations where there are multiple discourses within organisation as can be see across all three of my organisations.

Finally, despite the use of the KM Discourse Framework, and the proposed amendments above, something that is still evident within the literature is that none of the KM frameworks presented in Chapter 3 fully encapsulate the KM within the organisation. For example, Nonaka, (1994), framework focuses on knowledge Creation, whereas Szulanski, (1996) focuses on KT. Furthermore, from the KM literature we know there are a multitude of factors that can influence the KM and KS within an organisation, including organisational culture (Zheng, Yang and McLean, 2010), structure (Wei, Choy, and Chew, 2011), technology (Venkitachalam and Willmott, 2015), and leadership (Hume and Hume, 2008; Venkitachalam and Willmott, 2015). Organisations are extremely complex, involving various people and processes, meaning that a singular KM model is unlikely to account for the multitude of influencing factors and, only provide a lens in which to view part of the KM conceptualisation and processes within an organisation. As such, any KM framework or model utilised within research or an organisation regarding their KM, should be viewed with a critical lens with the understanding that it is unlikely to be able to consider all dimensions in play.

2.2 Research Question 2: To what extent, and how does the classification of Global, Global North and Global South shape Knowledge Sharing processes within and between conservation organisations?

Based upon my findings in Chapter 5 this research has demonstrated that different understandings around knowledge can lead to different conceptualisations of KM (Schultze and Stabell, 2004) and their strategies in practise (Hansen, Nohria and Tierney, 1999; Bolisani, Padova and Scarso, 2020). Additionally, within Chapter 6 this is developed further to explore the influence that the organisation's geographical position of either Global, GN or GS has on the organisation's conceptualisation of KM and KS. Specifically, this research demonstrated that the terms GN and GS have little influence over the three Organisations conceptualisation of KM. However, it was found that the Organisations roles within the partnership, particularly Organisations 1 and 2 positions influenced Organisation 3. This was specifically the Neo-functionalist discourse assumptions from Organisation 1 and 2 influencing the conceptualisation within Organisation 3 using both *Power as Entity* and *Power as Strategy* (Gordon and Grant, 2004; Heizmann and Olsson. 2015).

These results are interesting and challenge the literature as I detail below. However, before I do, I would first like to acknowledge that these results demonstrating influence and power between the organisations, are only possible due to the long term and established partnership between the three organisations. The longevity and stability of the project and subsequent partnerships most likely affected how the participants answered the interview questions and my observations within meetings, which presented the level of power and influence there is between the organisations. This is in comparison to a newer partnership that had not had time to fully establish and influence each other yet. As such, the established partnerships between the organisations strongly influenced the results of this research, and if future research was to be undertaken, then finding organisational partners of different longevity would be interesting.

Furthermore, these findings challenge the current KM literature in that much of the KM research undertaken through organisational case studies has been undertaken within the GN. This includes countries such as the UK (Finn and Waring, 2006), the US (Szulanski, 1996), Australia (Venkitachalam and Willmott, 2016), Finland (Salojärvi, Furu and Sveiby, 2005), Saudi Arabia (Migdadi, 2009), and Japan (Nonaka, 1991). This is in addition to one GN-GN partnership between the US and Japan (Inkpen and Dinur, 1998). More recently, there have been a couple of KM organisational case studies in GS countries including Wei, Choy, and Chew, (2011) and Ramjeawon and Rowley, (2017) within

Malaysia and Mauritius respectively. Chong, Chong, and Gan, (2011) and Wei, Choy, and Chew, (2011), highlight the lack of KM having been researched in developing countries, which this research supports and suggests that not much has changed within the past decade.

Additionally, whilst within the non-profit sector there is overall less organisational case studies with a KM focus, those that have been undertaken are predominantly focused within Europe (Lettieri, Borga and Savoldelli, 2004; Corfield, Paton and Little, 2013) with one being a GN-GS approach, but this was all within one organisation rather than across different organisations (Smith and Lumba, 2008). Finally, even within the conservation sector, research around KM or KS tends to be focused on Australia or GN countries (Cvitanovic *et al.*, 2015; Nguyen, Young and Cooke, 2016). And interestingly none of this research had any focus around power or the partnerships. All of which demonstrates the value of my research, in firstly addressing KM within the GS, but also exploring the power dynamics between the organisations, due to the limited focus of these areas within the literature.

My research demonstrates that not only is there a gap within the research on KM within the GS, but this gap also extends to the non-profit sector KM literature and the conservation sector literature too. As addressed within Chapter 3, KM was designed for businesses, within the GN (Mårtensson, 2000; Corfield, Paton and Little, 2013). As such, most models, case studies and research have also been undertaken within the GN as shown above. In relation to this, my research highlights the influence of roles and partnerships on an organisation's conceptualisation of KM, so questioning the applicability of current KM literature on GS organisations. This also demonstrates the neglect of the concept of power within the KM literature (Olsson, 2007; Engstrand and Enberg, 2020), particularly when researching KM between GN and GS organisations (Martins, 2020). Whilst within the KM Discourse Framework, it was acknowledging that knowledge could be seen as a metaphor for power (Schultze and Stabell, 2004), at least within the conservation sector it is not conceptualised this way, taking a more Neo-functionalist and Constructivist approach. Moreover, within the wider KM literature, power is rarely mentioned, either as an aspect of KM or as an influencing factor, most likely because as mentioned above KM research is undertaken in singular organisations situated within the GN (Heizmann and Olsson, 2015). As such power relations are not considered around the knowledge or KM between organisations within the GN and GS (Engstrand and Enberg, 2020), which is limiting to the KM literature and something I recommend at the end of this chapter.

2.3 Research Question 3: *How do technological factors and the associated discourses facilitate and*

constrain the KS within and between conservation organisations?

Based upon Chapter 5 my findings demonstrate that my organisations view knowledge at least partially, using the Neo-functionalist discourse (Schultze and Stabell, 2004) and use the codification strategy and subsequently technology to manage and share knowledge (Hansen, Nohria and Tierney, 1999). As such technology was explored for its facilitating and hindering influence. Within Chapter 7 my findings support the wider literature on technology being both a facilitator and a hindrance to KM and KS (Connell, Klein, and Powell, 2003; Hume and Hume, 2008; Wei, Choy, and Chew, 2011; Navimipour, Jafari and Charband, 2016). For all Organisations, *Online platforms* were used for KS, with Organisations 2 and 3 also using it for storing knowledge. However, some limitations of these *Online Platforms* for Organisations 1 and 2 include, these platforms not being user friendly or up-to-date, the consistent changing of platform, as well as these *Online platforms* limiting access to knowledge for some individuals. *Virtual working* was seen as a good platform for sharing knowledge by Organisations 2 and 3, with Organisation 3 mentioning that more people had access to knowledge and there were less wasted resources in unnecessary travel. However, it was seen across all three organisations that there was information overload from *Virtual working* with all three organisations mentioned that they missed face-to-face social interactions. Finally, where my research challenges the current KM literature and highlights a gap is through the *DD*. All three organisations saw the *DD* as a hindrance to KS, with Organisations 1 and 2, being indirectly hindered through the limitations it presents to their partnership and with Organisation 3 within the GS, who is directly impacted.

Whilst there is some literature available on KM and the *DD* (Malhan and Gulati, 2003; Vong *et al.* 2017), specifically within the organisational KM literature, there is limited acknowledgement that takes into consideration the *DD* issue as described in Chapter 3 and 7. As previously discussed, there are several debates around the importance and influence of technology within KM and KS (Sveiby, 1996b; Davenport and Völpel, 2001; McKinlay, 2006; King, 2009; Venkitachalam and Willmott, 2016; Bolisani, Padova and Scarso, 2020). However, within the organisational KM literature there are finite discussions around the inaccessibility to technology as highlighted by the *DD* and the impact that this could have on KM or KS. There is an understanding that technology can be an expensive part of KM, and not all organisations will be able to afford the technology in an appropriate capacity (Hume and Hume, 2008), but there was very little if anything in terms of emphasising the importance of internet connectivity or speed within a GS organisation to ensure their KM was technologically supported. This links back to my previous point for Research Question 2, regarding the limited amount of KM literature that has been specifically applied to GS organisations. In this case exploring the issues of technology within the implementation of KM within GS organisations, where access to

technology is known to be more difficult (Cullen, 2001; Odeh, 2010; Kim *et al.*, 2021). Moreover, this is something that is also missing from the Conservation KM literature, which tends to also focus on the GN aspects of KM (Cvitanovic *et al.*, 2015), as discussed above.

As such, my literature is highlighting a gap within both KM and more specifically Conservation KM literature around the lack of consideration to the inaccessibility of technology when undertaking KM within a GS organisation. This aligns with the missing aspects of power within the KM literature, with my research highlighting the need for greater flexibility and understanding of KM within non-western and GS contexts and organisations. Without this consideration, I question the usefulness of KM with its current assumptions to GS organisations.

3.0 Methodological Contribution:

On top of my theoretical contributions through my three Research Questions, this research has also made contributions through its methodology, specifically in the application of undertaking FE using virtual approaches within the conservation context.

3.1 Benefits of FE being undertaken in a virtual manner:

According to the FE literature, FE has not been undertaken virtually prior to this research. Traditionally FE has been undertaken face-to-face by authors such as Higginbottom, Boadu and Pillay, (2013); Wall, (2015); Conte *et al.*, (2019); Andreassen, Christensen and Møller, (2020). Moreover, whilst Atherton *et al.*, 2018 explored the use of virtual meetings using FE, this was still undertaken in a face-to-face manner. Interestingly, from this research, several benefits were found to undertaking data collection using virtual FE, in comparison to face-to-face FE. This includes saving money, as I did not need to travel to my three organisations or pay to stay with them for an extended period (O'Connor *et al.*, 2008; Deakin and Wakefield, 2014), in addition to significantly reducing the research's carbon footprint through not travelling to the research sites. This is particularly important, as it also allowed me access to a greater variety of employees within the organisations. Despite each organisation having a main location, several of the participants that I spoke to were not in the same geographical areas, with it being my belief that this was not wholly to do with the pandemic. Meaning that if this was face-to-face research, I might not have had access to several of these participants (Seitz, 2016). Additionally, it means that I could undertake the data collection across the three organisations simultaneously, which I did across the Global, GN and then the GS in different time zones. As such, data could be collected in a relatively shorter period across the three organisations, meaning a quicker turnaround of transcription, member-checking and

subsequent analysis. Finally, it is suggested in the literature by Deakin and Wakefield, (2014); Seitz, (2016); Jenner and Myers, (2019), and something that I have found to be the case within this research, that the distance and inconspicuousness of online meetings and interviews allowed for a more open dialogue where they could be sure that no one else was listening to the conversation.

Now it is known that not all these benefits are specific to FE. Saving money on travel is a general benefit for undertaking online research (Deakin and Wakefield, 2014) as is the greater access of participants in a variety of locations (Seitz, 2016), and technology allowing individuals to be more comfortable and open about their experiences (Jenner and Myers, 2019). However, a key aspect of FE, as discussed within the methodology is its ability to have a quicker data collection period, which from this research is increased using technology. Whilst this research might not be the most suitable example of this due to the time taken with administrative and technological edits, it shows potential for data collection to be undertaken quickly and simultaneously across multiple organisations, thus reducing travel, time, and money, and so generating a quicker turnaround time for data collection, analysis, and feedback.

This is particularly important for the conservation context of this research. It has been well researched, that having the right knowledge at the right time can be crucial for conservation action and decision making (Martin *et al.*, 2012; Cook *et al.*, 2013; Cooke *et al.*, 2016). This is important given that knowledge stemming from research publications can be out of date due to excessive publication times (Linklater, 2003; Fazey, Fazey and Fazey, 2005; Cvitanovic *et al.*, 2014). As such virtual FE might be even more useful than face-to-face FE within the conservation sector, if exploring a topic across multiple different organisations / areas. Thus, my research builds upon previous FE works by Knoblauch, (2005); Cruz and Higginbottom, (2013) to develop its application and consequently addressing issues within the conservation sector.

3.2 Limitations of FE being undertaken in a virtual manner:

However, as well as the benefits identified within this research on FE, I also found several issues of undertaking FE using a virtual approach, which I have previously detailed within Chapter 4. Firstly, by undertaking FE virtually, it made it difficult to build up rapport with the participants (Jenner and Myers, 2019) hence the presentations and email exchanges before the data collection (Deakin and Wakefield, 2014). It is accepted that this is a well-known limitation of ethnography in general (Gray, 2017), but this was made particularly challenging by the virtual nature of FE, especially when there was limited time to collect the data, as mentioned above.

Secondly, this difficulty building rapport with the participants lead to a heavy reliance on my Gatekeepers (Kim *et al.*, 2021), which resulted in potential inaccessibility to data, as well as data focused on conflict within or between the organisations. This I mentioned above in relation to the challenges of attaining data stemming from the Critical or Dialogic discourse due to access. Again, as above, it is understood that this is a limitation of ethnography in general, but undertaking this research virtually, made the reliance on the Gatekeeper, much greater, as there was no other opportunity to engage with the participants, at least in the beginning than through coordination with the Gatekeeper. Whereas if it had been face-to-face, I would have been able to observe within the organisation, introduce myself to participants and connect without the help of the Gatekeeper. Additionally, by it being virtual, there was no chance to observe participants outside of meetings or have informal chats with them, which influenced the data surrounding the power dynamics within and between the organisations. The implications of this being that the participants were possibly on their best behaviour when I was observing the meetings or interviewing them, and as such any difficult or conflicting knowledge might have not been readily available (Seitz, 2016; Jenner and Myers, 2019).

Finally, the last issue stemming from collecting data using a virtual approach to FE, focuses on the issues with technology. Within my methodology, I detail the ways in which technology interrupted the data collection across all three organisations, with this being across both online software issues, and hardware issues. This is unsurprising, and are common issues as mentioned within the literature when undertaking data collection virtually (Deakin and Wakefield, 2014; Seitz, 2016). However, as above, this issue was amplified when attempting to collect data within a certain time frame, as is expected within FE research (Knoblauch, 2005). Overall, FE can be undertaken virtually, producing high quality and numerous data. However, possibly for certain research focus, such as that focused on conflict, or topics of sensitivity, as suggested by Seitz, (2016), might not be suitable for Virtual FE, especially in terms of restricted access, in comparison to face-to-face FE.

4.0 Practical Contributions:

Finally, alongside my theoretical and methodological contributions, this research also has practical contributions to my three organisations and the SDG. Firstly, my research has been beneficial for my three organisations as presented by these quotes from the feedback sessions as seen in **Table 10:**

Organisation	Session	Quote
Organisation 1	(O1 FFBS).	<i>"You have made our project slightly better because there are things we have taken on board and we really appreciate that. And I am certainly open with the team after this as well. If there are things from this report that we should take on board then let's do it"</i>
Organisation 2	(O2 FFBS).	<i>"Yes. Thanks, [RESEARCHER]. It's a very good moment to be able to step back and think about how we're sharing and communicating knowledge. Well, sharing knowledge and communicating internally as well as externally."</i>
Organisation 3	(O3 FFBS).	<i>"Congratulations to you, the reports are very succinct and interesting, I think you kept it very engaging and partly through being so succinct. But also compliments you in your approach because undertaking this research remotely, and sort of getting your foot in the door at [ORG 3] or any of the other organisations is a huge achievement because often we are too busy to put aside anytime for these things. And the fact that all of our staff have just jumped on board and enjoyed chatting to you and that reflects your personality and approach".</i>
All	(O1 - JFBS).	<i>"But thank you very much, [RESEARCHER], it's been a good ride and a good experience. I think your body of research will also I guess inform and inspire other like studies in the future, so I think it's a good baseline for knowledge management as a term and as a scientific working term moving forward".</i>
All	(O2 - JFBS).	<i>"I think from my side it's certainly been really interesting to have you join us. I think it's always great to have somebody slightly external come in and observe how you work and reflect on it and come up with insights that you might not otherwise have been aware of. I think we'll basically have to go away and reflect on the reports and think about whether there are things we can take away from it and do a bit differently. Thank you, it's been great to work with you for the last few months".</i>

Table 10: Quotes from participants across all three organisations providing feedback on my research.

These quotes from the feedback sessions demonstrate that my research was well received across my three organisations. That my participants understood what my research was about and found it useful in increasing their understanding and opening the dialogue on the KM and KS within and between their organisations. However, it is difficult to show more impact than this under the time constraints of the PhD. As such, through my own understanding and feedback, I envisage the potential contributions for my three organisations. For Organisation 1, I envisage that there would be developments to bridge the thematic and technical sides of the share project, as there was only fragmented horizontal KS observed within the research. Additionally, I envisage that more processes would be written down regarding the various databases, how they work, what information they contain, what information can be queried within them etc. For Organisation 2, I envisage that there would be development around either creating a new or building up an existing project wide social media platform, like they used to have before it was replaced by Teams. This would enable them to share and communicate knowledge with lots of different people worldwide quickly and easily, which is something they are currently missing and raised within the research. Finally for Organisation 3, I envisage that they would continue to challenge future projects and partners to ensure that any future KM systems can be embedded within their current system. Moreover, I envisage that due to the diversity of their region, that there will be a greater focus on expanding their KM to encompass local languages within their region to ensure that knowledge is being shared widely and in a manner that others can understand. All these areas were discussed with the organisations within their PFBS.

As well as this impact to my organisations, through this research I have contributed to the SDG, as mentioned within Chapter 4. Firstly, this research has been working towards SDG 17 Partnerships for the Goal (SDGS. 2015) More specifically, this research is working towards SDG 17.6 *“knowledge sharing and cooperation for access to science, technology, and innovation”*. This research exploring the KM and KS within and between three conservation organisations has raised awareness and understanding on the different assumptions and approaches to KM and KS. Furthermore, I have raised the issue of the lack of consideration for KM research within the GS, specifically power, and the *DD*, as well as highlighted the implications that this has on the current KM and conservation literature. All of this is working towards ensuring that all organisations have better access to the right knowledge, at the right time for the work they are doing. Moreover, by benefitting the partnership of the organisations across the shared project, this research is also working towards SDG 15 Life on Land, as that is the topic of focus for the project.

5.0 Advice and Areas of Future Research:

Based on my contributions, my advice for future researchers, would be as follows:

1. Be clear about your own assumptions and philosophical position, but that it does not need to be rigid, just clear.
2. KM is a very complex and broad topic, so be clear about which aspects you are considering, and which are beyond the scope of your research. For example, culture is an important part of organisations and an influential factor around KM, but it is beyond the scope of this research to consider its implications. That due to the origins of KM there are certain aspects that have not been considered or considered at a lesser rate particularly within the models. And whilst this is fine if it is acknowledged, be aware of what is missing within KM rather than what is being repeatedly said.
3. Undertaking Virtual FE has both benefits and limitations which should be balanced across the research.

Moreover, due to the specific and exploratory nature of this research, there are 5 directions that this research could develop in the future, with there being overlap between the first 4. These include exploring the GN-GS dynamic further, with a specific focus on the power dynamics. One possible way could be through a focus on the wider partners within the project partnership, to gain alternative perspectives on the power dynamics within the partnership. Additionally, These power dynamics, could be explored further using face-to-face FE, to explore and collected the nuanced data that might not result from online research. Finally, I propose future research examine the different ways that the KM Discourse Framework could be used to explore KM within and between organisations.

5.1 GN-GS dynamic and power context:

Firstly, as raised within my second theoretical contribution, research on KM within the context of the GS, as well as between the GN-GS partnership is missing within the KM and conservation KM literature. This brings into question to the applicability of GN KM models and frameworks on GS contexts, and as such further research should be undertaken to explore the implications of this, or whether there are KM frameworks created within the GS that might be more suitable. A good example of this would be more research around the implication of Technology as an influencing factor for KM within GS organisations, i.e., *DD*. Additionally, there is very little research (Kelly, 2007; Olsson, 2007; Heizmann, 2011; Engstand and Enberg, 2020; Martins, 2020) having been undertaken on the relationship between KM and power within organisational settings. As such I propose there could be a greater emphasis on inter and intraorganizational power dynamics when undertaking KM research (both theoretically and in practise) and how the different conceptualisations of power can

influence the KM both within and between organisations, so developing the KM and GN-GS partnership literature.

5.2 Wider focus on project partners:

Furthermore, it was found within this research that the Critical and Dialogic discourse were lacking, which could have been partially to do with the lack of engagement by the researcher with external stakeholders and partners. As such, to enable a wider approach to these two discourses and develop the topic of power within KM research, I propose that in future research, a certain level of engagement with wider stakeholders, partners, and funders, to get alternative perspectives that might shed light on the power dynamics within and between the organisations, partnered on a shared project.

5.3 Longevity of Partnership:

Another possible gap for future research to address around the power dynamics, would be to explore multiple organisations in partnership over a shared project, but where the partnership and project were newer. As mentioned previously, my three organisations have been partnered for several years and as such their partnership is established. It would be interesting in future research to explore the implications of the partnership on KM and KS conceptualisation and approaches on partnerships that were less established. As such, my research could be repeated on organisations with a much newer partnership, or even repeated at various stages of a long-term project. The aim behind this would be to explore how the longevity of the partnership might influence the organisations conceptualisation of KM and KS.

5.4 Both face-to-face and virtual FE:

As highlighted in my methodological contributions above, there are both benefits and limitations to undertaking FE in a virtual manner. As such, future studies could continue to develop this research, possibly exploring the use of both face-to-face FE and virtual FE to overcome the limitations of both. I.e., Use face-to-face approach to build rapport within participants directly in the beginning but then use virtual means to undertake interviews in a quicker manner, once access has been granted. Thus, using FE in a manner that highlights the benefits of both face-to-face and virtual approaches, in a shorter data collection period, thus advancing FE as a methodology. Moreover, linking this to my previous two proposals, having a level of face-to-face data collection could support the exploration of power dynamics within and between the organisations, as there would be more opportunity for the collection of nuanced data, than if just collecting data through virtual means alone.

5.5 Different ways to use the KMDF:

Finally, as mentioned in my first theoretical contribution above, KM models have their limitations in attempting to explore and explain KM within a variety of different organisational contexts. Despite this, it was mentioned by Organisation 2 whether there was any KM model or framework that could or would be useful to conservation organisations in providing extra insights. As such more research could be undertaken on the applicability of current frameworks or models on organisations within the conservation sector. Not only would this evaluate the models/ frameworks applicability and limitations, but it would also highlight to conservation organisations, what aspects of KM are important to their organisations, project, and partnerships, enabling them to develop their own KM in the process. Based on this, I propose the following changes to using the KM Discourse Framework in future research: Exploring KM from a pairing of discourses to emphasise the overlap between the different discourses. Or one that would be more interesting and comprehensive, would be to explore the KM within an organisation or organisational partnership across all 4 of the discourses. Using each discourse as a critical lens of enquiry for the organisation to understand their own strengths and weaknesses, so clarifying their conceptualisation and approaches to KM.

Overall, there are several different directions that my research could develop into, and it is hoped that this research will be a springboard for future KM research within the conservation sector.

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Appendices

ETHICS APPROVAL LETTER



Downloaded: 27/03/2023
Approved: 30/09/2020

Augusta Moore
Registration number: 180149588
Management School
Programme: PhD Management

Dear Augusta

PROJECT TITLE: Knowledge Management within and between conservation organisations described as Global, Global North and Global South

APPLICATION: Reference Number 031593

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 30/09/2020 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 031593 (form submission date: 29/09/2020); (expected project end date: 01/10/2021).
- Participant information sheet 1081360 version 2 (29/09/2020).
- Participant information sheet 1081359 version 2 (29/09/2020).
- Participant consent form 1081362 version 2 (29/09/2020).
- Participant consent form 1081361 version 2 (29/09/2020).

If during the course of the project you need to [deviate significantly from the above-approved documentation](#) please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter.

Yours sincerely

Sophie May
Ethics Administrator
Management School

Please note the following responsibilities of the researcher in delivering the research project:

- The project must abide by the University's Research Ethics Policy: <https://www.sheffield.ac.uk/research-services/ethics-integrity/policy>
- The project must abide by the University's Good Research & Innovation Practices Policy: https://www.sheffield.ac.uk/polopoly_fs/1.6710661/file/GRIPPpolicy.pdf
- The researcher must inform their supervisor (in the case of a student) or Ethics Administrator (in the case of a member of staff) of any significant changes to the project or the approved documentation.
- The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.
- The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.

ORGANISATION INFORMATION SHEET DRAFT

Knowledge Management within and between conservation organisations, described as Global, Global North and Global South.

Hello, my name is Augusta Moore and I am inviting **[INSERT NAME OF ORGANISATIONS]** to take part in my PhD research study. Before you decide whether to participate, it is important for you to understand why the research is being undertaken and what it will involve. Please take some time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Please take time to decide whether you wish to take part. Thank you for reading this.

1. What is the research about?

This research will be exploring Knowledge Management within and between conservation organisations, described as Global, Global North and Global South. This is with a specific focus on their approach to Knowledge Sharing and how this impacts their project partnerships.

2. Why has **[INSERT NAME OF ORGANISATIONS] been chosen?**

You have been invited to take part in my research because you are a well-established conservation organisation classed as **[GLOBAL/ GLOBAL NORTH / GLOBAL SOUTH]** working in collaboration with other conservation organisations classed as **[GLOBAL / GLOBAL NORTH / GLOBAL SOUTH]**. Additionally, you have expressed interest in my research and helping to explore my research questions.

3. Does **[INSERT NAME OF ORGANISATIONS] have to take part?**

It is up to you to decide whether to take part in this research project. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. Throughout the research you can refuse to answer any questions as well as withdraw at any time without any negative consequences or providing a reason. If you wish to withdraw, your data will also be withdrawn where possible. However, due to the conversational nature of meetings and feedback sessions, it would be impossible for us to delete the information that you have shared, up to the point of withdrawing, but we will try to keep your data anonymous and confidential. If you wish to withdraw from the research, please contact myself Augusta Moore at AAMoore1@sheffield.ac.uk

4. What will happen to me if I take part? What do I have to do?

As part of this research, I will be undertaking focused ethnography with **[INSERT NAME OF ORGANISATIONS]** across at least a 6-week period. This will involve semi structured interviews, participant observation, document and website analysis, a researcher diary and feedback sessions, undertaken predominantly via the internet. By taking part in this research, you may be asked for an interview (up to 90 minutes), be asked whether you mind the researcher sitting in and observing (audio recording) meetings, be asked to provide information / documents that would be useful to the research or to attend a feedback session either during or after data collection.

5. What are the possible disadvantages and risks of taking part?

Whilst there will be no physical harm to the participants taking part, this research could be seen as intrusive and possibly distressing to the participants comfort and privacy (especially with the topic of Covid-19), as well as there being a loss of time, that could be seen as an inconvenience.

6. What are the possible benefits of taking part?

Whilst there are no immediate benefits for those individuals participating in the project, it is hoped that this research will contribute to the three organisations involved. The aim is to feedback the results to the three organisations to help them gain a better understanding of their own knowledge management practises as well as their partnered organisation. With this knowledge, it is anticipated that the organisations could develop their own knowledge management as well as their partnerships and projects.

7. Will my taking part in this project be kept confidential?

All the information that I collect from **[INSERT NAME OF ORGANISATIONS]** during the research will be kept confidential where possible and will only be accessible to members of the research team or wider university services if required for the undertaking of the research. However, I will be feeding back my findings to all organisations involved. Careful consideration will be given when describing the organisations within my thesis / publications to find a balance between providing enough information for readers, whilst concealing their identity. Additionally, the researcher will not share quotes from the documents provided, to ensure they cannot be identified through searching online. **[INSERT NAME OF ORGANISATIONS]** will not be identified in any reports, presentations, posters or publications etc apart from the feedback reports for the organisations (see below).

8. What is the legal basis for processing my personal data?

According to data protection legislation, we are required to inform you that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of a task carried out in the public interest' (Article 6(1)(e)). Further information can be found in the University's Privacy Notice <https://www.sheffield.ac.uk/govern/data-protection/privacy/general.>

9. What will happen to the data collected, and the results of the research project?

During the initial data collection period, only the lead researcher will have access to the raw data (including interview, meeting and feedback audio files, transcripts and notes, researcher diaries, document and website analysis and participant observation notes). A transcription service recommended by the University of Sheffield will be given the interview, meeting and feedback audio files to transcribe them. They will then be checked over by the researcher. If you have been interviewed, or taken part in an audio recorded meeting or feedback session, the researcher will send you a copy of the edited transcript to check over. It will be at this point for you to raise any issues within the transcripts and report them back to the research. However, if you do not reply to the email in the given time period stated in the email, the researcher will take this as permission to use the transcript in its current format. Once the researcher receives the transcripts back, names, job titles or any identifiable information mentioned will be given pseudonyms and/or altered and /or deleted to protect individuals/ organisations identity. During data analysis, the research team will be presented with the interview, meeting and feedback transcripts and notes (not the audio files), the

document and website analysis and the participant observation notes. This research team will consist of myself and my three PhD supervisors. Once the data has been analysed, the data will be compiled into an individual report (one per organisation) and then into a combined report (shared between all organisations). The organisations will own the individual report created for them but will need to seek permission from the University of Sheffield before sharing the individual reports with any external organisation. Regarding the 4th combine report, each organisation will receive a copy, which is owned by Sheffield, but that will be for their internal purposes only and cannot be shared with a third party.

As part of this research, feedback will be provided in preliminary sessions towards the end of data collection and in sessions once the data has been analysed and the reports written. These sessions will be treated in the same manner as the recorded interviews and meetings mentioned above.

Within 6 months of graduating from the PhD, original audio files from the interviews, meetings and feedback sessions, original documents provided by the organisations, as well as the researcher's diary will be destroyed by the researcher. This is not an exclusive list of data to be destroyed. Interview, meeting and feedback transcripts and notes and Participant Observation notes, will be stored in an archive. I also have the option to archive my document and website analysis and subsequent analysis from the data collection, where identifiable data has been deleted/ anonymised. Again, this is not an exclusive list. It is expected that the research data will be stored in an archive for a number of years after the PhD has been completed (10 years), after which the data will either be stored forever or deleted depending on the rules of the specific archive. Alongside the PhD thesis, the data collected from this research will be used for research purposes including but not exclusive to papers, posters, conferences, book chapters, reports, articles, and presentations. It is aimed that any publications to come from this research will be accessible through Open Access meaning all organisations will be able to have a copy. Due to the nature of this research, it is very likely that other researchers may find the data collected to be useful in answering future research questions. By taking part in the research and signing the consent form, you are agreeing for your data to be shared in this way.

10. Who is organising and funding the research?

Augusta Moore, (lead researcher) alongside the University of Sheffield Management School.

11. Who is the data Controller?

The University of Sheffield will act as the data Controller for this study. This means that the University is responsible for looking after your information and using it properly.

12. Who has ethically reviewed the project?

This project has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by the University of Sheffield Management School.

13. What if something goes wrong and I wish to complain about the project?

If you should have a complaint regarding anything to do with this research please contact either the lead researcher or any of her supervisors, whoever you think is more appropriate. If you feel that your complaint has not been handed to your satisfaction, then you should contact the Programme

Director for Postgraduate Research. All contact details are at the end of this information sheet. If the complaint relates to how your personal data has been handled, information about how to raise a complaint can be found in the University's Privacy Notice: <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

14. Contact for further information

Title	Name	Email	Telephone number
Lead researcher	Augusta Moore	aamoore1@sheffield.ac.uk	+44 (0)7930 812527
Supervisor	Dr Emanuela Girei	e.girei@sheffield.ac.uk	+44 (0)114 222 0985
Supervisor	Professor Rachael Finn	r.l.finn@sheffield.ac.uk	+44 (0)114 222 3484
Supervisor	Dr Stephen Allen	stephen.allen@sheffield.ac.uk	+44 (0)114 222 3229
Programme Director for Postgraduate Research	Dr Martina McGuinness	m.mcguinness@sheffield.ac.u k	+44 (0)114 222 3381

Finally, you as the organisation will be given a copy of the information sheet and will have signed a consent form to keep, prior to data being collected.

Thank you very much for taking part in my research project.

ORGANISATION CONSENT FORM DRAFT

Knowledge Management within and between conservation organisations, described as Global, Global North and Global South.

Lead Researcher: Augusta Moore

<i>Please tick the appropriate boxes</i>	Yes	No
Taking Part in the project		
I have read and understood the project information sheet dated DD/MM/YYYY or the project has been fully explained to me. (If you answer No to this question please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree for [NAME OF ORGANISATION] to take part in the project. I understand that taking part in the project will include at least 6 weeks of Focused Ethnography consisting of audio recorded semi-structured interviews, audio recorded participant observation (in online meetings), audio recorded feedback sessions (during and after data collection), document and website analysis and a researcher diary by the researcher.	<input type="checkbox"/>	<input type="checkbox"/>
[NAME OF ORGANISATION] understands that they can refuse to answer any questions and that their taking part is voluntary and that they can withdraw from the study at any time. They do not have to give any reasons for why they no longer want to take part and there will be no adverse consequences if they choose to withdraw.	<input type="checkbox"/>	<input type="checkbox"/>
How my information will be used during and after the project		
I understand personal details such as name, job title, phone number and email address etc. will not be revealed to people outside the project or research team.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that audio recorded interviews, meetings and feedback sessions will be sent away to be transcribed by an external service recommended by the University of Sheffield.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that the data collected may be quoted in publications, reports, web pages, and other research outputs. I understand that [NAME OF ORGANISATION] will not be named in these outputs apart from the feedback reports for the organisations (see below).	<input type="checkbox"/>	<input type="checkbox"/>
I understand that the organisations will own the individual report created for them but will need to seek permission from the University of Sheffield before sharing the individual reports with any external organisation. Regarding the 4th combine report, each organisation will receive a copy, which is owned by Sheffield, but that will be for their internal purposes only and cannot be shared with a third party.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>

I give permission for the data collected in this research that is provided by [NAME OF ORGANISATION] to be deposited in a data repository recommended by the University of Sheffield so it can be used for future research and learning.	<input type="checkbox"/>	<input type="checkbox"/>
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	<input type="checkbox"/>	<input type="checkbox"/>

Name of Organisation [Printed]	Date	
Name of participant [Printed]	Signature	Date
Name of Researcher [Printed] Augusta Moore	Signature	Date

project contact details for further information:

University of Sheffield, Western Bank, Sheffield S10 2TN.

Title	Name	Email	Telephone number
Lead researcher	Augusta Moore	aamoore1@sheffield.ac.uk	+44 (0)7930 812527
Supervisor	Dr Emanuela Girei	e.girei@sheffield.ac.uk	+44 (0)114 222 0985
Supervisor	Professor Rachael Finn	r.l.finn@sheffield.ac.uk	+44 (0)114 222 3484
Supervisor	Dr Stephen Allen	stephen.allen@sheffield.ac.uk	+44 (0)114 222 3229
Programme Director for Postgraduate Research	Dr Martina McGuinness	m.mcguinness@sheffield.ac.uk	+44 (0)114 222 3381

PARTICIPANT INFORMATION SHEET DRAFT

Knowledge Management within and between conservation organisations, described as Global, Global North and Global South.

Hello, my name is Augusta Moore and I am inviting you to take part in my PhD research study. Before you decide whether to participate, it is important for you to understand why the research is being undertaken and what it will involve. Please take some time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Please take time to decide whether you wish to take part. Thank you for reading this.

1. What is the research about?

This research will be exploring Knowledge Management within and between conservation organisations, described as Global, Global North and Global South. This is with a specific focus on their approach to Knowledge Sharing and how this impacts their project partnerships.

2. Why have I been chosen?

You have been invited to take part in my research because you are an employee of **[INSERT NAME OF ORGANISATION]**. As part of that you are either involved in the management of knowledge within the organisation, involved in the collaboration with **[INSERT NAME OF ORGANISATIONS]** on the conservation project or could provide some information relevant to this research.

(OR IF FOR AN EMPLOYEE OF ANOTHER ORGANISATION) You have been invited to take part in my research because you are involved in the collaborative conservation project.

3. Do I have to take part?

It is up to you to decide whether to take part in this research project. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. Throughout the research you can refuse to answer any questions as well as withdraw at any time without any negative consequences or providing a reason. If you wish to withdraw, your data will also be withdrawn where possible. However, due to the conversational nature of meetings and feedback sessions, it would be impossible for us to delete the information that you have shared, up to the point of withdrawing, but we will try to keep your data anonymous and confidential. If you wish to withdraw from the research, please contact myself Augusta Moore at AAMoore1@sheffield.ac.uk

4. What will happen to me if I take part? What do I have to do?

As part of this research, I will be undertaking focused ethnography across at least a 6-week period. This will involve semi structured interviews, participant observation, document and website analysis, a researcher diary and feedback sessions, undertaken predominantly via the internet. By taking part in this research, you may be asked for an interview (up to 90 minutes), be asked whether you mind the researcher sitting in and observing (audio recording) meetings, be asked to provide information / documents that would be useful to the research or to attend a feedback session either during or after data collection.

5. What are the possible disadvantages and risks of taking part?

Whilst there will be no physical harm to the participants taking part, this research could be seen as intrusive and possibly distressing to the participants comfort and privacy (especially with the topic of Covid-19), as well as there being a loss of time that could be seen as an inconvenience.

6. What are the possible benefits of taking part?

Whilst there are no immediate benefits for those individuals participating in the project, it is hoped that this research will contribute to the three organisations involved. The aim is to feedback the results to the three organisations to help them gain a better understanding of their own knowledge management practises as well as their partnered organisation. With this knowledge, it is anticipated that the organisations could develop their own knowledge management as well as their partnerships and projects.

7. Will my taking part in this project be kept confidential?

Regarding your participation within this research, confidentiality will be attempted but cannot be guaranteed due to the size of the organisations and the project of focus. As a researcher, I cannot guarantee that other employees or gatekeepers at any of the organisations will not talk/ guess/ assume certain participants (such as yourself) are involved. However, I can assure that the specific details given in interviews, whilst will be shared (both with members of my research team and with all the organisations involved), will not be linked back to the participant themselves. Regarding specific details within the audio recorded meetings and feedback sessions, these will also be shared (both with members of my research team and with all the organisations involved), and will obviously be known to those who were involved in the meeting or feedback sessions. Despite this, the research still aims to not link specific details to the participants, although due to the presence of others involved, this cannot be guaranteed. Additionally, the researcher will not share quotes from the documents provided, to ensure they cannot be identified through searching online. You will not be able to be identified in any reports, presentations, posters or publications etc.

8. What is the legal basis for processing my personal data?

According to data protection legislation, we are required to inform you that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of a task carried out in the public interest' (Article 6(1)(e)). Further information can be found in the University's Privacy Notice <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.'

9. What will happen to the data collected, and the results of the research project?

During the initial data collection period, only the lead researcher will have access to the raw data (including interview, meeting and feedback audio files, transcripts and notes, researcher diaries, document and website analysis and participant observation notes). A transcription service recommended by the University of Sheffield will be given the interview, meeting and feedback audio files to transcribe them. They will then be checked by the researcher. If you have been interviewed, or taken part in an audio recorded meeting or feedback session, the researcher will send you a copy of the edited transcript to check over. It will be at this point for you to raise any issues within the transcripts and report them back to the research. However, if you do not reply to the email in the given time period stated in the email, the researcher will take this as permission to use the transcript

in its current format. Once the researcher receives the transcripts back, names, job titles or any identifiable information mentioned will be given pseudonyms and/or altered and /or deleted to protect individuals identity. During data analysis, the research team will be presented with the interview, meeting and feedback transcripts and notes (not the audio files), the document and website analysis and the participant observation notes. This research team will consist of myself and my three PhD supervisors. Once the data has been analysed, the data will be compiled into an individual report (one per organisation) and then into a combined report (shared between all organisations). The organisations will own the individual report created for them but will need to seek permission from the University of Sheffield before sharing the individual reports with any external organisation. Regarding the 4th combine report, each organisation will receive a copy, which is owned by Sheffield, but that will be for their internal purposes only and cannot be shared with a third party.

As part of this research, feedback will be provided in preliminary sessions towards the end of data collection and in sessions once the data has been analysed and the reports written. These sessions will be treated in the same manner as the recorded interviews and meetings mentioned above.

Within 6 months of graduating from the PhD, original audio files from the interviews, meetings and feedback sessions, original documents provided by the organisations, as well as the researcher's diary will be destroyed by the researcher. This is not an exclusive list of data to be destroyed. Interview, meeting and feedback transcripts and notes and Participant Observation notes, will be stored in an archive. I also have the option to archive my document and website analysis and subsequent analysis from the data collection, where identifiable data has been deleted/ anonymised. Again, this is not an exclusive list. It is expected that the research data will be stored in an archive for a number of years after the PhD has been completed (10 years), after which the data will either be stored forever or deleted depending on the rules of the specific archive. Alongside the PhD thesis, the data collected from this research will be used for research purposes including but not exclusive to papers, posters, conferences, book chapters, reports, articles, and presentations. It is aimed that any publications to come from this research will be accessible through Open Access meaning all organisations will be able to have a copy. Due to the nature of this research, it is very likely that other researchers may find the data collected to be useful in answering future research questions. By taking part in the research and signing the consent form, you are agreeing for your data to be shared in this way.

10. Who is organising and funding the research?

Augusta Moore, (lead researcher) alongside the University of Sheffield Management School.

11. Who is the data Controller?

The University of Sheffield will act as the data Controller for this study. This means that the University is responsible for looking after your information and using it properly.

12. Who has ethically reviewed the project?

This project has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by the University of Sheffield Management School.

13. What if something goes wrong and I wish to complain about the project?

If you should have a complaint regarding anything to do with this research please contact either the lead researcher or any of her supervisors, whoever you think is more appropriate. If you feel that your complaint has not been handed to your satisfaction, then you should contact the Programme Director for Postgraduate Research. All contact details are at the end of this information sheet. If the complaint relates to how your personal data has been handled, information about how to raise a complaint can be found in the University's Privacy Notice: <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

14. Contact for further information

Title	Name	Email	Telephone number
Lead researcher	Augusta Moore	aamoore1@sheffield.ac.uk	+44 (0)7930 812527
Supervisor	Dr Emanuela Girei	e.girei@sheffield.ac.uk	+44 (0)114 222 0985
Supervisor	Professor Rachael Finn	r.l.finn@sheffield.ac.uk	+44 (0)114 222 3484
Supervisor	Dr Stephen Allen	stephen.allen@sheffield.ac.uk	+44 (0)114 222 3229
Programme Director for Postgraduate Research	Dr Martina McGuinness	m.mcguinness@sheffield.ac.uk	+44 (0)114 222 3381

Finally, you as the participant will be given a copy of the information sheet and will have signed a consent form to keep, prior to data being collected.

Thank you very much for taking part in my research project.

PARTICIPANT CONSENT FORM DRAFT

Knowledge Management within and between conservation organisations, described as Global, Global North and Global South.

Lead Researcher: Augusta Moore

<i>Please tick the appropriate boxes</i>	Yes	No
Taking Part in the project		
I have read and understood the project information sheet dated DD/MM/YYYY or the project has been fully explained to me. (If you answer No to this question please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to take part in the project. I understand that taking part in the project will include at least 6 weeks of Focused Ethnography consisting of audio recorded semi-structured interviews, participant observation (in online meetings) and feedback sessions (during and after data collection), document and website analysis and a researcher diary by the researcher.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to be observed by the researcher in online meetings unless the researcher is specifically told otherwise in certain situations.	<input type="checkbox"/>	<input type="checkbox"/>
I agree for the meetings to be audio recorded.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to be interviewed by the researcher through either online video interviews, online audio interview, telephone interviews or face to face interviews.	<input type="checkbox"/>	<input type="checkbox"/>
I agree for the interview to be audio recorded.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to take part in feedback sessions, during or after data collection, through either online video, online audio, telephone or face to face, if invited by the researcher.	<input type="checkbox"/>	<input type="checkbox"/>
I agree for these feedback sessions to be audio recorded.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to be asked questions about the impact of Covid-19 on areas pertaining to the research.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that I can refuse to answer any questions and that my taking part is voluntary and that I can withdraw from the study at any time. I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.	<input type="checkbox"/>	<input type="checkbox"/>
How my information will be used during and after the project	<input type="checkbox"/>	<input type="checkbox"/>
I understand my personal details such as name, job title, phone number, and email address will not be revealed to people outside the project or research team.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that audio recorded interviews, meetings and feedback sessions will be sent away to be transcribed by an external service recommended by the University of Sheffield.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that if I am interviewed, or take part in a recorded meeting or feedback session, the researcher will send me a copy of the transcript to check over.	<input type="checkbox"/>	<input type="checkbox"/>

However, if I do not reply to the email in the given time period stated in the email, the researcher will take this as permission to use the transcript in its current format.		
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I give permission for the data that I provide to be deposited in a data repository recommended by the University of Sheffield so it can be used for future research and learning.	<input type="checkbox"/>	<input type="checkbox"/>
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	<input type="checkbox"/>	<input type="checkbox"/>

Name of participant [printed]	Signature	Date
Name of Researcher [printed] Augusta Moore	Signature	Date

project contact details for further information:

University of Sheffield, Western Bank, Sheffield S10 2TN

Title	Name	Email	Telephone number
Lead researcher	Augusta Moore	aamoore1@sheffield.ac.uk	+44 (0)793081252 7
Supervisor	Dr Emanuela Girei	e.girei@sheffield.ac.uk	+44 (0)114 222 0985
Supervisor	Professor Rachael Finn	r.l.finn@sheffield.ac.uk	+44 (0)114 222 3484
Supervisor	Dr Stephen Allen	stephen.allen@sheffield.ac.uk	+44 (0)114 222 3229
Programme Director for Postgraduate Research	Dr Martina McGuinness	m.mcguinness@sheffield.ac.uk	+44 (0)114 222 3381

DATA COLLECTION SCHEDULE

	Type of data	data code	Date	Number of Participants
Organisation 1	Interview	O1 I0	11/12/2020	1
	Preliminary feedback session	O1 PFBS0	18/12/2020	1
	Meeting	O1 M1	07/06/2021	2
	Interview	O1 I1	08/06/2021	1
	Meeting	O1 M2	14/06/2021	3
	Meeting	O1 M3	17/06/2021	2
	Interview	O1 I2	30/06/2021	1
	Interview	O1 I3	02/07/2021	1
	Interview	O1 I4	05/07/2021	1
	Interview	O1 I5	22/07/2021	1
	Meeting	O1 M4	08/11/2021	2
	Meeting	O1 M5	08/11/2021	2
	Interview	O1 I6	12/11/2021	1
	Meeting	O1 M6	15/11/2021	3
	Meeting	O1 M7	15/11/2021	8
	Meeting	O1 M8	22/11/2021	2
	Meeting	O1 M9	22/11/2021	8
	Interview	O1 I7	29/11/2021	1
	Meeting	O1 M10	29/11/2021	8
	Meeting	O1 M11	29/11/2021	3
	Interview 8	O1 I8	30/11/2021	1
	Preliminary Feedback session	O1 PFBS1	15/12/2021	12
	Formal Feedback session	O1 FFBS	24/01/2021	7
Organisation 2	Meeting	O2 M1	17/08/2021	6
	Meeting	O2 M2	23/08/2021	13
	Interview	O2 I1	23/08/2021	1
	Meeting	O2 M3	24/08/2021	8
	Interview	O2 I2	25/08/2021	1
	Interview	O2 I3	26/08/2021	1
	Interview	O2 I4	27/08/2021	1
	Interview	O2 I5	03/09/2021	1
	Meeting	O2 M4	14/09/2021	9
	Interview	O2 I6	17/09/2021	1
	Meeting	O2 M5	20/09/2021	13
	Meeting	O2 M6	21/09/2021	5
	Interview	O2 I7	24/09/2021	1
	Meeting	O2 M7	27/09/2021	14
	Meeting	O2 M8	28/09/2021	8
	Interview	O2 I8	29/09/2021	1

	Interview	O2 I9	29/09/2021	1
	Meeting	O2 M9	05/10/2021	8
	Interview	O2 I10	05/10/2021	1
	Interview	O2 I11	08/10/2021	1
	Meeting	O2 M10	19/10/2021	7
	Interview	O2 I12	29/10/2021	1
	Interview	O2 I13	29/10/2021	1
	Interview	O2 I14	03/11/2021	1
	Interview	O2 I15	09/11/2021	1
	Preliminary Feedback Session	O2 PFBS	22/11/2021	5
	Formal Feedback Session	O2 FFBS	14/01/2021	4
Organisation 3	Interview	O3 I1	15/11/2021	1
	Meeting	O3 M1	16/11/2021	4 (0-2-1-1) *
	Interview	O3 I2	17/11/2021	1
	Meeting	O3 M2	21/11/2021	5
	Meeting	O3 M3	28/11/2021	5
	Interview	O3 I3	29/11/2021	1
	Meeting	O3 M4	05/12/2021	5
	Interview	O3 I4	05/12/2021	1
	Interview	O3 I5	06/12/2021	1
	Interview	O3 I6	06/12/2021	1
	Interview	O3 I7	07/12/2021	1
	Meeting	O3 M5	12/12/2021	6
	Interview	O3 I8	16/12/2021	1
	Interview	O3 I9	16/12/2021	1
	Meeting	O3 M6	19/12/2021	2
	Interview	O3 I10	19/12/2021	1
	Preliminary Feedback Session	O3 PFBS	18/01/2021	1
	Joint Feedback session	JFBS	26/01/2021	6 (3-2-1) **
	Formal Feedback Session	O3 FFBS	27/01/2021	5

*This was a meeting across three organisations. Organisation 2, Organisation 3 and their external partner. There were no participants from Organisation 1, 2 from Organisation 2, 1 from Organisation 3 and 1 external.

** This was a meeting across all three organisations. Organisation 1 had 3 participants, Organisation 2 had 2 participants and Organisation 3 had 1 participant.

INTERVIEW GUIDE:

Can you tell me about yourself/ your role/ about the organisation / project

Can you tell me more about the project?

→ How did the project start? Why did the project start? When did it start? How has it developed over the years? What is the project about and what does it involve from your organisation - can you give examples? What is the aim of the project? What is the future for the project?

Within the specific project, is the term Knowledge Management used? (Y/N)

→ If not, do they use any similar terms? If so, when do they use it? What are they referring to?

Do people use the term Knowledge Management in your organisation? (Y/N)

→ If not, do they use any similar terms? If so, when do they use it? What are they referring to?

Can you describe KM within your organisation?

→ How long has KM been used within the organisation? How and why did it develop? Can you give me some examples of KM within the organisation?

→ Is there a Knowledge Management strategy within the organisation?

→ *Has Coronavirus impacted this KM, would you say?*

Could you tell me how you access and share knowledge with your colleagues across the organisation? Do you have any examples? / Between the three organisations in the project?

→ What knowledge is shared? How is the knowledge shared and in what format? How often is the knowledge shared, using what format? How far is this knowledge shared? - within your own organisations or outside the organisations Why do you share this knowledge this way? What's the motivation behind it?

Can you think of anything that facilitates the sharing of knowledge?

→ Specific facilitating factors to KS?

→ What is the number 1 facilitating factor to you sharing project knowledge?

Can you think of anything that hinders the sharing of knowledge?

→ Specific barriers to KS?

→ What is the number 1 barrier to you sharing project knowledge?

Can you tell me anything more about the specific Partnerships? (to the 2 other orgs)

→ How did the partnership start? When did it start? Why did the partnership occur? How has it developed over the years? What does your organisation put into and get out of the partnership? Can you give me an example from this partnership where through this collaboration something within the project has been achieved? Is there an end point to the partnership - project end date based?

Can you describe to me what a typical day in the office looked like, and how it has developed now?

I was wondering if you could paint me a picture of what your office looks like.

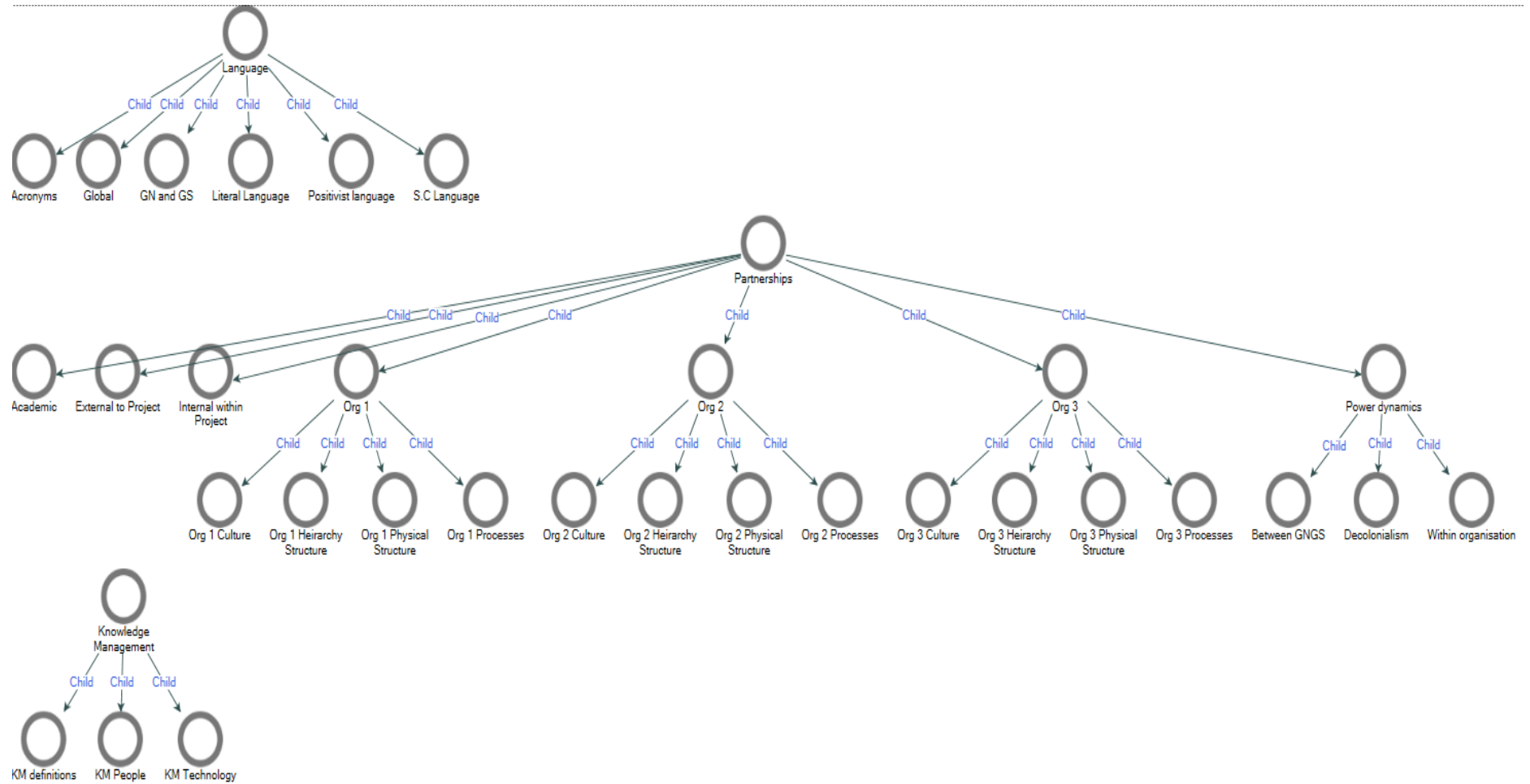
In 3 words, can you describe your organisation?

Are the terms Global, GN, GS used within your organisation? (Y/N)

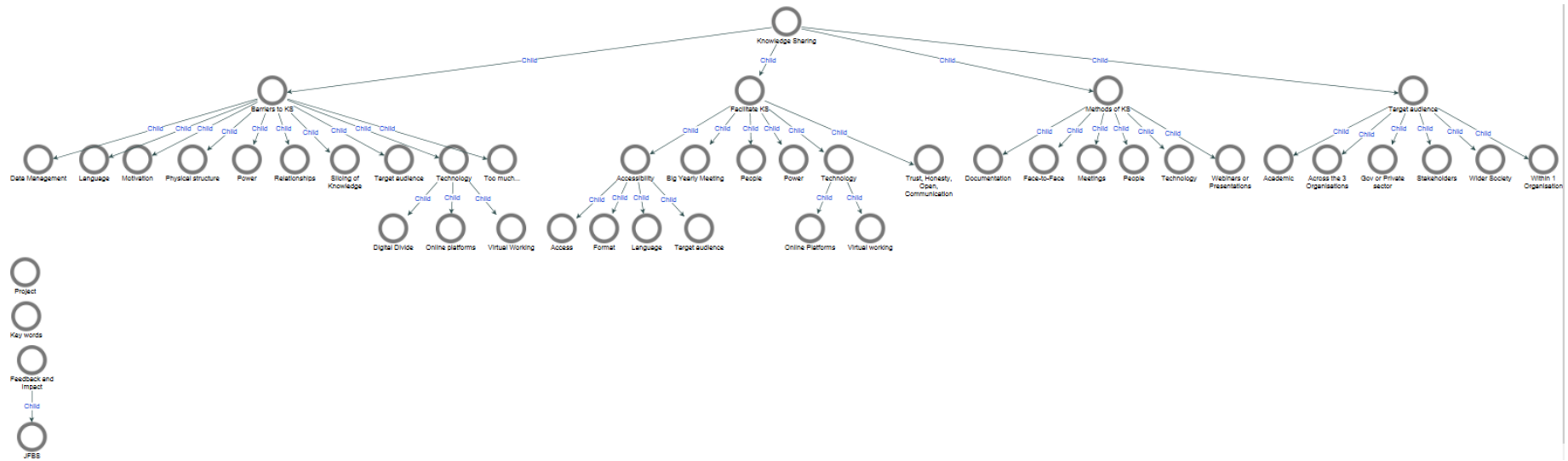
→ If not, do they use any similar terms?

→ If so, when do they use it? What are they referring to? What do they mean?

project Map of the Research Codes 1



project Map of the Research Codes 2



Research Code Book

Name	Description	Files	References
Feedback and Impact	This code was created towards the end of the analysis as I was analysing the feedback sessions. Within this code are quotes of positive feedback from my participants, examples of the impact of the research, changes that they might make off the back of the research and areas that they disagreed with.	7	44
JFBS	These are the quotes from the Joint Feedback Session across all three organisations.	1	33
Key words	This contains the 3 key words that participants have used to describe their organisation / project. These have then been combined in the attached memo document.	28	68
Knowledge Management	Broad code for all that can be captured under Knowledge Management, across the project and all three organisations, but does not fit under the more specific child codes.	43	207
KM definitions	This code contains individuals' perspectives on what Knowledge Management is - specifically asked within the interviews. Additionally, if appropriate I have asked about the difference between data, information, and knowledge.	18	68
KM People	These are examples of people being involved in the Knowledge Management process. It is a very broad code across all three organisations and includes positive and negative.	63	497
KM Technology	These are examples of technology being involved in the Knowledge Management process. It is a very broad code across all three organisations and includes positive and negative.	60	403

Name	Description	Files	References
Knowledge Sharing	Broad code for all that can be captured under Knowledge Sharing, across the project and all three organisations, but does not fit under the more specific child codes.	31	64
Barriers to KS	Broad barriers or issues that have been identified as hindering Knowledge Sharing within the project or the organisations.	4	7
data Management	Examples of data management issues being a barrier to Knowledge Sharing within the project and within and across the organisations.	20	46
Language	Examples of how the use of certain language can be a barrier to Knowledge Sharing within the project and within and across the organisations.	10	21
Motivation	Examples of how motivation or a lack of motivation to share knowledge can be a barrier to Knowledge Sharing within the project and within and across the organisations.	11	22
Physical structure	Examples of how the physical structure of the organisations can be a barrier to Knowledge Sharing within the project and within and across the organisations.	5	7
power	Examples of how power dynamics can be a barrier to Knowledge Sharing within the project and within and across the organisations.	27	116
Relationships	Examples of how working and personal relationships can be a barrier to Knowledge Sharing within the project and within and across the organisations.	13	28
Siloing of knowledge	Examples of how siloing of knowledge can be a barrier to Knowledge Sharing within the project and within and across the organisations.	16	31

Name	Description	Files	References
Target audience	Examples of how the use of different target audiences can be a barrier to Knowledge Sharing within the project and within and across the organisations.	23	75
Technology	Examples of how technology can broadly be a barrier to Knowledge Sharing within the project and within and across the organisations.	20	54
Digital Divide	Examples of how the digital divide can be a barrier to Knowledge Sharing within the project and within and across the organisations.	12	23
Online platforms	Examples of how online platforms can be a barrier to Knowledge Sharing within the project and within and across the organisations.	11	34
Virtual Working	Examples of how virtual working can be a barrier to Knowledge Sharing within the project and within and across the organisations.	40	102
Too much	Examples of how information overload can be a barrier to Knowledge Sharing within the project and within and across the organisations.	35	114
Facilitate KS	Broad factors that have been identified as facilitating Knowledge Sharing within the project or the organisations.	3	4
Accessibility	Examples of how accessibility can broadly facilitate Knowledge Sharing within the project and within and across the organisations.	4	7
Access	Examples of how accessibility can facilitate Knowledge Sharing within the project and within and across the organisations.	11	22
Format	Examples of how the use of certain formatting can facilitate Knowledge Sharing within the project and within and across the organisations.	22	44

Name	Description	Files	References
Language	Examples of how the use of certain language can facilitate Knowledge Sharing within the project and within and across the organisations.	8	16
Target audience	Examples of how the use of different target audiences can facilitate Knowledge Sharing within the project and within and across the organisations.	8	10
Big Yearly Meeting	Examples of how the big yearly meeting can facilitate Knowledge Sharing within the project and within and across the organisations.	7	27
People	Examples of how the People can facilitate Knowledge Sharing within the project and within and across the organisations.	20	44
power	Examples of how the power dynamics can facilitate Knowledge Sharing within the project and within and across the organisations.	20	42
Technology	Examples of how technology can broadly facilitate the Knowledge Sharing within the project and within and across the organisations.	33	90
Online Platforms	Examples of how online platforms can facilitate Knowledge Sharing within the project and within and across the organisations.	21	56
Virtual working	Examples of how virtual working can facilitate Knowledge Sharing within the project and within and across the organisations.	19	47
Trust, Honesty, Open, Communication	Examples of how trust and communication can facilitate Knowledge Sharing within the project and within and across the organisations.	19	38
Methods of KS	Examples of methods being used within the project and organisations to share knowledge.	0	0

Name	Description	Files	References
Documentation	Specific examples of Knowledge Sharing within or between the three organisations with a focus on documentation.	33	60
Face-to-Face	Specific examples of Knowledge Sharing within or between the three organisations with a focus on face-to-face contact.	21	49
Meetings	Specific examples of Knowledge Sharing within or between the three organisations with a focus on meetings (either online or face-to-face).	28	98
People	Specific examples of Knowledge Sharing within or between the three organisations with a focus on people.	24	48
Technology	Specific examples of Knowledge Sharing within or between the three organisations with a focus on technology.	37	109
Webinars or Presentations	Specific examples of Knowledge Sharing within or between the three organisations with a focus on webinars, presentations, training etc.	27	59
Target audience	Examples of the various target audiences for either the project or organisations, discuss when sharing knowledge.	11	35
Academic	Specific examples of academic or publications target audiences when discussing Knowledge Sharing.	7	9
Across the 3 Organisations	Specific examples of Knowledge Sharing across all three organisations as the target audience.	15	44
Gov or Private sector	Specific examples of the Government and private sector being the target audience for Knowledge Sharing.	7	10

Name	Description	Files	References
Stakeholders	Specific examples of stakeholders, funders, external partners being the target audience for Knowledge Sharing.	5	6
Wider Society	Specific examples of wider society being the target audience for Knowledge Sharing.	12	32
Within 1 Organisation	Specific examples of Knowledge Sharing across organisation 1 or with them being the target audience.	15	30
Language	Examples of the language used within and between the organisations surrounding the project.	15	37
Acronyms	Examples of the use of acronyms within each organisation or the project.	8	22
Global	Examples of the use of the term Global - either in relation to the Global, GN, or GS or due to the scale of work being down between the global, national, or local scale.	27	111
GN and GS	Examples of the use of terms Global North and Global South across all three organisations or the project.	31	101
Literal Language	Examples of the use of literal language used, e.g. English across the organisations or the project.	9	15
Positivist language	Examples of the use of positivist language across the organisations or the project.	22	55
S.C Language	Examples of the use of social constructionist language across the organisations or the project.	18	64
Partnerships	This is the broad code specifically relating to partnerships between organisations within the project.	24	110

Name	Description	Files	References
Academic	Examples of partnerships between an organisation and academic institutions.	3	6
External to project	Examples of partnerships with other outside organisations that are not directly involved in the project.	9	23
Internal within project	Example partnerships with other organisations, but the partnership are directly related to the project but aren't either Org 1, 2, or 3.	31	116
Org 1	Partnerships that are involving Organisation 1.	27	134
Org 1 Culture	Specific details relevant to Organisation 1's culture	15	42
Org 1 Hierarchy Structure	Specific details relevant to Organisation 1's structural hierarchy.	4	11
Org 1 Physical Structure	Specific details relevant to Organisation 1's physical layout.	2	19
Org 1 Processes	Specific details relevant to Organisation 1's internal processes.	10	11
Org 2	Partnerships that are involving Organisation 2.	26	173
Org 2 Culture	Specific details relevant to Organisation 2's culture.	22	77
Org 2 Hierarchy Structure	Specific details relevant to Organisation 2's structural hierarchy.	3	8
Org 2 Physical Structure	Specific details relevant to Organisation 2's physical layout.	9	33
Org 2 Processes	Specific details relevant to Organisation 2's internal processes.	5	7
Org 3	Partnerships that are involving Organisation 3.	33	167

Name	Description	Files	References
Org 3 Culture	Specific details relevant to Organisation 3's culture.	16	80
Org 3 Hierarchy Structure	Specific details relevant to Organisation 3's structural hierarchy.	1	4
Org 3 Physical Structure	Specific details relevant to Organisation 2's physical layout.	6	23
Org 3 Processes	Specific details relevant to Organisation 3's internal processes.	8	16
power dynamics	Broad examples of power dynamics within and between the organisations or the project.	32	136
Between GNGS	Examples of power dynamics specifically between the Global North and Global South, with either a focus on the organisations or the project.	33	179
De-colonialism	Examples of power dynamics with a decolonial link with either a focus on the organisations or the project.	8	14
Within organisation	Examples of power dynamics contained within one of the three organisations.	10	37
project	Examples of specific details relating to the project of focus for this research.	18	51