

**Indigenous worldviews meet Western paradigms:
a path to renewal of human/non-human relationships**

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Declaration

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

SignedKat Wehrheim..... (candidate)

Date10 April 2023.....

STATEMENT 1

This thesis is the result of my own investigations, except where otherwise stated. Where correction services have been used the extent and nature of the correction is clearly marked in a footnote(s). Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

SignedKat Wehrheim..... (candidate)

Date10 April 2023.....

STATEMENT 2

I hereby give consent for my thesis, if accepted, to be available for deposit in the University's digital repository.

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Acknowledgements

This thesis is for the wild rabbits of West Berkshire, who were out first thing on summer mornings.

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Abstract

This thesis attempts to identify and overcome barriers to potential knowledge transfer and collaboration between Western and Indigenous worldviews regarding our human relationship with more-than-human nature. Issues of discrimination and epistemic injustice are contextualised with existing minority and intersectional thought, and distinguished from particular incommensurabilities between the two worldviews requiring their own approach.

Part 1 introduces and practises an iterative methodology of utilising, and progressing from, familiar stepping stones on a journey towards understanding of the unfamiliar on its own terms. Indigenous and Western academics' own journey of "The Dialogues", a series of conferences, is retraced, exploring parallels between quantum theory and Indigenous thought over a period of ten years, and revealing a shared ethic of responsive responsibility as we interact with those around us. These results are shown to be interwoven with Merleau-Ponty's and Spinoza's thinking. An interim conclusion is drawn of the unhelpfulness of human persistence in our assumption of unilateral control of the world.

This leads to the **Part 2** question of how an alternative to our unilateral control can be lived in the contemporary West, considering our tendency to impose Cartesian distinctions of binary dualism not only of mind and body and of humans versus non-humans, but also of the spiritual versus the material and of the individual versus the whole: learning from Indigenous worldviews would involve our openness to understanding these as being in a non-binary relationship of mutual supportiveness instead, entailing a constitutive role of ritual.

Stepping stones to our engagement with an Indigenous, participationalist paradigm are provided by Jacques Ellul's, John Dewey's, and William James's thinking. Three case studies explore the possibility of Western participation in the shared learning and creation inherent in Indigenous understandings of performative knowledge processes. To the extent that we acknowledge the incompleteness of our understanding, we may be able to reclaim our responsiveness to that which, only a few hundred years ago, we in the West, too, might have referred to as the sacred in the material.

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Chapter 1 – Introduction

To find a way to live on the earth without wrecking it (...) we cannot afford to limit ourselves to only one way of thinking.¹

This thesis is going to attempt to find an alternative to Cartesian, binary dualism, in order for our Western mind-bodies to learn to relate to Indigenous philosophies, with the aim of working together towards regenerating a harmonious relationship between human and more-than-human nature.

1.a. The challenge

We are experiencing a climate emergency, and Western science alone has been struggling to resolve the issue.² Indigenous voices are not currently being heard by the Western mainstream: while some awareness exists of Indigenous societies' skilfulness at living on their land without rendering it uninhabitable for future generations, application of Indigenous wisdom by the non-Indigenous majority continues to be the exception rather than the norm.³ Examples of sustained collaboration or shared innovation are even rarer.⁴

There appears to be more at play here than simply a minority being outvoted in a democratic nation state: Indigenous voices have also been struggling to be heard in academic settings.⁵ To some extent, the reason for this can be traced to age-old mechanisms of discrimination unfortunately still in operation today.⁶ Discrimination provides fertile ground for epistemic injustice⁷ and, as a result, for our ignorance of Indigenous wisdom as it relates to the more-than-human world.

Discrimination is, however, unlikely to be the only cause of our ignorance: the impossibility

¹ V.F.Cordova, *How It Is* (Tucson: The University of Arizona Press, 2007), p.2. Viola Cordova was one of the first Indigenous women to be awarded a PhD in Philosophy in the USA.

² UN Environment Programme, *State Of The Climate – Climate Action Note: Data You Need To Know*, <URL = <https://www.unep.org/explore-topics/climate-action/what-we-do/climate-action-note>> [Accessed: 20 March 2023].

³ L.Allam, 'Right Fire For A Right Future: How Cultural Burning Can Protect Australia From Catastrophic Blazes', *The Guardian*, 18 January 2020. Available at: https://www.theguardian.com/australia-news/2020/jan/19/right-fire-for-right-future-how-cultural-burning-can-protect-australia-from-catastrophic-blazes?CMP=Share_iOSApp_Other [Accessed: 20 March 2023].

⁴ F.Berkes, *Sacred Ecology*, 4th ed. (Abingdon: Routledge, 2018), p.292.

⁵ L.T.Smith, *Decolonising Methodologies*, 2nd ed. (London: Zed Books Ltd., 2012).

⁶ D.H.McPherson and J.D.Rabb, *Indian From The Inside: Native American Philosophy And Cultural Renewal* (Jefferson: McFarland & Co., 2011), pp.23-60.

⁷ M.Fricker, 'Evolving Concepts Of Epistemic Injustice' in I.J.Kidd, J.Medina, G.Pohlhaus Jr. (eds), *The Routledge Handbook Of Epistemic Injustice* (Abingdon: Routledge 2017), pp.53-60.

of a complete phenomenological reduction⁸ implies that even in a fictional, future scenario where discrimination has been eliminated, we are still – at least initially – likely to struggle to understand each other when encountering worldviews formed from significantly different vantage points. Wittgenstein’s lion is likely to continue to struggle to convey his message to humans, even once humans begin to recognise lions as partners in conversation who may have something of interest to say.⁹ Similarly, Indigenous and non-Indigenous interlocutors frequently feel that they are “talking past each other”.¹⁰

The fact that it is possible for lack of understanding to prevail even in those settings where discrimination is unlikely to be at play is demonstrated, for example, by Bruce Wilshire’s comments on the experience of phenomenologists in parts of the USA’s academic system: as non-Indigenous as their analytic peers, American pragmatists and phenomenologists can struggle to be heard by parts of the American Philosophical Association (APA).¹¹ Wilshire describes a culture of scientism at present, based on a history of exclusive subscription to Cartesian dualism in the past, which has led to a paradigm tacitly being accepted and now lived that makes it difficult for the West even to perceive the presence of anything that may lie outside the realm of a conception of science that has grown to expect to operate in a laboratory setting.¹² William James’s “The More”¹³ has not only been rendered invisible itself, but its concealment has also been concealed by a paradigm that has made us unlikely to conceive of its existence.¹⁴

Ample examples exist of American pragmatists and phenomenologists citing elements of Indigenous philosophy: Wilshire, for example, goes as far as to describe William James’s

⁸ T.Toadvine, ‘Maurice Merleau-Ponty’ in *The Stanford Encyclopedia of Philosophy*, ed. by E.N.Zalta, (Spring 2019 Edition), URL = <<https://plato.stanford.edu/archives/spr2019/entries/merleau-ponty/>> [Accessed: 20 March 2023]. The point relevant to this argument is that due to the impossibility of a complete phenomenological reduction, situations exist when we are (at least initially) unable (even when *not* unwilling) to understand each other’s points of view.

⁹ E.Meijer, *Animal Languages* (London: John Murray, 2019), p.149.

¹⁰ A.Fienup-Riordan, ‘A Guest On The Table: Ecology From The Yup’ik Eskimo Point Of View’, in *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, ed. by J.Grim (Cambridge: Harvard University Press, 2001), pp.541-558.

¹¹ B.Wilshire, *The Primal Roots Of American Philosophy: Pragmatism, Phenomenology, And Native American Thought* (University Park: The Pennsylvania State University Press, 2000), p.159.

¹² D.Bohm and F.D.Peat, *Science, Order, And Creativity* (Abingdon: Routledge Classics, 2011), p.9.

¹³ B.Wilshire, *The Primal Roots Of American Philosophy*, pp.24 and 33-65. Wilshire invokes William James’s conception of “The More” – of that which lies outside the realm that is capable of being captured by Newtonian physics – in the contexts of Western, phenomenological thought and also of Indigenous philosophies, but maintains that for the reasons stated, it has become invisible to large parts of mainstream philosophy. William James’s ideas are going to be discussed in detail in **Part 2**.

¹⁴ *Ibid.*, pp.163-174.

thinking as a pathway to shamanism.¹⁵ The same applies vice versa: several of the first generation of Indigenous holders of PhDs in Western Philosophy in the USA, introducing their work in an anthology edited by Anne Waters,¹⁶ make reference to phenomenology as the branch of Western philosophy most likely to provide a stepping stone towards mutual understanding between the two worldviews.¹⁷

Wilshire's above comments on paradigm make it appear likely that at least part of the reason for the lack of understanding between the two worldviews is inherent in them, meaning that at least initially, they cannot, even once any "will not" has been overcome, understand each other due to the sheer distance between their respective vantage points. Dennis McPherson and Douglas Rabb refer to this as the "incommensurability problem."¹⁸

Questions relating to terminology may arise at this point. It may be helpful to address some of these before proceeding any further. First and foremost, why would a thesis whose very beginning states that its aim is going to be to look beyond binary dualisms, then go on to use the terms "Indigenous" and "Western" in ways that may, at first glance, appear to place two monoliths into binary opposition? Relatedly, why would a thesis whose entire **Part 2** – as well as significant parts of **Part 1** – is going to be found to discuss the dynamics of our participation in continuing creation of a world we belong to, yet make a choice to use the above nouns, and thereby draw upon categories which may, at first glance, appear to be treating these dynamics as if they were static? From what little has been said up to this point, it is already apparent that this choice must be seen as a questionable one.

¹⁵ Ibid., p.64.

¹⁶ A.Waters (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004).

¹⁷ G.Cajete, 'Philosophy Of Native Science', in *American Indian Thought: Philosophical Essays*, ed. by A.Waters (Oxford: Blackwell Publishing Ltd., 2004), pp.45-57.

¹⁸ McPherson and Rabb, pp.147-148. It is going to become clear through McPherson and Rabb's work, and through that of several more authors (particularly in **Part 2** of the thesis, when Indigenous conceptions of performative knowledge processes are discussed), that vantage points, although vitally important to the points made, are not all that is at stake in a dynamic conception of our participation in the world.

It is, however, arguably still a viable one. A wide range of the authors cited in the thesis have made the same choice.¹⁹ What is significant here is, most of all, their diversity rather than their number: a range of academic disciplines and approaches are represented. Crucially, the examples include authors who are not only clearly aware of the issues raised here, but who are actively, in their works cited, making the above points of neither worldviews nor groups of people being monoliths, of the importance of thinking beyond overreliance on binary dualisms, and of our participation in the continuing creation of our world being dynamic rather than static. Brian Burkhart's thinking, for example, is introduced in **Part 1** and discussed in depth in **Part 2** in the context of his conception of locality, of his jazz analogy, and of bridges built between different worldviews' understandings of relationships by drawing upon Martin Buber's thinking. All three of these thought processes are going to evidence Burkhart's keen awareness of the issues raised here. Despite this, Burkhart is making a choice to rely on the terms in question, as is Karen Barad,²⁰ whose theory of agential realism (which, as does Burkhart's work, makes the very points raised here) forms a recurring theme throughout the thesis, and whose work is discussed in depth in **Appendix B**.

Convention need not imply continued fitness for purpose, however. Counterexamples of authors having made different choices are also contained in the **Bibliography**. Sandra Harding, for instance, uses the term "Enlightenment philosophies",²¹ the difference being that it categorises philosophies rather than groups of people. David Bohm discusses his experimentation with a newly-created, verb-based form of language use (rheomode).²² The difference, with Bohm's rheomode, is that – in a similar way to that discussed in the context of a tendency for Indigenous languages to be verb-based rather than noun-based

¹⁹ Examples include (but are not limited to): L.T.Smith, *Decolonising Methodologies*, 2nd ed. (London: Zed Books Ltd., 2012); F.D.Peat, *Blackfoot Physics* (York Beach: Red Wheel/Weiser, 2005); B.Wilshire, *The Primal Roots Of American Philosophy: Pragmatism, Phenomenology, And Native American Thought* (University Park: The Pennsylvania State University Press, 2000); F.Berkes, *Sacred Ecology*, 4th ed. (Abingdon: Routledge, 2018); B.Burkhart, *Indigenizing Philosophy Through The Land* (East Lansing: Michigan State University Press, 2019); D.K.Barker, 'Dualisms, Discourse, And Development', in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.177-188.

²⁰ Barad, for example, makes reference to "our weary Western souls": K.Barad, 'Meeting The Universe Halfway: Realism And Social Constructivism Without Contradiction', in *Feminism, Science, And The Philosophy Of Science*, ed. by L.H.Nelson and J.Nelson (Boston: Kluwer Academic Publishing, 1996), pp.161-194 (p.166), and to "Western science": *ibid.*, p.185.

²¹ S.Harding,S., 'Gender, Development, And Post-Enlightenment Philosophies Of Science', in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding, Bloomington: Indiana University Press, 2000), pp.240-261.

²² D.Bohm, *Wholeness And The Implicate Order* (Abingdon: Routledge Classics, 2002), pp.34-60.

(for example, by Robin Wall Kimmerer in **section 4.a.** , by Gregory Cajete in **section 7.b.** , by Shay Welch in **section 12.a.** , and by Jack Forbes in **section 16.c.iii.**) – categorisation is less pronounced as the focus remains on the dynamic nature of interactions.

I would argue that despite these choices made by Harding and by Bohm being advantageous in the ways stated, some disadvantages that their adoption would entail in the context of this thesis shift the balance against their use here. With regards to the term used by Harding, and while respecting Harding's choice as an appropriate one in its own context, the aim of this thesis, stated at the beginning of this introduction, is to interact with philosophy in a way inextricably linked to the practical purpose of regenerating relationships. Its focus is, therefore, going to be not on philosophies alone, but on their their integral part in what is going to be characterised, for example, in **section 5.b.** , by Maurice Merleau-Ponty as our weaving the network that carries our existence. It discusses living beings, as individuals and as groups, engaging in thought processes as part of their engagement with each other. It discusses the interplay between philosophies and Merleau-Ponty's network, which is our network, in its and in our becoming, as well as, relatedly, in the philosophies' own.

This almost seems to imply that Bohm's choice of creating a verb-based form of language use (or of attempting to use his) would have been the more appropriate one here. It is a choice that, for the reasons stated, I almost wish I had been able to make. However, the Wittgensteinian riverbeds of accustomed interaction that are going to form a recurring theme in this thesis (for example, in **section 5.d.**) include the way that we speak to each other: those interacting with Bohm's work continued to use language as they had used it before.²³ The option of using a verb-based language appears only to be available to those using it in the context of other speakers familiar with it too. It is not realistic, therefore, for this thesis to adopt Bohm's choice.

With the above discussion of the imperfections of the terms "Western" and "Indigenous" in mind, it is my hope that readers may be generous and allow that a "Westerner" (or an "Indigenous" person), in this thesis, is not intended to mean an individual cast in a particular mould, unable, or unwilling (or both) to question a norm that, in itself, can

²³ For example, some development in David Peat's thinking from the time before a period of intense collaboration with Bohm to the time afterwards is discussed in **section 6.c.** . This development, however, relates to Peat's expanded appreciation of some dynamics in the context of acausal relationships. Peat's language use remains as it was before.

already be neither monolithic nor static. A “Westerner” is, rather, intended to mean someone embedded in a dynamic of worldview, institutions, and Wittgensteinian riverbeds influenced by largely Cartesian developments since the Enlightenment as outlined in **chapter 5**. An “Indigenous” person, on the other hand, is intended to mean someone embedded in a dynamic characterised by some elements of unity in diversity proposed by Leroy Little Bear in **section 4.d**, and explored in greater depth in some versions put forward by additional authors in **section 6.a**. (Some thoughts on the interplay between the diversity of Indigenous worldviews and the elements of unity in diversity proposed are offered in **Appendix I**.) The importance of the terms in question in no way being intended to essentialise cannot be overstated. It is going to be re-stated, for example, by a Creek Elder prioritising the role of participation over that of a blood test in **section 5.f.vii**. At least as importantly, it is my hope that it is going to shine through the thought processes unfolding as the thesis progresses.

A handful of other terms may rankle, at least before they have been considered here. The work would appear more rigorous if I were to include at its beginning a list of succinct, unified definitions of some additional terms, such as, for example, “energy” and “spirit”. However, the points about to be made in the thesis are going to demand something different: additional terms are going to be shown to be subject to interaction with the dynamics they are embedded in, too. It is going to become apparent at various points that the different worldviews involved cannot help but use a term differently because the term is woven into a context of different understandings. The term “person” may serve as an introductory case in point: in the context of some elements of unity in diversity between Indigenous worldviews considered in **section 6.a**, a non-anthropocentric conception of the term “person” growing from a sense of equivalency between species is exemplified and is found to chime with these. It is shown that no requirement is placed on a non-human to display human characteristics for this. It is therefore then possible in **section 6.a** to provide an explanation to accompany citations of works drawn upon in its context, pointing out that here, a “person” is understood to be a potential partner in a mutually responsive relationship potentially developing across species boundaries. When a Western philosopher’s attempt to use methods of analytic philosophy to prove that his dog is a “person” is considered in **section 15.b**, on the other hand, the criteria used in the work cited are shown to be based on characteristics previously only attributed to humans. Again, it is possible, in the context of **section 15.b**, to provide an explanatory

note to the effect that in the context of *this* work, use of the term “person” is based on an anthropocentric conception of it. What is not possible, conversely, is to provide one unified definition of the term “person” to be applied to all the works referenced in the thesis: this would conceal a dynamic relevant to points about to be made in relation to incommensurabilities between worldviews.

In the same vein, when **section 5.f.vii.** makes reference to Frédérique Apffel-Marglin’s criticism of “ritual” not being used by the Fair Trade movement, her criticism is made in the context of a worldview where there is not only the above expectation of relationships between equivalents developing across species boundaries, but where the sacred is experienced as being present in the material, rather than in a realm beyond, and where “ritual” has previously (for example, in **section 5.e.**) been contextualised as chiming not only with the three elements of unity in diversity put forward by Leroy Little Bear in **section 4.a.** , but, relatedly, also with work on diverse animacies by Kyle Whyte. Apffel-Marglin’s claim of no “ritual” being used by the Fair Trade movement does not mean that she thinks no one working at Fair Trade attends services at the Catholic Church she has been shown to acknowledge in **chapter 4** , nor is it being suggested that the Fair Trade movement has no accustomed way of, for example, celebrating colleagues’ birthdays (which it may well describe as a “ritual” way of marking these). Rather, what is being suggested is that whether or not Fair Trade colleagues attend church services or engage in birthday “rituals”, they are unlikely to do so in an expectation of such “ritual” being a channel of mutually responsive communication across species boundaries, nor one of any sacredness being experienced as part of such relationships within the material world. What is being suggested is that it is “ritual” conducted on the basis of these expectations which is being rejected by Fair Trade staff.²⁴

²⁴ At first glance, it might appear to be an option to categorise the “ritual” referenced in this context as “religious ritual”. However, this would mask the point that is being made, which is that the difference lies in the fact of the sacred being experienced as part of the material world here. These issues are going to be explored in greater depth from **chapter 4** onwards in **Part 1** , and again in the context of performative knowledge processes in **Part 2** , once relevant aspects of Vine Deloria’s and Benedict de Spinoza’s thinking have been taken into account. A wider issue at stake is introduced in the discussion of methodology in **chapter 2** below: at times, engagement with incommensurabilities between worldviews is going to require relinquishment of familiar categories. A distinction between “religion” on the one hand and “subsistence” on the other is shown, for example, in **chapter 7** not to be universally applicable. Communicative difficulties between paradigms are shown to arise, for example, from this distinction being reflected in contemporary legislation in relation to groups where the spiritual is experienced as an integral part of inter-species mutual nurturing in a whaling community. Use of the term “religious ritual” would, in this case and in a variety of others throughout the thesis, carry the risk of masking this issue.

A related difficulty is then encountered in **section 6.d.** with regards to the English term “spirit”, when used in a Western context, being shown to tend to refer to an entity perceived to be *outside* this world, which results in its only being able to serve as a rudimentary translation of terms relating to intangible presences being experienced as *part of* this world in a worldview where the sacred and the material are experienced as one. Similar points, now made by Qechua speakers regarding the Qechua terms *runa*, *huaca*, and *sallqa* and their rudimentary English translations of “human being”, “deity”, and “a part of non-human nature” are discussed in **section 5.e.** . An additional, related issue is once more encountered with regards to the term “sacred”, and is and discussed in depth in **chapter 13** and **chapter 14** .

From this brief introductory sketch of the issue under discussion, it is already becoming apparent that the term “science” is going to be unable to escape its repercussions: how could it, when the worldviews being considered differ in their very conception of what is and what is not part of the world that science aims to offer understandings of? (Some of the dynamics involved in this are discussed in **chapter 5** .) It is going to become increasingly apparent throughout **Part 1** that even use of the terms “Western science” and “Indigenous science” (besides carrying echoes of the above discussion of the terms “Western” and “Indigenous”) would come with the added difficulty of “Western science” – as outlined, for example, in **chapter 5** and in **section 6.c.** – not always having restricted itself to remain within the boundaries imposed by what we may now wish to refer to as scientism. A conscious effort has therefore been made at key points of this thesis to use the terms “contemporary Western science” or “a Newtonian paradigm” when a Cartesian-based conception of science is meant, while at other times prioritising readability.

In the context of science Newtonian or otherwise, it is, finally, by this stage in the discussion, becoming apparent that even a term such as “energy” is not going to remain unscathed. The issue, here, is not only one of the outline of Niels Bohr’s work in the field of quantum theory, offered in **section 4.b.** , demonstrating that the boundary drawn between matter and energy in customary language use is not a boundary that is going to hold water in every circumstance. It has, by now, also become apparent that in a worldview where the sacred is experienced as part of the material, “energy” – as well as “matter” – as well as “matter-energy”, as it is going to be shown to be referred to by Viola Cordova in a nod both to Niels Bohr’s complementarity principle and to Indigenous

language use in **Part 1** – is going to take on connotations of sacredness (for example, in **section 6.d.**) which are unlikely to be associated with it in a worldview where any sacredness is understood to be located in a realm beyond this world.

It is my hope that despite – for the reasons stated – being unable to reduce all the terms under discussion to succinct, unified definitions capturing what is going to be meant by them in the diversity of texts and contexts considered, the above introductory sketch of some of the issues at stake is going to be helpful both in relation to the terms themselves and as a glimpse of the promise of some of the incommensurabilities between worldviews about to be explored.

With this in mind, this thesis is going to consider barriers to understanding that involve obvious discrimination, as well as those that appear not to, and explore how these may be overcome. It is also going to consider in more detail the potential stepping stones to understanding provided by phenomenological thought, by Spinoza, and by quantum theory, and how these interact with points of view put forward by a range of Indigenous authors. Based on this, it is then going to propose a tentative way forward in the direction of mutual understanding and collaboration between those arguing from within different paradigms, as well as potential steps towards regeneration of a harmonious relationship between human and non-human nature in the West.

1.b. Overview of chapters

This introduction is followed by a chapter on methodology (**Chapter 2**), examining some potential pitfalls when approaching an unfamiliar worldview, as well as introducing an iterative methodology proposed by Mary Midgley as a viable way forward. A brief outline is given of the resources used.

Part 1 of the thesis proper, **Edging closer to an Indigenous vantage point** , consists of chapters 3 to 8 and examines the challenges involved in operating across paradigms while embarking on a journey towards increased understanding of Indigenous worldviews in relation to more-than-human nature.

Chapter 3 offers some general thoughts on the challenges of operating across paradigms. It presents Western science as one piece in the jigsaw of knowledge of the world, and attempts to open up a space between scientism at one end of the spectrum, and ill-informed ways of knowledge being taken out of context at the other, in order to begin to

develop some generalised elements of a potential breeding ground for successful knowledge transfer between paradigms.

Chapter 4 offers some first glimpses beyond the Newtonian clockwork universe, and thereby moves forwards in the direction of specific consideration of a worldview encompassing a dimension beyond the accustomed remit of contemporary Western science. Beginning with the discoveries of quantum theory, and placing these first in the context of a Western, Christian point of view provided by John Polkinghorne, it moves on to a brief overview of possible implications with regards to Indigenous thought based on Leroy Little Bear's assertion of three elements of philosophical unity in diversity between Indigenous worldviews.

Since Western and Indigenous worldviews, specifically, have traditionally struggled to understand each other, **Chapter 5** examines a number of known reasons for these specific difficulties. Exploring the issue from both points of view, the chapter considers Indigenous philosophies as transformative philosophies, and attempts to answer the question of why this appears to pose the amount of difficulty to our Western mind-bodies that it appears to have done to date. Contemporary as well as historical evidence is presented to show that this chapter would not be complete without extensive consideration being given to the issue of discrimination.

Building on the background developed in Chapter 5 of some of the specific difficulties involved, **Chapter 6** then explores the bigger picture that emerges as Leroy Little Bear's starting point from Chapter 4 is elaborated in greater depth by a range of authors. The interwovenness of quantum theory, phenomenology, monism, and Indigenous thought is examined with particular reference to the existence of acausal relationships alongside causal ones, leading into a discussion of the role of awe in human relationships with the human and more-than-human world. The chapter concludes with a discussion of the implications of the above for ethics, with both Western and Indigenous conceptions of ethics being considered.

Chapter 7 offers some first insight into the implications of the above findings for potential new forms of knowledge transfer and, relatedly, potential opportunities for new forms of collaboration. The issue of reparations is considered in light of the context of both paradigms; epistemic injustice, previously discussed in relation to the transfer of already existing knowledge, is revisited in the new context of its being a potential barrier to

successful shared innovation. In order to illustrate some of the tensions involved in collaboration across the two paradigms, a number of specific dilemmas are considered before a tentative stepping stone towards a solution is proposed.

Chapter 8 completes **Part 1** by offering an interim conclusion. Based on the thesis up to this point, it is now possible to discern that unilateral decision-making by humans can no longer be viewed as the only way forward available. This, however, poses a difficulty: on the one hand, shared decision-making involving non-human parts of nature, as it has been practised by Indigenous groups, not only tends to involve ritual, but tends to involve ritual in such a way that it is inseparable from everyday interaction, as – consistent with an understanding of the sacred as being present in the material – ritual and labour tend to be conceived as one. On the other hand, the West has not only all but abandoned any practice of ritual in the last 500 years, but has also developed a tendency to be wary of it. In light of this difficulty, it is, at this point of the thesis, unclear how any new, Western, human participation with non-human nature based on our openness to the possibility of any presence of the sacred within the material may be approached.

Part 2, Towards participation, addresses this challenge in the remaining chapters.

Chapter 9 sets the scene by revisiting some communicative challenges outlined in **Part 1**, and by introducing the work of Western-trained, Indigenous botanist Robin Wall Kimmerer as an example of a scientist attempting to bridge the gap between the two worldviews. It then poses the question of how a potential link may be found between the material world as shown by Western science on the one hand, and Indigenous conceptions of performative knowledge, story, and meaning on the other, in order to explore in what way such a link may be helpful to the West in moving towards practical openness to its own, distinctive actualisation of ritual and labour as one.

In the spirit of the thesis aiming to explore applications of non-binary dualisms, **Chapter 10** is dedicated to the thinking of Vine Deloria, an Indigenous author with a background in Western science who is nonetheless – surprisingly, as this appears to be anything but the norm – critical of evolutionary theory. Questions of epistemology are explored alongside those of metaphysics, to reveal the Indigenous understanding of the relatedness of the non-binary dualism of the individual and the whole to that of the material and the sacred. This insight casts additional light on the relevance of Spinoza’s thinking to Western attempts to approach Indigenous worldviews.

Chapter 11 , therefore, considers the relevance of Benedict de Spinoza to our Western engagement with Indigenous worldviews in more detail. A number of complexities arise, all of which ultimately prove fruitful: Mary Midgley’s objection to Spinoza on the grounds of his perceived egoism is examined, as well as the possible anthropocentric interpretation of Spinoza’s advice to utilise or destroy members of other species. Spinoza’s alleged determinism is questioned, initially from a Western point of view, and subsequently from a participationalist one.

Chapter 12 revisits Indigenous conceptions of performative knowledge, which were briefly introduced in **Part 1**. After clarifying why performative knowledge cannot be reduced to embodied cognition, Jacques Ellul’s thinking is contrasted with John Dewey’s in order to show why it would be equally inappropriate to reduce performative knowledge processes to “knowing how”. The rest of the chapter consists of an exploration of performative knowledge within a participationalist paradigm.

Chapter 13 completes the groundwork necessary before addressing the **Part 2** question of Western engagement with the sacred in non-human nature by discussing William James’s *The Varieties of Religious Experience*. Based on James’s conception of the sacred as being beyond definition or control by any individual or group alone, a sketch of a family resemblance is then attempted in **Chapter 14**, and applied first to a case study of a small group of humans engaging in a team sport, and subsequently to two case studies reflecting attempts made by wider contemporary Western, human society to navigate its interdependencies. Lessons are extracted from the difference between the two.

Chapter 15 considers existing contemporary attempts at Western interaction with non-human nature, with particular focus on the multi-faceted roles of anthropocentrism and anthropomorphism as elements of our interaction.

An example of Western botanical research conducted as conversation is then examined in **Chapter 16** to complete the picture in preparation for the chapter’s subsequent application of the above family resemblance to current Western interaction with the more-than-human world. While the case study concerned offers promising insight into potential Western ways of interacting with the sacred in the material while simultaneously enhancing scientific rigour, a nuanced overall picture emerges. In those situations where we are open to it, the opportunity for participation appears to be there for the taking. However, the chapter also highlights some of the dynamics at work in the contemporary West acting as roadblocks to

the opportunity being taken.

With the work of the thesis largely completed by this point, it has become clear by **Chapter 17** that uncomfortable parallels exist between Western treatment of Indigenous humans and of non-humans. Raimond Gaita's sequencing of events – of our honouring the inherent dignity of a fellow creature, as a matter of decency and of fellow creatureliness, and of the *conatus* of the creature then, in a subsequent step, thriving and contributing to the *conatus* of the whole – does not tend to be actualised in either case. With the absence of our decency in this matter comes its corollary of the absence of the opportunity that would have been inherent in a relationship but for its inability now to be open to Martin Buber's *I-thou*.

Chapter 18, in light of the above **Part 2** thoughts, then returns to the question left open at the end of **Part 1**: how can any learning from this thesis influence the action we take going forward? – None of the authors cited, Indigenous or Western, offers a simple solution; our nuanced response appears to be required. If we are open to engagement with a paradigm where ritual and labour are one, our journey will include our interaction with the as yet unresolved, remaining binary dualism underlying the **Chapter 7** dilemmas in **Part 1**: the dualism of the usefulness of pre-emptive legislation to the operation of our nation states on the one hand, and the need to remain alive to the locality in space-time of a particular interaction in order for an *I-thou* relationship to be able to flourish on the other. Black Elk's Heyoka Ceremony is revisited in light of this, alongside a contemporary example of Western scientific engagement developing into ceremony, thus allowing a complex picture to emerge of our honouring our legislative commitments while becoming open, with Indigenous authors and with Gaita, to letting the sacred in the material emerge through respectful and responsive interaction. To the extent that we do, we may find new, ceremonial ways of doing things emerging naturally from our *I-thou* relationships with others.

Chapter 19 offers some recommendations, initially argued from a mainstream, Western, representationalist paradigm, and subsequently branching out to include participationalist thinking. Besides reinforcing the above interim conclusion of exclusive reliance on unilateral, human decision-making no longer being tenable, the chapter focuses on our interaction with the above remaining challenge of embracing responsiveness while respecting the usefulness of pre-emptive legislation. Chiming with the Indigenous

conception of disagreement as progress, and drawing on examples of this considered throughout this thesis, it is shown that a fruitful way forward is unlikely to be found through any form of reinforcement of dichotomies of condemnation versus romanticism in relation to the “other”. Rather, in our participation in performative knowledge processes, supported by a richer conception of rationality and engaged in with humans and non-humans alike, it is likely to be through the very pain of our initial discomfort with those dimensions of the “other” that we disagree with that new, harmonious forms of interaction may emerge.

Chapter 20 summarises these findings in a conclusion.

Chapter 2 – Methodology

2.a. Some pitfalls to avoid

A number of previous attempts have been made to approach Indigenous worldviews, and it is going to be useful to learn from these.

A large proportion, unfortunately, fall into the category of cultural appropriation, with knowledge – often acquired by unfair means – being stripped of the context where it can coherently operate, placed into a new context where it cannot, and its wisdom being lost in the process, while the perpetrators make off with a tidy profit. Due to the power imbalances involved, the usual scenario involves Indigenous knowledge being appropriated by non-Indigenous actors, although the examples chosen will demonstrate that this does not always have to be the case.

Outside predominantly commercial settings – for example, in academic ones – the problem of absent context may occur just as easily,¹ and it needs to be actively addressed in order to prevent a similar pattern being followed even in the absence of any intention to appropriate knowledge for profit. All too often, authors attempting to learn from an unfamiliar worldview seem to fall into the trap of validating this worldview from within the paradigm that they usually operate in. The difficulty appears to be that it follows from Wilshire's and Wittgenstein's comments regarding concealed assumptions and regarding lions in the *Introduction* that we are unlikely even to notice when this is happening: I am going to cite examples of research demonstrating nothing but the very best of intentions yet falling into this trap. I am aware that, as a non-Indigenous person attempting to approach Indigenous worldviews, I have no way of being certain of successfully steering clear of it myself at all times.

Irrespective of intention, to validate an Indigenous worldview from within a Western paradigm is not only a sign of ignorance, as Linda Martín Alcoff points out.² It is also impractical, as it is going to prevent the emergence of coherence: while some aspects of a previously unfamiliar worldview may chime with one's existing one, others will not, leading to an overall picture that is unlikely to be a coherent whole.³ Most importantly (at least for

¹ Smith, *Decolonising Methodologies*, p.44.

² L.M.Alcoff, 'Philosophy And Philosophical Practice: Eurocentrism As An Epistemology Of Ignorance', in *The Routledge Handbook Of Epistemic Injustice*, ed. by I.J.Kidd, J.Medina, G.Pohlhaus Jr., (Abingdon: Routledge 2017), pp.397-408.

³ P.Vitebsky, *Reindeer People* (London: Harper Collins, 2005), p.263.

the purposes of a thesis that aims to open up pathways for appropriate forms of knowledge transfer from Indigenous worldviews), it is going to prevent learning: a methodology that only accepts new information in those cases where the new information is already acceptable to the pre-existing paradigm is going to be unable to extend its pre-existing comfort zone.

2.b. A possible way forward

An alternative strategy is the method proposed by Mary Midgley, which is a respectful, iterative approach to understanding of a new vantage point by learning to ask increasingly well-informed questions, initially generated from the perspective of one's own, familiar vantage point, but subsequently, as discovery progresses, increasingly informed by what one is learning about the new one.⁴

At first glance, Midgley's proposed method could be mistaken for yet another one that applies a Western yardstick to non-Western ideas in order to validate them, beginning as it does in the West, because that is what is familiar to us. However, nothing could be further from the truth. The inappropriate approach criticised, for example, by Linda Tuhiwai Smith,⁵ has the learner persisting in their application of their previously familiar categories, and persistently failing to realise that these are not the only possible ones. Midgley's approach, on the other hand, sets out from the beginning to become increasingly familiar with the new vantage point, and it is only at the beginning of the journey that familiar categories are used as stepping stones to increasingly pertinent questions. Dennis McPherson and Douglas Rabb, in the same vein, distinguish between subsuming a new experience under preconceived categories on the one hand, and employing previously familiar experiences as tools on a journey towards appreciation of the new in its newness on the other.⁶ The latter is what I hope to achieve.

2.c. Resources

With regards to resources, works considered to exemplify an Indigenous vantage point, initially, were those by Anne Waters' eight above-mentioned, first-generation Indigenous holders of PhDs in Philosophy in the USA, and by the international authors included in

⁴ M.Midgley, *Animals And Why They Matter* (Athens, GA: University of Georgia Press, 1983), p.127.

⁵ L.T.Smith, *Decolonising Methodologies*, 2nd ed. (London: Zed Books Ltd., 2012), p.58.

⁶ McPherson and Rabb, pp.63-64.

John Grim's anthology published two years prior to these.⁷ Branching out from these, their "family trees" of works citing and works cited were examined, which then led to further discoveries via the Indigenous branch of the APA Newsletter,⁸ as well as to the output generated by the PRATEC project in the Andes.⁹ Reading lists for Native Studies programmes at universities in Canada and the United States provided further resources, most importantly perhaps the collaborative work of Indigenous philosopher Dennis McPherson and non-Indigenous philosopher Douglas Rabb at Lakehead University in Canada.¹⁰

As indicated above, American pragmatists and phenomenologists are frequently cited by Indigenous philosophers, and provided a starting point for exploration of a non-Indigenous vantage point. A frequent common denominator appears to be Maurice Merleau-Ponty, and it is his lectures at the Collège de France near the end of his life¹¹ which are also cited in Louise Westling's work.¹²

Quite early on in this research, it became clear that it was, in fact, Indigenous academics themselves who first attempted to build bridges. With the benefit of hindsight, it is now clear to me that there are at least two reasons why this was almost bound to be the case: firstly, Indigenous academics tend to be bi-cultural, having experienced a non-Indigenous education system as well as some Indigenous enculturation at home.¹³ This means that

⁷ J.Grim (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community* (Cambridge: Harvard University Press, 2001).

⁸ A.B.Curry (ed.), *APA Studies on Native American And Indigenous Philosophy*, URL = https://www.apaonline.org/page/indigenous_newsletter [Accessed: 20 March 2023]. The Newsletter has been published continuously since 2001. It has been renamed several times since and, as a result, appears under several titles with slightly different wordings in this thesis as papers from different issues are cited.

⁹ F.Apffel-Marglin (ed.) with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998). The abbreviation "PRATEC" stands for *Proyecto Andino de Tecnologías Campesinas*, which is an organisation run by Western-educated academics originally from an Indigenous background aiming to strengthen Indigenous-led attempts to reclaim Indigenous modes of interaction with the land in Andean agriculture.

¹⁰ D.H.McPherson and J.D.Rabb, *Indian From The Inside: Native American Philosophy And Cultural Renewal* (Jefferson: McFarland & Co., 2011).

¹¹ M.Merleau-Ponty, *Nature: Course Notes From The Collège de France* (Evanston: Northwestern University Press, 2003).

¹² L.Westling, *The Logos of the Living World: Merleau-Ponty, Animals, and Language* (New York: Fordham University Press, 2013).

¹³ Details of this can be complex. As discussed in the section on discrimination below, educational practices imposed by colonial powers tended to be detrimental to the continued flourishing of Indigenous cultures, often resulting, for example, in Native languages being threatened with extinction, and in conscious effort now being required to regenerate Indigenous ways of being in the world.

for them, natural starting points for building mutual understanding may already have emerged through their bi-cultural socialisation, and intrigued them to discover more.

Secondly, and less widely known, Indigenous philosophers are experts in a worldview that felt itself to be “coming home”¹⁴ as it took the initiative in beginning to forge trans-disciplinary ties with the work of two quantum physicists who reciprocated their interest: David Bohm and David Peat.¹⁵

After the success of a first, exploratory conference held to this end, regular meetings ensued, and continued over a decade from the early 1990s to the early 2000s. The meetings were referred to as “the Dialogues”.¹⁶ By the time the Dialogues were retired at the end of this period of ten years, some striking parallels had been discovered between Indigenous thinking, the Western, scientific discoveries of quantum theory, aspects of Benedict de Spinoza’s philosophy, and phenomenological thought.

It is on the basis of the cluster of interrelated concepts which emerged from these early attempts at knowledge transfer between paradigms discussed in **Part 1** of the thesis that it is then possible, in **Part 2**, to explore in greater depth a range of interactions between humans and non-humans, between learning and creation, between ritual and labour, and potentially between Western as well as Indigenous groups and the sacred within the material.

Before this can begin, however, it is first necessary to examine some factors which contributed to a number of previous attempts now being understood to have been unsuccessful.

¹⁴ G.A.Parry, *Original Thinking* (Berkeley: North Atlantic Books, 2015), p.24.

¹⁵ F.D.Peat, *Blackfoot Physics* (York Beach: Red Wheel/Weiser, 2005), p.43.

¹⁶ Parry, *Original Thinking*, p.3. Official conference titles and funding arrangements changed about half way through the process.

Part 1. Edging closer to an Indigenous vantage point.

Chapter 3 – Barriers to successful knowledge transfer between paradigms: some general considerations

When previously unfamiliar worldviews meet, two questions arise. The first question relates to the worldviews themselves: they have come into contact; they are showing interest in each other – how can they now overcome challenges of epistemic injustice and of the impossibility of a complete phenomenological reduction hampering their journey towards mutual understanding, as outlined in the previous section? – The previous chapter identified the methodology proposed by Mary Midgley as a possible way forward, and this methodology is going to be used throughout this thesis.

The second question relates to misrepresentations of either worldview that may develop as a result of any process of attempting to gain understanding of the previously unfamiliar: incomplete understanding of an unfamiliar area of expertise may lead to misconceptions, and to loss of the wisdom contained therein. Examples cited in this context are frequently examples of cultural appropriation of Indigenous knowledge by the West. The power imbalances involved result in its being easier for the majority culture to exploit a minority culture's knowledge and resources, and these examples almost certainly represent the majority of cases.¹

However, on reflection, it is clear that Western science is equally prone to misrepresentations by those who lack understanding. Misappropriation occurs when any knowledge is removed from its context and placed into a new one where it no longer makes sense. For example, when faced with the Covid-19 crisis, it was not an Indigenous herbal remedy that Donald Trump famously put forward as a solution: it was a Western, scientifically-proven surface-cleaning chemical which Trump recommended for use as an injectable anti-viral drug.² Clearly, this is as much of an example as any misappropriation of Indigenous knowledge of an abject lack of understanding resulting in knowledge being stripped of its relevant context from which it drew its original coherence, and of the

¹ Smith, *Decolonising Methodologies*, p.109.

² D.Smith, 'Coronavirus: Medical Experts Denounce Trump's Theory Of Disinfectant Injection', *The Guardian*, 18 January 2020. Available at: <https://www.theguardian.com/world/2020/apr/23/trump-coronavirus-treatment-disinfectant> [Accessed: 20 March 2023].

outcome being a complete failure to retain any of the wisdom contained.

It is for this reason that the following section is going to attempt to open up a space where science and worldviews accommodating a more-than-scientific dimension to life can meet, mindful of the boundaries represented by scientism at one end, and by the need to call out promises of snake oil on the other.

3.a. Western science as one piece in the jigsaw: quantum theory, snake oil, and the relevance of the buchu plant

Viola Cordova’s remark at the very beginning of this thesis makes an important point. Western science largely grew out of a conceptual framework based on Cartesian dualism, and is therefore unlikely to be able to provide us with an all-encompassing understanding of the world.³ While there can be no doubt that the Enlightenment’s emancipation of science from doctrine⁴ is to be celebrated – without it, it is unlikely that we would now be celebrating the lives saved by a Covid-19 vaccine – scientific progress, as it has recently been conceived in the West, has come at a price. Descartes’ view of nature as an automaton carried a danger of exclusive concern with particular types of evidence, while discounting others. In recent years, it has become evident that we may have to cast our net wider again: while contemporary Western science has allowed us to develop life-saving medical interventions, its thought processes have also given rise to the climate emergency.⁵

Traditional Environmental Knowledge, embedded in Indigenous worldviews, is beginning to be recognised in the West as one potential pathway to approaching this challenge.⁶ In order to facilitate genuine knowledge transfer, Gregory Cajete calls for a holistic approach, whereby Indigenous science is accepted “as a tool and a body of knowledge that may be integrated with Western science in new and creative ways that sustain and

³ B.Wilshire, *Fashionable Nihilism: A Critique Of Analytic Philosophy* (Albany: State University of New York Press, 2002) p.66. It could be argued here, of course, that Wilshire’s point is not true of *all* Western science, not least because science was already being practised in the West before the arrival of Cartesian dualism. While this is clearly the case (a later chapter of this thesis, for example, makes reference to alchemy), the point made by Wilshire is that Western science in its contemporary form has become almost exclusively Cartesian. More detail on the choices that contributed to the shaping of the current Western scientific paradigm is provided in **chapter 5b**.

⁴ For example, P.Machamer, ‘Galileo Galilei’, in E.N.Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition), URL = <<https://plato.stanford.edu/archives/sum2017/entries/galileo/>> [Accessed: 20 March 2023].

⁵ G.Cajete, *Native Science: Natural Laws Of Interdependence* (Santa Fe: Clear Light Publishers, 2000), p.307.

⁶ F.Berkes, *Sacred Ecology*, 4th ed. (Abingdon: Routledge, 2018).

ensure survival.”⁷ Later sections of this thesis are going to explore in more detail whether integration is indeed likely to be the most appropriate form of knowledge transfer, and what alternatives to it may exist. For now, suffice it to say that some form of knowledge transfer is beginning to be seen as desirable by a widening circle of both Indigenous and non-Indigenous stakeholders.⁸

Attempts at knowledge transfer to date have met with varying degrees of success.

One of a number of ways in which this knowledge transfer has begun to be driven is through the above-mentioned attempts by a group of Indigenous and non-Indigenous academics to draw parallels between Indigenous knowledge and quantum theory. Initially based on a series of conferences between Indigenous academics and Western theoretical physicists supported by the Fetzer Institute⁹ and later by the SEED Institute¹⁰, a number of works have emerged on potential areas of overlap between Indigenous worldviews and the findings of Western quantum theory. The approach has been experienced as a successful one by those involved¹¹, and some insights gained through this process are going to be discussed below.

Indigenous thought is not the only worldview where an exchange with quantum physicists has been attempted: similar explorations have been conducted for Eastern thought,¹² and also in a Western context,¹³ each time asking the question of how a worldview accommodating a more-than-scientific dimension to life may dovetail with the thought processes and findings of contemporary Western science.

Not every attempt at knowledge transfer has been as fruitful as the Dialogues. Besides learning to approach previously unfamiliar points of view and allowing these to extend our present comfort zone, casting our net wider also requires us to learn to discern sources of wisdom from promises of snake oil. As outlined at the beginning of this section, previously unfamiliar sources of wisdom may be in danger of being appropriated, and misused in their new context, stripping them of their wisdom. One (in this case,

⁷ Cajete, *Native Science*, p.271.

⁸ Peat, *Blackfoot Physics*, p.312.

⁹ *Ibid.*, p.43.

¹⁰ Parry, *Original Thinking*, p.3.

¹¹ Peat, *Blackfoot Physics*, p.15.

¹² For example, F.Capra, *The Tao of Physics*, (London: Harper Collins, 1982).

¹³ For example, J.Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship* (London: SPCK, 2007).

Indigenous) example is the appropriation of the buchu plant cited by Christopher Low¹⁴, which will be discussed in detail below.

It is important to bear in mind that although the majority of such cases of appropriation involve non-Indigenous appropriation of Indigenous knowledge, the above example of Donald Trump's proposed misappropriation of household bleach demonstrates that the same dynamic can operate where there is insufficient understanding of Western science. Cases have been reported of this happening to quantum theory, too: a few of the existing attempts to relate quantum theory to any more-than-scientific dimension to life have raised objections of inaccuracy. For example, claims have been made, and justifiably rejected, that quantum entanglement "proves" the existence of telepathy, with no reference to the fact that entanglement cannot involve a signal because the signal would have to travel too fast.¹⁵ This point will be discussed in more detail below.

3.b. Prerequisites of successful knowledge transfer between paradigms: some general considerations

Having sketched some initial examples of successful and less successful knowledge transfer between contemporary Western science and paradigms conceiving science as having a wider remit in the previous section, the aim of this section is to discuss some of the factors that might be capable of making a difference.

Some of the challenges encountered in the endeavour are going to be specific to the natures of the two knowledge systems involved, and these specific challenges are going to be addressed as they arise throughout this thesis. Others, however, have been encountered before: the advent of feminism, for example, has necessitated the transformation of an existing mainstream before, and emerging thought on the subject of intersectionality provides further examples of nuanced approaches to questions of knowledge, identity, and belief.

As a starting point for discussion, I am going to draw on a handful of papers selected from a feminist and intersectional anthology edited by Uma Narayan and Sandra Harding,¹⁶

¹⁴ C.Low, 'Different Histories Of Buchu: Euro-American Appropriation Of San And Khoekhoe Knowledge Of Buchu Plants', in *Indigenous Knowledge*, ed. by S.Johnson (Cambridge: The White Horse Press, 2012), pp.247-274.

¹⁵ J.Polkinghorne, *Quantum Physics: A Very Short Introduction* (Oxford: Oxford University Press, 2002), p.92.

¹⁶ U.Narayan and S.Harding (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000).

addressing questions also relevant to an exploration of contemporary Western science and Indigenous thought.

Ofelia Schutte confronts an issue head-on that is going to be highly relevant to an example of appropriation to be considered in the latter half of this chapter: in a situation with a history of domination, a danger exists of long-standing conflict resulting in both sides “othering” each other.¹⁷ In our particular case of Indigenous philosophy meeting Western knowledge systems, this is likely to mean danger of the West “othering” Indigenous thought, and of anti-Imperialist voices “othering” the West.

If we then apply Schutte’s thinking specifically to the potential discovery of parallels between quantum theory and a knowledge system that makes reference to a more-than-scientific dimension to life, we may be faced with precisely the type of scenario that John Polkinghorne describes in his work: while Western academics frequently express surprise that Polkinghorne, given his distinguished career as a theoretical physicist, would even consider the existence of such a dimension,¹⁸ there are, on the other hand, those who engage in what Polkinghorne describes as “quantum hype”,¹⁹ demonstrating little knowledge of quantum theory’s scientific context while feeling free to appropriate what they believe to be its findings. The latter is as disrespectful of Western science as the former is of the realm that lies beyond its chosen remit.

When two knowledge systems meet, it is almost inevitable that there is going to be some tension between two competing expectations. On the one hand, there is the need to allow the unexpected to have its say, to be heard, and to be understood. We know from existing work on epistemic injustice, as well as from phenomenological thought (both touched upon in the introduction above, and to be revisited throughout the thesis), that approaching a previously unfamiliar knowledge system is going to require sensitivity and effort to overcome barriers that may otherwise result in its remaining unheard. It is going to require openness to having our comfort zone extended, too. Narayan and Harding, in their introduction, point out that exposure to the voices of “the ‘others’ of modernity’s

¹⁷ O.Schutte, ‘Cultural Alterity: Cross-Cultural Communication And Feminist Theory In North-South Contexts’ in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.47-66 (p.58).

¹⁸ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.x.

¹⁹ Polkinghorne, *Quantum Physics: A Very Short Introduction*, p.92.

ideal humans – such as women, and peoples of non-European races and cultures”²⁰ is not only going to add to the mainstream: it is going to transform the mainstream.²¹ The authors leave the reader in no doubt with regards to how far-reaching this transformation is going to be: “(...) we should expect transformations in the fundamental landscapes of Western metaphysics, epistemology, ethics, political philosophy, and even philosophies of science.”²² The latter is echoed by Harding in a subsequent paper where, citing Vandana Shiva’s work, she issues a stern warning with regards to nature’s limits, and stresses that it is particularly for this reason that philosophies of science “must remain permanently unfinished and continually regenerated.”²³ Ann Cudd points out that the value of this not only lies in the contributions made by minorities once this is achieved (which, on its own, would already be reason enough to attempt it), but also in the wider societal change effected by their inclusion.²⁴

At the same time, as Cudd also states,²⁵ it can be unhelpful simply to adopt unexamined everything that the new knowledge system appears to be telling us, and yet more unhelpful to generalise it as universal truth. What matters is that the new knowledge system is heard and understood, not that it is unthinkingly and universally adopted. Humans are fallible, and they may be in error; *we* may be in error. Even where no one is in error, there is a possibility that initial unfamiliarity, and Wittgenstein’s lion, may cause us to be slow to understand each other. Once we have – *if* we have – there is still the question of where to apply the new knowledge, and where not to. Universality is not a universal concept. Brian Burkhart, for example, devotes an entire book to the fact that it

²⁰ U.Narayan and S.Harding, ‘Introduction’, in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.vii-xvi (p.vii).

²¹ Ibid.

²² Ibid., p.ix.

²³ S.Harding, ‘Gender, Development, And Post-Enlightenment Philosophies Of Science’, in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.240-261 (p.256). Harding’s commitment to this statement is evident from the fact that the inaugural *APA Newsletter on American Indians in Philosophy* mentions Harding’s role in securing funding for Indigenous philosophers’ travel to present papers at APA conferences. (A.Waters, ‘Comments From Chair Of The APA Committee On American Indians In Philosophy’, *APA Newsletter On American Indians In Philosophy*, Vol.01, No.1 (Fall 2001), pp.2-3 (p.2), URL: <<https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/v01n1AmericanIndians.pdf>> [Accessed: 20 March 2023].

²⁴ A.E.Cudd, ‘Multiculturalism As A Cognitive Virtue Of Scientific Practice’ in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.299-317 (p.315).

²⁵ Ibid., p.309.

is not;²⁶ Lorraine Code's thoughts chime with his, in a sensitive exploration of locality without subscription to relativistic "anything goes".²⁷

Exploring this idea further, and referencing the work of several members of the PRATEC project in the Andes, Drucilla Barker states the importance of the *episteme* remaining subordinate to a cosmology,²⁸ as opposed to presuming to replace one, in order for peaceful coexistence of Western science and other knowledge systems to lead to genuine knowledge transfer. In this context, she stresses the need to "valorise local knowledge systems without romanticising them."²⁹ Lynda Lange, in the same vein, references Enrique Dussel when pointing out that it is not the existence of a European concept of philosophical and scientific "rationality" in itself that is problematic, but rather the perception that this is superior, let alone to the point of allowing it to justify colonial violence.³⁰

3.c. Appropriation as a specific manifestation of unsuccessful knowledge transfer: the buchu example as a double dose of disrespect³¹

It was stated above that within this complex system of epistemic navigation between paradigms, the most obvious pitfall of knowledge transfer between Indigenous and

²⁶ B.Burkhart, *Indigenizing Philosophy Through The Land* (East Lansing: Michigan State University Press, 2019). The term **universalism** is used in this thesis as it is used by Burkhart and by Enrique Dussel below, i.e. to refer to the normalisation and subsequent treatment as universals even of those ideas and phenomena that are in fact, on closer examination, better understood as particular and/or as localised.

²⁷ L.Code, 'How To Think Globally: Stretching The Limits Of Imagination', in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.67-79.

²⁸ D.K.Barker, 'Dualisms, Discourse, And Development', in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.177-188 (p.185). Barker places her remarks into the context of her review of a body of existing literature on issues of feminism and development. Barker's point made here chimes with Burkhart's (and Dussel's) on universalism above: she does not perceive the existence of a predominantly Cartesian way of thinking *per se* to be problematic, but its tendency to understand itself to be superior to others.

²⁹ *Ibid.*, p.186.

³⁰ L.Lange, 'Burnt Offerings To Rationality: A Feminist Reading Of The Construction Of Indigenous Peoples In Enrique Dussel's Theory Of Modernity', in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.226-239.

³¹ This section makes reference to different conceptions of ill-health and well-being. As pointed out (for example) in **section 3.a.** above, this thesis values the contribution made by contemporary Western science to this field: it is not its intention to suggest that allopathic forms of medicine are less valuable than other forms. Rather, it suggests that allopathic forms of medicine need not be all that there is. The section's context is an exploration of factors influencing the success or otherwise of attempts to share knowledge between paradigms. Its intention is not to abandon one paradigm in favour of another.

Western thought is that of cultural appropriation.³² The dynamics involved can be seen to carry echoes of all the above-mentioned papers' thoughts, and this makes them relevant to the points about to be made in relation to prerequisites for successful knowledge transfer between paradigms in the next section. It is for this reason that I am going to discuss one particularly pertinent example of cultural appropriation here.

The example illustrates appropriation, as well as several of the other challenges discussed, with particular clarity. Sarah Johnson's anthology *Indigenous Knowledge*³³ explores issues of knowledge transfer from a variety of angles, and in this work, Christopher Low gives an account of the appropriation of buchu plants.³⁴ In this section, I am going to focus on the issues of appropriation involved. Low's more detailed explanations regarding the plant's role in its original context are discussed in **Appendix A**.

The buchu plant was originally used in an Indigenous context, where plant use for medical purposes tends to be understood differently from the Western, largely biochemical model.³⁵ Illness tends to be understood as an imbalance between the individual and their context.³⁶ This imbalance may then manifest in a diversity of symptoms, such as, for example, a stomach complaint or a rash.³⁷ Plant use – or indeed any other form of medical intervention – aims to address the imbalance, not the symptom. The imbalance is diagnosed by taking the patient's entire context into account, and a personalised treatment plan is drawn up accordingly.³⁸ This means that the same stomach complaint,

³² It may be useful to reiterate here that besides the ethical concern of appropriation being an unfair practice, and unacceptable for this reason alone, the knowledge appropriated may also become unintelligible, and even counterproductive, if it is removed from its context. Examples of appropriation of Indigenous knowledge are rife, and well-documented (for example, L.A. Whitt, 'Biocolonialism And The Commodification Of Knowledge', in *American Indian Thought: Philosophical Essays*, ed. by A. Waters (Oxford: Blackwell Publishing Ltd., 2004), pp.188-213). As Linda Martín Alcoff points out (L.M. Alcoff, 'What Should White People Do?' in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U. Narayan and S. Harding (Bloomington: Indiana University Press, 2000), pp.262-282 (p.277)): appropriation is a complex issue. While it may not be necessary for all white people to refrain from singing the Blues, it *is* necessary to refrain from dismissing its blackness as irrelevant. Context matters.

³³ S. Johnson (ed.), *Indigenous Knowledge* (Cambridge: The White Horse Press, 2012).

³⁴ C. Low, 'Different Histories Of Buchu: Euro-American Appropriation Of San And Khoekhoe Knowledge Of Buchu Plants', in *Indigenous Knowledge*, ed. by S. Johnson (Cambridge: The White Horse Press, 2012), pp.247-274. Low's case study relates to a plant remedy from sub-Saharan Africa.

³⁵ The Indigenous conceptions of ill health which are about to be discussed are likely to sound unusual to our Western ears. A useful stepping stone may be found in Havi Carel's work, making a case for a phenomenological toolkit to aid discussion of illness as it is experienced: H. Carel, and I.J. Kidd, 'Epistemic Injustice In Healthcare: A Philosophical Analysis', *Medicine, Healthcare And Philosophy* (2014:17), pp.529-540. DOI: 10.1007/s11019-014-9560-2 [Accessed: 20 March 2023].

³⁶ Cajete, *Native Science*, p.117.

³⁷ *Ibid.*, p.120.

³⁸ *Ibid.*, p.121.

for example, may require different interventions depending on the type of imbalance involved, just as different complaints involving similar imbalances may require similar interventions. It is thus misleading to think of the buchu plant solely as a combination of chemicals capable of alleviating a particular type of symptom in everyone who ingests it, in the way that we in the West would, for example, think of Paracetamol.

Predictably, once marketed in a Western context (and under the Western assumption that the same plant was going to help everyone with the same symptoms), buchu was found no longer to work as expected.³⁹ No one had ever claimed its efficacy in an allopathic context: those now thinking they could market it there might as well have marvelled at some honey bees' waggle dance communicating the location of a food source,⁴⁰ and then expected the bees to repeat the dance indoors at a circus every night.

Up to this point, Low's case study can be understood as another greedy example of the West appropriating Indigenous knowledge and goods, taking them out of context, losing the wisdom contained, and making off with a tidy profit nonetheless.

In addition, a dimension of *Western* knowledge being taken out of context, and of its wisdom being lost, then emerges between the lines. The buchu case study contains a double dose of disrespect, in the sense that Western healthcare marketing practices have been extracted from their accustomed context of scientifically founded, mass clinical trials to assess suitability for mass use. Without validation within this scientific context, mass marketing clearly makes only financial, but hardly medical sense. Western science has been disrespected in the same way here as it has been disrespected in Polkinghorne's above example of "quantum hype".

The parallels between the buchu example and Polkinghorne's thinking are going to be highly relevant to any discussion of quantum theory, or indeed of any other aspect of Western science, in relation to its application to any more-than-scientific dimension to life. David Abram, for example, for all his participation in, and sensitive account of, the border country between the Western paradigm and shamanic practice, is highly critical of certain aspects of "new-age" thinking.⁴¹ In our quest to distil wisdom rather than snake oil, it is going to be of equal importance to leave intact the contexts of *both* knowledge

³⁹ Low, p.248.

⁴⁰ F. de Waal, *Are We Smart Enough To Know How Smart Animals Are?* (London: Granta Publications, 2017), p.11.

⁴¹ D.Abram, *Becoming Animal: An Earthly Cosmology* (New York: Vintage Books, 2011), p.302.

systems involved in any knowledge transfer. It is my hope that this work is going to open up a space for Western science and Indigenous worldviews to meet in an atmosphere of genuine enquiry and of mutual respect.

3.d. Some first, generalised elements of a potential breeding ground for successful knowledge transfer

Besides the – by now, obvious – need to consider the work of the relevant experts on both knowledge systems involved in any knowledge transfer – in our particular case, those who are knowledgeable in the field of Indigenous philosophy and those who are knowledgeable in the field of theoretical physics – it is Sandra Harding who states the third ingredient necessary to make an encounter with a previously unfamiliar knowledge system a successful endeavour: the ingredient of respectful dialogue.⁴²

Applied to Polkinghorne’s example of “quantum hype” inspiring attempts to “prove” telepathy with quantum entanglement, Sandra Harding’s requirement of respectful dialogue implies that entanglement must be discussed as it actually is, and this includes the crucial point of its very nature involving the distance allegedly travelled being too great for any signal to have covered it in the time available. If this fact is not discussed, then we are dealing not with wisdom, but with what Polkinghorne refers to as “quantum hype”.

Once this information has been acknowledged, however, new possibilities open up: while realistic consideration of entanglement makes it highly unlikely that telepathy (if it exists – and, at the moment, we cannot conclusively say either way) is realised by quantum entanglement, it is, on the other hand, conceivable that quantum entanglement may be consistent with there being a collective element to consciousness. This idea is going to be further explored in **chapter 6**.

Knowledge about entanglement has been available for a mere matter of decades. Who is to say, at this early stage, whether or not this is in any way linked to reports of twins experiencing a connection currently beyond scientific explanation, regularly cited in the media?⁴³ – Who is to say, at this early stage, whether or not it is in any way linked to experiences of participants becoming attuned to each other during a well-run dialogue

⁴² Harding, ‘Gender, Development, And Post-Enlightenment Philosophies Of Science’, p.257.

⁴³ For example, ‘Radio 4 In Four: Identical Twins’, *Shared Experience*, BBC Radio 4, 29 November 2016, URL: <<https://www.bbc.co.uk/sounds/play/p04jcpm9>> [Accessed: 20 March 2023].

session?⁴⁴ – Who is to say, at this early stage, whether it is relevant to the discussion of whether anything transforms during a Eucharist in a Catholic church? – Who is to say, at this early stage, whether it is relevant to the discussion of whether performance of a vision in an Indigenous context is entirely symbolic or capable of affecting the course of reality?⁴⁵ –Polkinghorne is wary of approaches that jump to conclusions, but his reasoning demonstrates that, even from a contemporary Western point of view, and definitely for Polkinghorne himself, it is possible to class as legitimate any attempt to find out, as long as it takes all the evidence into account.⁴⁶

Convincing attempts to link quantum theory with a “more-than-scientific” dimension to life are characterised by the involvement of people with a background in science, as well as in the “more-than-scientific” realm to which the link is being proposed. John Polkinghorne, for example, spent most of his career in theoretical physics before becoming an Anglican priest⁴⁷; Fritjof Capra’s interest in parallels between quantum theory and Eastern thought is underpinned by a similar career history.⁴⁸ David Bohm and David Peat, too, were working in their capacity as theoretical physicists when the Dialogues with Indigenous academics were conceived.⁴⁹ Facilitation of the Dialogues was carefully designed to ensure all voices could be heard. The process involved elements of Western facilitation techniques (such as presentations)⁵⁰ alongside elements of, for example, Indigenous talking circles.⁵¹

In order to attain credibility, any attempt to gain understanding by drawing parallels between quantum theory and a “more-than-scientific” dimension to life must be anchored in the contexts of both and, where representatives of both knowledge systems are involved, Harding’s requirement of respectful dialogue must be met. Wherever this has been achieved, I am going to be inclined to look at its conclusions with great interest.

In addition, and on a lighter note, I would argue that both dog whistle frequencies and

⁴⁴ Parry, *Original Thinking*, pp.150-4.

⁴⁵ For example, B.Burkhart, ‘Red Wisdom: Highlighting Recent Writing In Native American Philosophy’, *Confluence: Journal Of World Philosophies*, Vol.1, 2014, <URL: <https://scholarworks.iu.edu/iupjournals/index.php/confluence/article/view/527/33>> [Accessed: 20 March 2023]. Questions of symbolism are going to be revisited below.

⁴⁶ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.90.

⁴⁷ *Ibid.*, pp.x-xiii.

⁴⁸ Capra, pp.11-12.

⁴⁹ Peat, *Blackfoot Physics*, pp.14-15.

⁵⁰ *Ibid.*, p.15.

⁵¹ *Ibid.*

love are relevant to this discussion of a “more-than-scientific” dimension to life.

The case of dog whistle frequencies is an example of science succeeding in catching up with life: dog-whistle frequencies existed, and dogs were able to hear them, without science giving them “permission” first – until, in due course, science managed to catch up and explain the phenomenon.

Love, on the other hand, has not been explained by science to date. Winnie the Pooh, Raimond Gaita,⁵² and Mary Midgley⁵³ are but three examples of Westerners acknowledging the existence of a realm that may well not only be beyond the reach of Western science for the foreseeable future,⁵⁴ but remain so for reasons that are not going to go away.

It will not surprise us that Indigenous philosophers think the same. The surprises in store are those that will come when we progressively learn to see Indigenous philosophers in their difference, and to allow them to extend our comfort zone.

⁵² Gaita,R., *The Philosopher's Dog* (Abingdon: Routledge Classics, 2017), p.85.

⁵³ M.Midgley, *Heart And Mind* (London: Routledge Classics, 2003), p.107.

⁵⁴ The fact of disciplines of contemporary Western science usually focusing on other matters is undoubtedly one reason for this (as discussed, for example, in **chapter 5.d**). However, even when science does make an attempt to explain love (for example, the attempt made by the discipline of chemistry when it identified oxytocin as being involved, as discussed in **Part 2**), its findings can only be regarded as partial explanations, as opposed to their being capable of being viewed as a formula to which love can now be reduced.

Chapter 4 – Introductory glimpses beyond a clockwork universe

4.a. Two rationales for responsibility: Viola Cordova and Karen Barad

Linda Hogan’s foreword to Viola Cordova’s *How It Is* succinctly introduces a central point of Cordova’s thinking: “We are co-creators of the universe. This is what makes us human.”¹

Besides participation (illustrated, for example, in her narrative of an Indigenous and a non-Indigenous infant’s respective first outings)², this, for Cordova, above all implies responsibility. The nature and implications of this responsibility are going to be explored in this section, and examined in greater depth throughout the rest of the thesis.

Cordova’s Navajo worldview was conveyed to her by her father³, and it was to her father that she turned to confess that she had given in to the temptation of committing a driving offence. It was not a matter of asking her father to attempt to mitigate the anticipated consequences. It was a matter of handing over the car keys, without being asked to do so, because she felt that her irresponsible behaviour meant that she did not deserve to drive.⁴

This could have been an idiosyncrasy. However – and without the incident ever having been discussed – Cordova’s daughter, years later, turned to Cordova with exactly the same concern.⁵ Cordova tells the story to exemplify Indigenous worldviews being passed from one generation to the next even where the respective Indigenous language is not spoken in the home, but it is at least as pertinent to the Indigenous conception of responsibility.

Cordova is clear that this responsibility applies to the earth as a whole as much as it does to individual fellow drivers: “Without a reevaluation of (...) the human dependence on the environment, there can be no “new” environmental ethic.”⁶ Human dependence on the environment is conceived as a relationship with the earth as mother, which is a positive

¹ L.Hogan, ‘Foreword: Viola Cordova’, in V.F.Cordova, *How It Is* (Tucson: The University of Arizona Press, 2007), pp.vii-xi (p.xi).

² Cordova, *How It Is*, p.82. Cordova’s account of the two outings showcases the marked difference in parental expectations regarding their infants’ interaction with non-human nature.

³ Cordova, *How It Is*, p.31.

⁴ *Ibid.*, p.28.

⁵ *Ibid.*.

⁶ *Ibid.*, p.210.

relationship characterised by reciprocity.⁷ It does not involve any conception of humans as being in a superior position, and it is based on participation rather than stewardship.⁸ Cordova's comments in *How It Is* continue the ideas put forward in her PhD thesis, where she already stresses the importance of balance and responsibility.⁹ Her balancing board analogy¹⁰ (in which she likens our responsible participation in the world to an ongoing attempt to maintain our balance on a board placed across a barrel, which is in turn placed on shifting sand), is emphatically *not* a call to opportunist exploitation of our understanding of a situation: it is a call to act responsibly towards the sacred, which is contained in the mundane, as we engage in co-creating it.¹¹

In the same vein, Thomas Norton-Smith, developing Vine Deloria's thinking,¹² defines truth as "respectful success".¹³ Burkhart, relatedly, while also crediting Deloria, conceives sovereignty in terms of responsibility rather than power,¹⁴ and stresses the importance of finding one's path in relationship.¹⁵ For Burkhart, it is, above all, disrespect that is to be avoided in our interaction with the world.¹⁶ For Deloria himself, it is as important to live with honour as with freedom.¹⁷ If these concepts are only briefly touched upon in this section, this is not because they do not require further discussion: they do, and some of this discussion takes place in **chapter 6** and in **Part 2** of this thesis, once some additional ground has been prepared by a discussion of some specific areas of difficulty in sharing knowledge between the paradigms concerned. For now, it appears useful to consider a related point made by Gregory Cajete: in the Native American, participationalist paradigm, our role as humans is to practise a heightened awareness, of

⁷ Ibid., pp.113-116.

⁸ Ibid., p.212.

⁹ V.F.Cordova, *The Concept Of Monism In Navajo Thought*. (Unpublished PhD thesis, University of New Mexico, 1992), <URL: https://digitalrepository.unm.edu/phil_etds/29> [Accessed: 20 March 2023], p.98.

¹⁰ Ibid., p.99.

¹¹ Cordova, *How It Is*, pp.230-232.

¹² Vine Deloria's thinking is going to be discussed in depth in **Part 2**, particularly in **Chapter 10**.

¹³ T.Norton-Smith, *The Dance Of Person And Place: One Interpretation Of American Indian Philosophy*, (Albany: State University of New York Press, 2010), pp.63-64. The conception of truth as respectful success (rather than as accurate representation of an already existing state of affairs) is going to be a recurring theme throughout this thesis, which is going to become easier for our Western sensibilities to approach in the context of an in-depth discussion of performative knowledge processes in **Part 2**.

¹⁴ Burkhart, *Indigenizing Philosophy Through The Land*, pp.85-87.

¹⁵ Ibid., p.287.

¹⁶ Ibid., pp.286-287.

¹⁷ V.Deloria and D.Wildcat, *Power And Place: Indian Education In America* (Golden: Fulcrum Publishing, 2001), p.150.

which the five senses commonly accepted in the West are only one part, in order to learn from the land that we find ourselves on, and from our fellow inhabitants of this land, as Gregory Cajete points out.¹⁸ If this initially sounds unfamiliar to our Western ears, it may be useful to remind ourselves that Mary Midgley makes a similar comment regarding culture emerging from nature.¹⁹ The difference is that for Cajete and his peers, engagement with nature and ritual are inseparable from each other.²⁰

Frédérique Apffel-Marglin, informed initially by her extensive collaboration with the PRATEC project in the Andes, and by a lifetime of living and working on Indigenous regeneration projects since,²¹ makes clear from the beginning that in an Indigenous setting, ritual is not to be understood as metaphoric, but as participation of non-humans in the interaction that is taking place.²² If this initially sounds unfamiliar to our Western ears, it may be helpful to consider that Apffel-Marglin is not arguing from within the representationalist vantage point of contemporary Western science, but from a participationalist one that is, to an extent, also implied by Western phenomenology. This point is going to be explored in more detail below. For the purposes of the present argument, the following, brief sketch may be helpful.

David Abram, who describes his work as having been inspired by Maurice Merleau-Ponty,²³ argues that the Western distinction between literal and metaphoric is unlikely to be able to do justice to our involvement in the world, as it requires a representationalist vantage point as its prerequisite: in a participationalist universe, it may be more realistic to speak of some phenomena as being metamorphic instead.²⁴ Bruce Wilshire then shows that premature categorisations may lead to our questions containing category mistakes: citing Edmund Husserl on the difference between “thats” and “whats”,²⁵ Wilshire points

¹⁸ Cajete, *Native Science*, p.27. It might be tempting to assume at this point that Cajete’s thinking here solely relates to empirical forms of knowledge acquisition. However, it is going to become increasingly apparent in later chapters of this thesis – particularly in **Part 2** – that this is only one aspect of what is meant. Indigenous conceptions of performative knowledge processes, and Brian Burkhardt’s suggestion of their being able to be approached through Martin Buber’s work in relation to *I-thou* relationships, are going to be introduced in **chapter 6** and discussed in depth in **Part 2**.

¹⁹ M. Midgley, *Beast And Man* (Abingdon: Routledge Classics, 2002), p.285.

²⁰ Cajete, *Native Science*, p.81.

²¹ F. Apffel-Marglin, *Subversive Spiritualities: How Rituals Enact The World* (Oxford: Oxford University Press, 2011), pp.198-203.

²² Apffel-Marglin, *Subversive Spiritualities*, p.11.

²³ Abram, p.314.

²⁴ *Ibid.*, pp.295-296.

²⁵ Wilshire, *The Primal Roots Of American Philosophy*, p.56. Wilshire makes the point that as we participate in the world, we interact with situations in their entirety before we are able to categorise their components. He also points out that this process of categorisation may remain incomplete.

out that in a great proportion of cases of our asking the “sledgehammer question” of whether “it” really happened, we are in no position to articulate what “it” even is.²⁶ The map of Western science was created to reduce the complexity of the actual territory of our experience to a level that we humans are able to discuss: it is counterproductive to forget this, and to treat the map as if it were the whole of reality.²⁷

Apffel-Marglin makes extensive reference to the work of Karen Barad in order to place the performativity of rituals as an alternative to Western representationalism into a context that is accessible to our Western minds.²⁸ Apffel-Marglin’s starting point is the end of a chapter in which she has demonstrated the role of Western mathematics in our creation of the academic discipline of economics and, through this new discipline’s eventual independence, in our severance of the link between human action and perceived responsibility.²⁹ It is against this background that she stresses our participation in creating the world that we live in, and the importance of accepting our responsibility which is so central to Cordova’s thinking above.

For Barad, Western feminist philosopher and quantum physicist, there appears to be no automatic link between Western science and the exclusion of an understanding of ritual as performative, nor any automatic exclusion of other-than-humans potentially emerging as part of reality: “We are of the universe – there is no inside, no outside. There is only intra-acting from within and as part of the world in its becoming.”³⁰

The thrust of Barad’s argument – which will be explored in more detail in the section on quantum theory and Indigenous thought below – is that our participation in the world implies that the observations we report cannot solely be understood to be the witness statements of spectators looking on: we are participants in the world, and this implies our involvement in producing the realities we measure, rather than our measurements

²⁶ Ibid., p.83.

²⁷ Cordova, *How It Is*, p.108.

²⁸ Apffel-Marglin, *Subversive Spiritualities*, p.15. Besides being relevant to the points made in this section, Karen Barad’s work is of overarching significance to the topics explored both in **Part 1** and in **Part 2** of this thesis. A comprehensive discussion of two examples of Barad’s work, and of their relationship with the relevant aspects of Indigenous worldviews as discussed in both parts of this thesis, has therefore been provided in **Appendix B**.

²⁹ Ibid., pp.53-54.

³⁰ Ibid., p.55.

merely representing pre-existing realities.³¹ As Wilshire already points out, the conventional model of our observations being witness statements reporting pre-existing realities may well apply to scenarios of limited complexity, but this by no means implies that it applies everywhere.³²

What Karen Barad proposes instead is a theory of agential realism as a “non-representationalist and non-anthropocentric paradigm.”³³ Here, matter and human discursive practice are intertwined – and this means that a purely representationalist model cannot be applied.

Apffel-Marglin makes reference to Barad’s work on Niels Bohr’s complementarity principle of wave and particle manifestations being equally essential to a wave/particle’s nature, but never concurrently manifest, and co-created by the circumstances of their measurements.³⁴ It is going to become clear in later sections that this chimes with the more detailed exploration of some parallels between Indigenous thought and quantum theory.

For the present discussion, a Western illustration from outside quantum physics may be taken from the world of sport: Rebecca Romero won Silver in the quadruple sculls at the 2004 Olympics in Athens. At the 2008 Olympics in Beijing, she won Gold in the Individual Pursuit. In the years leading up to 2004, Romero had lived and breathed rowing, transforming her physical, intellectual, emotional and social makeup from that of an adolescent into that of a world-class rower. From 2005 to 2008, Romero changed course and devoted herself exclusively to cycling, transforming all aspects of her being from those of a world-class rower into those of a world-class cyclist. It would have been impossible for her to be both at the same time, even though we now know that she was carrying the potential to become either. It was through her respective acts of

³¹ Ibid., p.56. The fact of Barad’s argument being grounded in her work as a quantum physicist entails that she is not exclusively referring to the influence of our mind-bodies on our perception of the world as it currently is, but that (in addition to this) she is also referring to our participation in shaping the world in its continued becoming. This is going to be a recurrent theme in this section and in those that follow. It is then going to be revisited in the chapters discussing performative knowledge processes in **Part 2**. Due to the overarching significance of Barad’s thought with regards to the points made by the thesis in its entirety, the relevance of Barad’s thinking – as well as a rationale for its being more realistically understood as a stepping stone to increased understanding of Indigenous worldviews, as opposed to its being an exhaustive explanation of these – is summarised in **Appendix B**.

³² Wilshire, *The Primal Roots Of American Philosophy*, p.84.

³³ Apffel-Marglin, *Subversive Spiritualities*, p.55.

³⁴ Ibid., p.57.

participation in the world that she first became one, and then the other.³⁵ Any claim that Romero represented any form of pre-existing reality of being a rower (and not a cyclist), or of being a cyclist (and not a rower), based on what she allowed herself to be observed as at a given time, would miss the point.

In the same vein, Barad refers to “intra-actions” to convey the absence of a pre-existing cut between object and agencies of observation. The cut is referred to as an “agential cut”, and the principle of it being possible to make one as “agential separability”.³⁶

With regards to Cordova’s responsibility, it is important to state here that far from abandoning objectivity, Barad has recast it as a participatory one. Bohr’s waves, manifesting as marks on a photographic plate, do leave a permanent trace, as real as Rebecca Romero’s two medals. Linking Bohr’s work to Foucault’s, Barad reminds us that while discourse may not be capable of determining reality, it is certainly capable of constraining it.³⁷ If Rebecca Romero had not engaged in her respective years of training for her two different Olympic events, or if British Rowing and British Cycling respectively had not given her the opportunity to do so, her respective successes at Athens and at Beijing would not have been able to materialise, any more than a wave would manifest as a mark on Bohr’s photographic plate without Bohr setting up his apparatus for it. In other words, our participation with the world has consequences.

Apffel-Marglin suggests that the situation is similar in the case of ritual: “The reality that emerges is at once material and discursive. I would propose that the other-than-humans (...) emerge as the result of particular agential cuts enacted in rituals.”³⁸

Apffel-Marglin then proceeds to go further in drawing parallels between Karen Barad’s work on quantum theory and the extent and manner in which different rituals may create different manifestations of reality. To what extent this conception, in its exact current form, will stand the test of time is unclear at this point: quantum theory is only a matter of decades old, with many open questions, and this means that new findings may emerge to reveal more on the exact workings, or otherwise, of this claim: as Merleau-Ponty

³⁵ R.Romero, *Rebecca Romero MBE*, <URL: <https://www.rebeccaromero.co.uk/about>> [Accessed: 20 March 2023]. An in-depth discussion of the links made by Karen Barad between the dynamics of processes at quantum level and macroscopic phenomena, as well as of Barad’s thinking in relation to agential realism and in relation to the accountability entailed by our participation as exemplified in an introductory case study here, is available in **Appendix B**.

³⁶ Apffel-Marglin, *Subversive Spiritualities*, p.57.

³⁷ *Ibid.*, p.58.

³⁸ *Ibid.*, p.62.

points out, “A theory, as solid as its experimental support, cannot annihilate the possibility of new theories.”³⁹ However, longevity of ApffelMarglin’s and Barad’s thought in its exact current state is not what is at stake here. What is at stake here are the following concepts: firstly, that quantum theory has opened the door for Western science itself to cast doubt on the exclusive validity of its traditional, representationalist paradigm – and secondly, that the way we interact with the world is capable of influencing how the potentialities contained in it manifest. If Apffel-Marglin’s inclusion of our communication with spirits as part of these potentialities initially sounds unfamiliar to our Western ears, it may be helpful to remind ourselves that many of us also habitually think of human communication with animals not being included in any viable conception of these, while others are beginning to be prepared to make a case for this omission being a socially acquired incompetence on our part, as opposed to a genuine impossibility.⁴⁰

Apffel-Marglin concludes that Barad’s comments allow us “to realise that the land cannot be land without our actions, just as we cannot be human without the land’s action.”⁴¹ As a corollary, she calls upon us to shift our motivation for our actions from self-interest to “an enactment of generosity that itself flows from the source of generosity in the spirit realm.”⁴² In other words, by means of an argument made from Barad’s vantage point of Western science, but otherwise sharing in the same conception of our participation in the world as Cordova, she calls upon us to shoulder our share of responsibility in the world.⁴³

And quietly, perhaps almost under our radar due to the magnitude of responsibility being proposed by both authors, something highly unusual in Western academic settings has slipped into the discussion: Karen Barad is a Western physicist, and she is making an argument from Western physics which supports the possibility of there being spirits. All that glitters beyond the edges of the Newtonian paradigm is not necessarily “quantum hype”.

³⁹ Merleau-Ponty, p.95.

⁴⁰ W.Kymlicka and S.Donaldson, ‘Animals And The Frontiers Of Citizenship’, *Oxford Journal Of Legal Studies*, Vol.34, No.2 (2014), pp.201-219, DOI: 10.1093/ojls/gqu001 [Accessed: 20 March 2023].

⁴¹ Apffel-Marglin, *Subversive Spiritualities*, p.63.

⁴² Ibid.

⁴³ **Appendix B**, which summarises the overarching importance of Barad’s thinking to the points made in both parts of this thesis, may also serve as a resource here to illustrate that Indigenous conceptions of responsibility tend to prioritise attunement over control: our accountability for our actions, above all, demands our respectful, responsive interaction with others (for example, Burkhart, *Indigenizing Philosophy Through The Land*, p.287: the point is going to be discussed in detail in the section on ethics below). A rationale for this, although it may be derived from Barad’s thinking, too, is not as comprehensively dealt with by Barad as it is by the Indigenous authors cited.

4.b. Quantum theory: some basic concepts

The previous section makes reference to ritual. In a Western academic setting, this can be unusual, at least outside the discipline of anthropology.⁴⁴ However, the question is not simply whether it is acceptable for a Western thesis in the discipline of Philosophy to contemplate the plausibility of Indigenous conceptions of ritual. The question is wider than this: it is whether it can be acceptable to Western science to engage with “the More” – and, in cases where it is not, whether it is conceivable that Western science may need to widen its remit to accept types of evidence that it has traditionally been reluctant to. As Frédérique Apffel-Marglin states, it is no stranger to be open to the viability of Indigenous ritual than it is to be open to the teachings of the Catholic church.⁴⁵

Being Western myself, I am initially going to attempt to answer this question – the question of how a more-than-scientific dimension to life may dovetail with the thought processes and findings of quantum theory – from a Western point of view.⁴⁶ It is the point of view of a Western theoretical physicist and Anglican cleric: in this section and the next, I am going to draw on the late John Polkinghorne’s work at Cambridge University.

Quantum theory comes with a health warning from the very highest level: Richard Feynman, one of its originators, warns of its being impossible to understand.⁴⁷ On the one hand, its mathematical equations operate with an astounding level of precision, and experimental verification of its findings has been impeccable.⁴⁸ On the other hand, it appears to defy the very same Western scientific logic that it was conceived with.⁴⁹

This exploration of some basic concepts is based on John Polkinghorne’s *Quantum Theory: A Very Short Introduction*.⁵⁰

The classical Western conception of physics, based on Newton’s equations, included the belief that through its application, humans were able “to predict the future, and to retrodict with equal certainty the past of the whole universe.”⁵¹ If this was hubris, it was

⁴⁴ Apffel-Marglin, *Subversive Spiritualities*, p.68.

⁴⁵ *Ibid.*, p.33.

⁴⁶ In fact, from a contemporary Western point of view, the above wording (“more-than-scientific”) might be questioned by some: a more rigid separation of disciplines might be suggested, rather than the call for a widening of contemporary Western conceptions of science and of rationality which is going to be made throughout this thesis, and which is implied in this choice of terminology.

⁴⁷ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.18.

⁴⁸ *Ibid.*, pp.48-51.

⁴⁹ *Ibid.*, p.18.

⁵⁰ J.Polkinghorne, *Quantum Theory: A Very Short Introduction* (Oxford: Oxford University Press, 2002).

⁵¹ *Ibid.*, p.1.

at least understandable hubris: as the example of Galileo Galilei shows, attempts to understand the world through science could be perilous undertakings at a time when the Catholic Church was able to declare these misguided, and to persecute the perpetrators. Cartesian dualism offered Western scientific circles a framework within which they explore the material while avoiding discussion of anything that might be encountered beyond it.⁵²

However, it has since been found that Newton's physics did not succeed in telling the whole story.

In 1885, and with no explanation possible at a time when the "plum pudding model" of the atom was the only one available, a formula was discovered for the set of separated coloured lines that appear when light from incandescent helium is split through a prism.⁵³

It was Max Planck who first thought of radiation as quanta of energy, and who succeeded in linking their energy content to frequency with Planck's constant. This did not explain, however, why Einstein could eject electrons from within a metal by aiming a beam of light at it: light was now showing behaviour akin to a succession of billiard balls, and it was not clear how this new, particle-like characteristic could be reconciled with its wave nature.

The fact that Planck had replaced the continuous with the discrete was helpful in replacing the "plum-pudding model" of the atom with Ernest Rutherford's and Niels Bohr's theory of electrons orbiting the nucleus at defined distances, emitting energy when moving from higher-energy to lower-energy orbitals. The new model not only provided an explanation for the existence of stable atoms (which simply meant that all their electrons were in their lowest possible orbits), but also for the above spectral lines of helium, which were caused by the transition of electrons between orbits.

The "quantum revolution" of the 1920s, then, is mainly credited to Werner Heisenberg and Erwin Schroedinger. Mathematically, it revolves round a move away from the exclusive use of differentials, and towards increased use of matrices. This change opened the door for the discovery of Heisenberg's uncertainty principle: quantities can only be measured together if their operators commute. Matrices do not commute. Heisenberg

⁵² P.Machamer, 'Galileo Galilei', in E.N.Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2021 Edition), URL = <<https://plato.stanford.edu/archives/sum2021/entries/galileo/>> [Accessed: 20 March 2023]. A more detailed discussion of the role of Cartesian dualism in the development of scientific tendencies in contemporary Western science is available in **section 5b**.

⁵³ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.5.

found that it was impossible to know simultaneously where exactly a particle is, and what exactly its momentum is. Schroedinger, then, in an attempt to find out if the above particle-like properties of light waves meant that, vice versa, particles could also show wave-like properties, discovered Schroedinger's equation, which gave mathematical underpinning to the validity of the above considerations regarding orbits and spectra.

The double-slit experiment, eventually, provided experimental verification of wave/particle duality, and marked the beginning of quantum theory as conceived by Max Born and Paul Dirac. It not only showed that *a large number of* particles passing through a screen with two slits showed a diffraction pattern previously only attributed to waves, but also that *one single particle* must have gone through both slits (superposition principle). According to the logical principles prevailing in the West at the time, this was, of course, impossible: superpositions constituted "a middle term undreamed of by Aristotle."⁵⁴ – It was the seemingly impossible taking place that caused Richard Feynman to make his above statement regarding the inexplicable nature of quantum theory. Uncertainty was no longer limited to Heisenberg's uncertainty principle of our inability to *know* the exact location and momentum of a particle at exactly the same time – it was now also no longer possible to predict in a physical process what exactly would *happen* when an observation was made. The question did not relate to epistemology alone, but to epistemology and metaphysics simultaneously.

These findings showed that what would have been impossible according to Newton's conception of physics had now happened not only mathematically, but experimentally too: predictions of the results of measurements, in quantum theory, were now merely statistical, and no longer deterministic with regards to the individual case. In a further step beyond the tacit assumptions of the Newtonian era, when asked to explain wave/particle duality, Bohr insisted that that the wave and particle properties found were complementary, and without contradiction.⁵⁵

The mathematical and experimental blurring of the previously undisputed line between epistemology and metaphysics gave rise to extensive debate. Were there simply more input parameters to the experimental physics we were witnessing than our mathematical

⁵⁴ Ibid., p.37. The findings of quantum theory outlined in this section are going to be relevant to both parts of this thesis. A summary of this overarching relevance, based on Karen Barad's thinking (but also considering its limitations with regards to its relationship with Indigenous worldviews) is provided in **Appendix B**.

⁵⁵ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.36.

representations were aware of – so that once our ignorance of these was remedied, our accustomed clockwork of a deterministic physics could resume? Or did the new findings show that physics could now demonstrate that there was more to the world than clockwork? – It is for this reason that Polkinghorne begins his book with the statement that its unresolved issues will not only require physical insight, but also metaphysical decision.⁵⁶

Attempts to answer this question have been plentiful, and have largely revolved around two issues: decoherence (the fact that once the environment – for example, background radiation – is taken into account, effects such as cross terms⁵⁷ can be found to have been cancelled out, providing an argument in favour of the theory that classical physics, which is still found to apply to sufficiently large systems in any case, may in fact be a special case of quantum physics) and the measurement problem (the fact that different alternatives in superposition only become mutually exclusive once measurement takes place). The currently most widely accepted explanation is the Neo-Copenhagen interpretation, stating that large and complex measuring apparatus adds an (albeit not yet fully understood) property of irreversibility to the process.⁵⁸

Other interpretations – for example, David Bohm’s, drawing on conceptions of order that are going to be considered in a later section of this thesis⁵⁹ – have been accused of being deterministic by some. However, this is likely to be due to a misunderstanding, or potentially to Bohm’s causal interpretation developing over the years: the version of Bohm’s causal interpretation cited to criticise its alleged determinism dates from the 1950s,⁶⁰ whereas Bohm and Peat’s outline of the interpretation published shortly before Bohm’s death states clearly why it does *not* support determinism.⁶¹

Additional open questions include the relationship between quantum theory and fractals (which is likely to be subtle, as fractals, being self-similar, have no natural scale, whereas quantum systems do have one, set by Planck’s constant), as well as the relationship

⁵⁶ Ibid., p.ii.

⁵⁷ Ibid., pp.41-42: cross terms can be understood to be the difference that adding before squaring will make in an equation such as $(2 + 3)^2 = 2^2 + 3^2 + 12$. The question of cross terms arises in this context because the respective processes for calculating probabilities are different for classical probabilities and for quantum probabilities.

⁵⁸ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.49.

⁵⁹ D.Bohm and F.D.Peat, *Science, Order, And Creativity* (Abingdon: Routledge Classics, 2011).

⁶⁰ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.53.

⁶¹ Bohm and Peat, pp.80-95. An explanation of their rationale is provided in **section 6.b.**

between relativity and quantum theory, further exploration of quantum field theory, and questions of application such as potential exploitation of the superposition principle for vastly increased parallel processing capacity in quantum computing.

Another question, which began as a genuinely open question in the early days of quantum theory, has since been resolved: the disagreement between Bohr and Einstein regarding quantum entanglement.

Quantum entanglement means that due to Pauli's exclusion principle,⁶² under certain conditions, one particle's spin may be dependent on another particle's spin – across distances that would, according to classical physics, make this impossible: measurement of one will change the direction of the other, across distances too great for any signal to have been able to travel in the time available. The important point to note is that entanglement is about ontology, not epistemology: the second particle's spin *actually changes* at that moment; we *do not merely find out* at that moment.⁶³ Entanglement is an example of an acausal relationship.

Although one of the most relevant experiments in this context, almost ironically, bears Einstein's name (EPR, short for Einstein, Podolsky and Rosen), Einstein continued to maintain that the two particles must be entirely separate systems. The argument was settled when theoretical justification of Bohr's findings (put forward by John Bell) was validated experimentally by Alain Aspect in the 1980s.⁶⁴

4.c. Western parallels drawn between quantum theory and a “more-than-scientific” dimension to life: John Polkinghorne (Christianity)

The above considerations led John Polkinghorne to observe that “nature fights back against a relentless reductionism”.⁶⁵ A solid background in theoretical physics no longer implies automatic subscription to Newtonian determinism: for example, Niels Bohr is said to have been influenced by William James, and is thus likely to have been alert to the

⁶² Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.63. Pauli's exclusion principle states that two electrons cannot be similar with regards to all four of their quantum numbers. One of the four is an electron's spin, which means that if the remaining three are similar, then the two electrons' spin must be different.

⁶³ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.79.

⁶⁴ *Ibid.*, p.80.

⁶⁵ *Ibid.*, p.80. Polkinghorne (in this instance) concentrates on the fact that non-human nature has revealed itself to be more than the mere clockwork universe accommodated by Newtonian physics alone. Polkinghorne's statement cited (at least in this instance) does not yet place any particular focus on our own, human capacity – and need – to be more than clockwork. This is, however, going to be explored from both Indigenous and Western points of view in the chapters below.

possibility of “the More”⁶⁶ well before his above comments on wave/particle duality. Bruce Wilshire, years before the topic of scientism was explored in detail, for example, by Rik Peels,⁶⁷ insisted that “scientism cannot be supported by science itself”.⁶⁸ It is from our very respect for the integrity of scientific discovery that it becomes necessary to be open to empirical data as it presents itself, as opposed to limiting ourselves to any subset we may have defined from our need to construct a humanly comprehensible model of the world.⁶⁹

Openness to “the More” does not automatically imply subscription to organised religion, let alone affinity to any particular one. Vice versa, however, religion does imply openness to “the More” – and it thus comes as no great surprise that the surprising nature of quantum theory has been explored with interest by a variety of religious worldviews. In order to remain within the scope of this thesis, I am going to limit myself to a short review of some aspects of a Western, Christian point of view as a stepping stone in this section, before returning to Indigenous thinking in the next.

Detail on Polkinghorne’s thinking in this regard and, relatedly, on a helpful analogy put forward by Bethany Sollereder,⁷⁰ is provided in **Appendix C**. The thrust of Polkinghorne’s argument is as follows:

Arguing from within a Western, representationalist paradigm, and stopping short of inclusion of Cordova’s and Barad’s above participationalist one, Polkinghorne asserts that scientific discovery has verisimilitude, as opposed to omniscience as its outcome.⁷¹

Relatedly, he does not place the whole in binary opposition to the individual; rather, he

⁶⁶ Wilshire, *The Primal Roots Of American Philosophy*, p.133.

⁶⁷ R.Peels, ‘The Fundamental Argument Against Scientism’, in *Science Unlimited? The Challenges Of Scientism*, ed. by M.Boudry and M.Pigliucci (Chicago: Chicago University Press, 2017), pp.165-184.

⁶⁸ Wilshire, *Fashionable Nihilism: A Critique Of Analytic Philosophy*, p.104. Relatedly, Wilshire makes the point that “science cannot know that only science can know”. (Wilshire, *The Primal Roots Of American Philosophy*, p.166).

⁶⁹ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.74.

⁷⁰ B.N.Sollereder, *Animal Suffering In An Unfallen World: A Theodicy Of Non-Human Evolution* (Unpublished PhD thesis, University of Exeter, 2014), URL = <<https://core.ac.uk/download/pdf/43094125.pdf>> [Accessed: 20 March 2023].

⁷¹ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.84. Polkinghorne defines the term “verisimilitude” as “an accurate account of a wide but circumscribed range of phenomena” here. Especially in connection with Karen Barad’s thinking (which is going to be highly relevant again in the context of Indigenous conceptions of performative knowledge processes in **Part 2**), it is useful to stress the importance of the word “circumscribed” here. The overarching relevance of Karen Barad’s thinking to both parts of this thesis is discussed in **Appendix B**.

sees a mutually supportive relationship between the two.⁷²

Polkinghorne's endorsement of the existence of a realm beyond the reach of Western science is carefully distinguished from facile conceptions of "anything goes": his epistemology still requires "motivated belief arising from interpreted experience";⁷³ it is the range of experiences permitted to enter the equation that is wider here.

Polkinghorne's overall conclusion is decidedly opposed to scientism: "There can be times when one just has to hold on to the strangeness of experience by the skin of one's intellectual teeth, knowing that progress will not come from a facile abandonment of any part of that experience."⁷⁴

With clearly audible echoes of William James, he continues: "One can take with absolute seriousness all that physics actually *can* tell us, and still believe in a world of true becoming, in which the future is not just an inevitable consequence of the past."⁷⁵

4.d. Quantum theory, phenomenology, monism, and Indigenous thought: an introduction and Leroy Little Bear's starting point

When Polkinghorne speaks of verisimilitude (as opposed to all-encompassing understanding) above, this implies that we may expect not only non-human nature, but also other humans' thought to surprise us with new insight.

Indigenous scholars, when operating in a Western academic context, frequently draw on Western phenomenological thought to build bridges between Indigenous and Western worldviews.⁷⁶ It is the impossibility of a complete phenomenological reduction⁷⁷ that supports verisimilitude here, and suggests the importance of learning from each other as well as from non-human nature. In addition, once we are prepared to consider the matter from an other than purely Western, representationalist vantage point, Karen Barad's concept of agential realism introduced in **section 4.a.** is a reminder that verisimilitude, on its own, may be unable to do justice to the extent of our participation in the world.

⁷² Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.90, and Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.103.

⁷³ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.9.

⁷⁴ *Ibid.*, p.90.

⁷⁵ *Ibid.*, p.95.

⁷⁶ For example, Cajete, *Native Science*, pp.23-26.

⁷⁷ T.Toadvine, 'Maurice Merleau-Ponty' in *The Stanford Encyclopedia of Philosophy*, ed. by E.N.Zalta, (Spring 2019 Edition), URL = <<https://plato.stanford.edu/archives/spr2019/entries/merleau-ponty/>> [Accessed: 20 March 2023].

Our opportunity for knowledge transfer comes with a challenge: we may not immediately be able to see all that is being shown to us. Established structures of systemic discrimination, some reminiscent of those described by feminist and intersectional authors,⁷⁸ may give rise to Miranda Fricker's two types of epistemic injustice preventing our understanding.⁷⁹ In addition, some unfamiliar experiences may initially be so alien to us that the above impossibility of a complete phenomenological reduction will, even in the absence of discriminatory structures or intent, at least initially prevent our understanding: Viola Cordova reminds us that valid interpretation needs background in the culture concerned.⁸⁰

It is for this reason that in this section, when making reference to Indigenous ideas, I am first and foremost going to cite Indigenous scholars.

Indigenous interest in quantum theory is widespread: Gregory Cajete⁸¹ is but one example of an Indigenous author making extensive reference to the work of David Bohm and David Peat. One reason for this are the above-mentioned Dialogues.⁸²

Leroy Little Bear, who usually facilitated, and who went to great lengths to encourage David Peat's involvement,⁸³ sums up the unity in diversity that he finds in Indigenous thought under three common denominators:

1. firstly, of nature being alive and imbued with spirit,
2. secondly, of Indigenous people being coparticipants in nature, which shows patterns as opposed to following laws, and
3. thirdly, of knowledge including that which may be manifesting (also referred to as

⁷⁸ For example, L.M.Alcoff, 'Philosophy And Philosophical Practice: Eurocentrism As An Epistemology Of Ignorance', in *The Routledge Handbook Of Epistemic Injustice* ed. by I.J.Kidd, J.Medina, and G.Pohlhaus Jr. (Abingdon: Routledge 2017), pp.397-408.

⁷⁹ M.Fricker, 'Evolving Concepts Of Epistemic Injustice' in *The Routledge Handbook Of Epistemic Injustice*, ed. by I.J.Kidd, J.Medina, G.Pohlhaus Jr. (Abingdon: Routledge 2017), pp.53-60. Epistemic injustice of types 1 and 2 as discussed by Fricker consists in failure to allow an individual's epistemic contribution either based on who they are (type 1), or via the more indirect route of denying them access to concepts available to those belonging to the mainstream, thus making it more difficult for them to be heard (type 2).

⁸⁰ Cordova, *How It Is*, pp.55-58.

⁸¹ Cajete, *Native Science*, p.78.

⁸² In the early 1990s, Indigenous academics in Canada and the United States became intrigued by the two theoretical physicists' work, and the series of conferences referred to as the Dialogues began to take place, continuing into the early 2000s. The purpose of the Dialogues was to discuss potential parallels between quantum theory and Indigenous thought.

⁸³ Peat, *Blackfoot Physics*, p.14.

the spiritual) as well as that which is manifest (also referred to as the physical).⁸⁴

It is from these three starting points that the collaborative exploration of the Dialogues originally set out. Other authors' summaries of common denominators of Indigenous thought, interactions between these, and their wider implications are going to be explored in **chapter 6**.

With regards to Leroy Little Bear's list, Little Bear's understanding of nature as alive and imbued with spirit is, for example, echoed by Cordova's understanding of matter and energy as one,⁸⁵ and of the world as an ongoing process rather than as a collection of objects.⁸⁶ Truth, and ethical action, are not viewed as static: they are likened to a balancing board interacting and attempting to stay in tune with an ever-evolving universe,⁸⁷ and to ripples in a pond not only expanding outwards, but co-evolving with other ripples that they meet in the process.⁸⁸ Cajete, for example, equates energy waves with spirit,⁸⁹ and refers to time as being eternal at the same time as being capable of harbouring sequences of events, so that it becomes possible for a rock to be rock and ancestor simultaneously.⁹⁰ Several authors mention the ability of Indigenous languages to reflect the universe constantly being in motion to a greater extent than Western languages typically do, due to the fact that the former tend to be verb-based rather than noun-based.⁹¹ While Western thought does have its own examples of accommodating the concept of flux,⁹² this thesis alone is ample evidence of the prevalence of nouns in

⁸⁴ G.A.Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue* (Unpublished PhD thesis, California Institute of Integral Studies, 2008), p.89, <URL: <https://originalthinking.us/pdfs/original-model-of-education.pdf>> [Accessed: 20 March 2023].

⁸⁵ Cordova, *The Concept Of Monism In Navajo Thought*, pp.93-94.

⁸⁶ *Ibid.*, p.115.

⁸⁷ Cordova, *How It Is*, pp.69-71 and p.120.

⁸⁸ *Ibid.*, p.230.

⁸⁹ L.Little Bear, 'Foreword', in Cajete, *Native Science*, pp.ix-xii (p.x).

⁹⁰ Cajete, *Native Science*, p.74. Cajete's conception of time here may appear unusual at first when considered from within a Western paradigm. It may be a helpful stepping stone at this stage that conceptions of time beyond the exclusively linear are beginning to be explored by Western science, too (an example of this is included in **Appendix B**). An accessible case study is then provided in **Part 2** as a postgraduate student of botany engages in a research project and finds herself drawn into both science and stories surrounding an ancient evolutionary relationship dating back to a time before the arrival of humans.

⁹¹ Cordova, *How It Is*, p.117.

⁹² For example, Heraclitus: D.W.Graham,D.W., 'Heraclitus', in Zalta,E.N. (ed.) *The Stanford Encyclopedia of Philosophy*, ed. by E.N.Zalta (Summer 2021 Edition), URL = <<https://plato.stanford.edu/archives/sum2021/entries/heraclitus/>> [Accessed: 20 March 2023], and – extensively referenced by Indigenous authors – Benedict de Spinoza: B. de Spinoza, *Ethics* (London: Penguin Classics, 1996).

Western communication, and a far cry from Robin Wall Kimmerer's example of Ojibwe language use: "To be a hill, to be a sandy beach, to be a Saturday, are all possible verbs in a world where everything is alive."⁹³

In light of these glimpses of Indigenous thought, it is no longer surprising that Indigenous academics were eager to initiate dialogue with Western theoretical physicists: the conception of a universe ever moving between energy and its manifestation as matter shows similarities with wave/particle duality as briefly outlined above, while the subtler conception of time than the idea of classical physics of a strictly linear, independent dimension, appears to chime not only with the merging of space and time described by quantum theory for sufficiently small scales, but also with Einstein's relativity theory some decades prior to this. The existence of non-binary dualisms alongside binary dualisms, as stated by Bohr and as exemplified by wave/particle duality above, is a recurring theme for a number of Indigenous authors, for example Anne Waters.⁹⁴

The second common element of Indigenous thought put forward by Little Bear, that of human co-participation in a universe that shows patterns as opposed to obeying laws, is of interest in its own right, as well as providing additional evidence to support the assertion that Bohm's interpretation of quantum theory is, contrary to some perceptions of it mentioned above, not deterministic.⁹⁵ (If it were deterministic, it would have been impossible for it to be accepted during the Dialogues, which involved Indigenous scholars supporting our participation in creation, and its corollary of responsibility for the consequences of our actions.) The fact of Cordova drawing parallels between Indigenous thought and Spinoza in this regard⁹⁶ need not confuse us: it is not the allegedly deterministic elements of Spinoza's thought that her work hinges on, and she frequently makes clear the importance of human responsibility.⁹⁷ Her above comparison of Indigenous and Non-Indigenous infants' first outings further illustrates her conception of humans as active participants in the universe.⁹⁸ In addition, a case will be made in **Part 2** of this thesis for determinism being far from the only possible interpretation of Spinoza's

⁹³ R.W.Kimmerer, *Braiding Sweetgrass* (London: Penguin Books, 2020), p.55.

⁹⁴ A.Waters, 'Language Matters: Nondiscrete, Nonbinary Dualism', in *American Indian Thought: Philosophical Essays*, ed. by A.Waters (Oxford: Blackwell Publishing Ltd., 2004), pp.97-115.

⁹⁵ Bohm's own rationale for this is discussed in **section 6.b.** below.

⁹⁶ For example, Cordova, *The Concept Of Monism In Navajo Thought*, p.83.

⁹⁷ For example, Cordova, *How It Is*, p.220.

⁹⁸ Cordova, *How It Is*, p.82.

thinking.

In its own right, and away from the question of determinism, Little Bear's second common denominator appears to mirror the interconnectedness implied by the discovery of quantum entanglement as outlined in **section 4.b.** . Burkhart, in this context, draws parallels to Western systems theory,⁹⁹ as well as devoting a large proportion of his work to elaborating on the Indigenous conception of locality that chimes with Little Bear's second point. Cajete, in addition, names a wider conception of science as a further consequence implied.¹⁰⁰

Needless to say, the general idea of interrelatedness, and of human participation as opposed to dominion or stewardship, has also been explored without particular reference to quantum theory. It is one element of Indigenous thought that has already begun the journey of finding its way into the Western debate as a suggested element of a modern environmental ethics.¹⁰¹

Little Bear's third common theme of Indigenous thought above, that of knowledge including the manifesting as well as the manifest (otherwise expressed as the spiritual as well as the physical), is contextualised in detail, for example, by Cordova,¹⁰² as well as by Little Bear himself.¹⁰³ As does Little Bear's first point, it appears to mirror the discovery of wave/particle duality above, but its implications are wider: they extend to the relationship between ritual and labour, which, in an Indigenous context, tend to be perceived as one,¹⁰⁴ and to the relationship between thought, action, and consequence. John G. Neihardt's collaboration with Nicholas Black Elk, *Black Elk Speaks*,¹⁰⁵ explores in detail the importance of performing a vision in order for it to be effective. Other Indigenous authors' work chimes with conceptions of performative knowledge processes going beyond what would immediately be recognised in a Western context.¹⁰⁶ Some stepping stones are, however, available, and these are going to be explored in **Part 2** of

⁹⁹ Burkhart, *Indigenizing Philosophy Through The Land*, p.193.

¹⁰⁰ Cajete, *Native Science*, p.77.

¹⁰¹ For example, W.Kelbessa, 'Indigenous Environmental Philosophy', in *The Oxford Handbook Of World Philosophy*, ed. by W.Edelglass and J.L.Garfield (New York: Oxford University Press, 2011), pp.574-581.

¹⁰² Cordova, *The Concept Of Monism In Navajo Thought*, pp.89-91.

¹⁰³ Little Bear, p.x.

¹⁰⁴ For example, S.B.Namunu, 'Melanesian Religion, Ecology, and Modernization in Papua New Guinea', in *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, ed. by J.Grim (Cambridge: Harvard University Press, 2001), pp.249-280.

¹⁰⁵ J.G.Neihardt, *Black Elk Speaks* (Lincoln: Board of Regents of the University of Nebraska, 2014).

¹⁰⁶ Burkhart, *Indigenizing Philosophy Through The Land*, pp.192-202.

this thesis.¹⁰⁷

As any subject matter requiring us to consider evidence that lies beyond the strictly measurable boundaries of contemporary Western science, this is going to involve situations where the question of discernment arises: the question that led Polkinghorne (above) to balance his assessment of there being more to the world than scientism would have us accept, on the one hand, with his stern warning that this should by no means imply that anything goes, on the other.

It was asserted at the beginning of this thesis that the process of exploring potential parallels of Indigenous thought with quantum theory, and with Western science in a more general sense, involves two challenges in this regard. Firstly, there is a danger of the West failing to accept Indigenous knowledge, even in the presence of indisputable empirical evidence, until proof has been provided of its consistency with previously existing Western conceptions:¹⁰⁸ a move criticised by Burkhart,¹⁰⁹ as well as by Rik Peels,¹¹⁰ for first claiming that science must be empirical, and then disallowing large parts of the empirical evidence. Secondly, there may be a temptation to jump to conclusions where none (or different ones) should be drawn, as Polkinghorne's above example of the misuse of "quantum hype" as a lazy justification of telepathy shows.

Discussion of Western science in the same breath with a worldview – Western or otherwise – that includes a "more-than-scientific" dimension to life necessarily involves a tension between remaining firmly rooted in the empirical evidence available, while accepting that aspects of this evidence may lie outside our present comfort zone.¹¹¹

This tension has previously been experienced, for example, by researchers working with animals, and navigating the subtle space between anthropomorphism and

¹⁰⁷ For now, it may be helpful to consider a first glimpse offered by Shay Welch's thinking regarding performative knowledge processes in the context of dance. Welch understands spirit as being about relationships, and relationships as creative and suffused with energy. (S. Welch, *The Phenomenology Of A Performative Knowledge System: Dancing With Native American Epistemology* (Cham: Palgrave Macmillan, 2019), p.49.) Welch's thinking is going to be considered in depth in **Part 2** of this thesis.

¹⁰⁸ Parry, *Original Thinking*, p.239.

¹⁰⁹ Burkhart, *Indigenizing Philosophy Through The Land*, p.248.

¹¹⁰ R. Peels, 'The Fundamental Argument Against Scientism'.

¹¹¹ The argument made up to this point does not yet take the ideas discussed in **Part 2** into account, which are going to entail the addition of the dimension of shared learning and creation *with* others, alongside that of learning *from* them.

anthropodenial.¹¹²

Once this tension has been acknowledged, and the existence of its counterpart acknowledged for those engaging in the process from their own, different vantage point, it is equally appropriate for Western thought to learn from Indigenous ideas as it is for Indigenous thought to learn from Western ideas. This is necessarily going to involve extending our comfort zone.

The experiences of feminism finding its way into the mainstream, and of beginning to transform it as a result, as well as of intersectionality being in the process of undertaking the same journey, were shown to provide valuable learning to support this quest, since both have dealt with challenges also inherent in an encounter between Indigenous and Western philosophies.

However, it is going to be necessary to acknowledge that some additional challenges are going to emerge that are particular to the relationship between the two worldviews considered in this thesis.

¹¹² For example Meijer, p.9. Anthropomorphism is going to be discussed in more detail in **Part 2** .

Chapter 5 - Specific considerations with regards to the West attempting to approach an Indigenous vantage point

With the first introduction in mind which was offered in *chapter 4* of some of the concepts involved, and alongside the more general considerations regarding knowledge transfer between paradigms discussed in *chapter 3* , it is now possible to consider some specific difficulties that may arise during attempts at sharing knowledge between the particular paradigms concerned.

5.a. Indigenous philosophies as transformative philosophies – and some reasons why the West may struggle

Dennis McPherson and Douglas Rabb begin their discussion of Indigenous philosophies with a narrative of a vision quest. The person giving an account of his first-hand experience is Douglas Cardinal, a contemporary Blackfoot Métis¹ with a successful career as an architect, having designed several museums.² It is an account by someone who knows more about Newtonian physics than most of us do: if he did not, his buildings would fall down.

The approach taken by the authors is one of phenomenological analysis, which they define as a product of conceptual analysis and existential phenomenology, placing particular importance on the requirement to set all preconceptions aside when first apprehending the experience.³

As Cardinal relates the details of his experience in a sweat lodge,⁴ two things immediately strike the reader. Firstly, it becomes clear that a sweat lodge is not simply a sauna; the quest is physically and emotionally difficult for Cardinal to complete. Secondly, it becomes clear that despite this, Cardinal's experience cannot simply be written off as a hallucination caused by dehydration: Cardinal knows, and states, which elements of his

¹ The French term "Métis", in this context, refers to a person of European as well as Indigenous heritage in parts of Canada.

² McPherson and Rabb, p.61.

³ Ibid., p.60.

⁴ Cardinal's vision quest involved significant physical as well as emotional hardship. His account includes a strong sensation of receiving help from non-human nature while navigating this, and of perceiving himself to be part of nature in ways that had not previously been part of his experience. The vision quest is going to be discussed again in *Part 2* , in the context of Indigenous conceptions of performative knowledge processes.

experience are to be seen as part of this category and which are not.⁵

Cardinal speaks of his quest as an experience of communicating with every living thing, and of experiencing this communion as power. He describes the magical elements of his experience as arising from the power of this communion, and he relates asking for, and receiving, strength from a tree and from the grass, as well as from the earth itself.⁶

The authors' reflection on the narrative carries echoes of Wilshire's above statement that when we ask the "sledgehammer question" of whether "it" really happened, we are not reliably in a position even to articulate what "it" is.⁷ To ask these questions, according to McPherson and Rabb, is to miss the point: what is important is what can be learnt from the experience.⁸

Cardinal himself describes the insight gained as a realisation that he had been separating himself from the universe, and that the vision quest was the progressive closing of this gap, so that at the end there no longer was a distinction between the two.⁹

It is unlikely that I am going to be able to relate fully to what Cardinal is describing. I like to think that I have had glimpses, having been fortunate enough to have had the opportunity to get to know a handful of mountains and bodies of water in my time. However, these experiences feel a million miles away from a vision quest in which a human being and the universe become one, to the point that the human experiences himself as "not there" any longer.¹⁰

McPherson and Rabb refer to Indigenous philosophies as transformative philosophies, first citing Leroy Meyer and Tony Ramirez to highlight the existence of incommensurabilities between worldviews,¹¹ before proceeding to cite Vine Deloria introducing the concept of relationships between humans and other-than-humans that define the power related to place.¹² An example of this is then taken from the work of Scott Pratt, outlining the dependencies between the sounds of different drums playing

⁵ McPherson and Rabb, p.62.

⁶ Ibid., p.73.

⁷ Wilshire, *The Primal Roots Of American Philosophy*, p.83. Wilshire's thoughts on premature categorisation carrying a risk of leading to category mistakes in the questions we ask are introduced in **section 4.a.** above.

⁸ McPherson and Rabb, p.62.

⁹ Ibid., p.63.

¹⁰ Ibid., p.75.

¹¹ Ibid., p.147.

¹² Ibid., p.151. Vine Deloria's thinking is going to be considered in greater depth in **Part 2**.

together, the instruments themselves, the players, and those listening.¹³ If the involvement of those listening in the shaping of the sound of drums initially seems unfamiliar to our Western ears, it may be helpful to use as a starting point Bruce Wilshire's comments on the active role of the audience in shaping a theatre performance.¹⁴

The authors are clear, however, that narratives and examples will only go so far. There comes a point where, even for those willing, some things can only be understood once transformation has occurred.¹⁵ McPherson and Rabb cite Leroy Meyer and Tony Ramirez referring to this transformation as a "gestalt switch" in the sense of a "shift in styles of reasoning as well as ways of perception."¹⁶ – Arguing, for the moment, from within an exclusively representationalist paradigm, this may be rephrased as, "once one has acquired the ability to occupy a new phenomenological vantage point."¹⁷

In pursuit of this new vantage point, the authors clearly believe that it is possible to benefit from reading Cardinal's narrative of his vision quest; otherwise they would not have included it in their book. They are, however, also clear that to be told about something is not the same at all as to experience it.¹⁸ With regards to the West learning about Indigenous philosophies, they explain that it is thus frequently pragmatism rather than secrecy that prevents Indigenous philosophical insight from being shared with the West: before transformation has occurred, some things are impossible to understand – and frequently, it is this knowledge, rather than secrecy, that is behind Indigenous reticence.¹⁹ In the related context of myth, the authors explore the possibility of the West's primary focus on "reason" depriving us of at least part of our ability to deal with complexity.²⁰

At least two renowned Western physicists agree: David Bohm and David Peat, both

¹³ S.Pratt, 'Persons In Place: The Agent Ontology Of Vine Deloria', *APA Newsletter On American Indians In Philosophy*, Vol.06, No.1 (Fall 2006), pp.4-9 (pp.6-7), URL: <https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/v06n1American_Indians.pdf> [Accessed: 20 March 2023].

¹⁴ Wilshire, *The Primal Roots of American Philosophy*, p.168.

¹⁵ McPherson and Rabb, p.159.

¹⁶ *Ibid.*, p.161.

¹⁷ It was shown above that Cordova's and Barad's participationalist thinking is going to add a new layer of complexity to this. This is alluded to at various points in **Part 1**, and discussed in detail in **Part 2** in the context of Indigenous conceptions of performative knowledge processes.

¹⁸ McPherson and Rabb, p.76.

¹⁹ *Ibid.*, p.161.

²⁰ *Ibid.*, p.110.

instrumental in establishing the Dialogues, cast light on the same blind spot in our perception from a Western scientific point of view. Referencing the work of Alfred Korzybski, they caution that any theory can only ever be a map of the universe, as opposed to the territory itself.²¹ Bohm and Peat perceive the confusion of the two to be particularly pronounced in the West, due to fragmentation: for example, whereas Cajete's *Native Science* builds on a wider conception of science as dealing in "systems of relationships and their application to the life of the community"²², the West tends to conceptualise science and philosophy as separate entities – a separation which Bohm and Peat find unrealistic, and inconsistent with the awe and wonder induced by their engagement with physics.²³

Relating their thoughts to the environmental considerations that this thesis is concerned with, they lay the blame for melting ice caps squarely at the door of fragmentation, due to the part it plays in our failure to consider any unintended consequences of our actions.²⁴ They draw an amusing analogy to distinguish between fragmentation (which they liken to a watch smashed with a hammer) and specialisation (a watch taken apart into coherent components).²⁵

Bohm and Peat are, in this particular instance, not interested in discussing the politics of the situation they are describing. They are, in this instance, examining the influence of paradigm. Much could, of course, be said about the roles of choices actively made which involved our individual and collective failure to curb inconsideration and greed, as well as about the role of technology unthinkingly adopted, resulting in a narrowing of the range of future choices available to us. Peat, for example, does explore some of these issues in the final chapters of his *Blackfoot Physics*, and some are also going to be considered in **Part 2** of this thesis. For the moment, however, Bohm and Peat are interested in the role of paradigm.

The trouble, according to Bohm and Peat, neither affects nor originates from science

²¹ Bohm and Peat, p.vii.

²² Cajete, *Native Science*, p.66.

²³ Bohm and Peat, pp.ix-xxiii. The question of whether it is in fact a wider conception of science than the contemporary Western one that is needed, or whether interdisciplinary rather than transdisciplinary work would not be sufficient, is of course a valid one here. However, I would argue that it is a question that dovetails with what was said above regarding new vantage points transforming as opposed to merely adding to the mainstream. The question is going to be revisited in the context of Genevieve Lloyd's thinking in **Part 2**.

²⁴ Bohm and Peat, p.xx.

²⁵ *Ibid.*, p.2.

alone, but pertains to “general ways we perceive and act, especially in groups.”²⁶ They caution that paradigm – despite being a useful source of common ground – can not only influence the conclusions we draw from our perception, but also our perception itself.²⁷ To counter this, and drawing on examples from their own work in the field of quantum physics as well as, undoubtedly, on their predecessor Niels Bohr’s thinking,²⁸ they then stress the power of metaphor to nudge thinking in a new direction, and more generally the importance of allowing ideas to interact.²⁹ Citing William James, they advocate use of a plurality of dynamically related approaches and – perhaps predictably, both due to their affinity to William James and their own findings in the field of quantum theory – define the relationship of science to reality as a participatory one.³⁰

We are thus looking at two renowned Western physicists calling for the West to cast our net wider than logical positivism typically allows. This begs the question of how the West, home to Stonehenge and to the Bayeux tapestry featuring a comet predicting the events of 1066,³¹ came to be ruled almost exclusively by logical positivism in the first place: at first glance, there appears to be no obvious reason why it could not simply have been enhanced, rather than dominated, by the discoveries made in its laboratories and by its Enlightenment freedom to voice opinions other than those endorsed by the Catholic church.

5.b. What is preventing the West from enjoying both the Enlightenment and “The More”?³²

Europe’s journey from spiritual diversity, to spiritual and intellectual domination by the Catholic church, and, subsequently, to our Enlightenment freedom to pursue science

²⁶ Ibid., p.6.

²⁷ Ibid., pp.41-47. Additional detail on some of the dynamics that may be involved in this is provided in the context of Karen Barad’s work in **Appendix B**.

²⁸ Wilshire, *The Primal Roots Of American Philosophy*, p.171. Niels Bohr saw no relationship of binary dualism between the discipline of physics and the role of metaphor in imaginative processes contributing to its advancement.

²⁹ Bohm and Peat, p.32. The point made by Bohm and Peat here is going to be revisited in the context of Shay Welch’s thinking in **Part 2**.

³⁰ Ibid., pp.44-45.

³¹ F.D.Peat, *Synchronicity: The Bridge Between Matter And Mind* (New York: Bantam, 1987), p.2.

³² The More, here, refers to William James’s conception of The More introduced in **section 1.a.**, a recurring theme throughout this thesis which is going to be discussed in depth in **Part 2**. What is at stake in this section is that, at first glance, it would appear perfectly feasible for a society to enjoy the benefits of contemporary Western science without allowing itself to succumb to scientism, but that there are, and have been, a combination of tacit assumptions and preferences at play which have led to some difficulty with this.

even in contradiction to the teachings of the Catholic church, can be charted in a variety of authors' work.³³

Concern that this freedom, rather than simply freeing us, has simultaneously turned into the new constraint of scientism, has also been voiced by a variety of authors. Bruce Wilshire deplores the sense of entitlement displayed, for example, by researchers arriving uninvited on Indigenous groups' land, expecting these groups to submit to being examined according to scientific methodologies that they, themselves, profoundly disagree with.³⁴ Similar sentiments, and a more detailed exploration of research methodologies more appropriate to interaction with Indigenous groups, were published by Linda Tuhiwai Smith in her ground-breaking *Decolonising Methodologies*,³⁵ which is now widely cited by Indigenous authors worldwide. Wilshire defines scientism as "the view, unsupportable by science, that only science can know."³⁶ He leaves us in no doubt about the harm this is causing with regards to the question that this thesis is concerned with: "As long as European psycho/physical dualism reigns supreme, all our interest in "the environment" will never get to the heart of our crisis."³⁷ While Rik Peels provides ample detail on the mechanisms involved in scientism, and on some aspects where even its formal logic fails,³⁸ it is Wilshire who points out its more fundamental restrictive harm: through its Cartesian assumption "that the world is not as common sense describes in its traditional, myth-laden, sensorial richness,"³⁹ it deprives us of our freedom to live in genuine participation with the world, grasping the "intertwining principles of thought, action, feeling, and being that are sustaining and orienting in any local environment."⁴⁰ Citing Hegel and Schelling, he reiterates the premise of his book that phenomenological and American Pragmatist thought share common ground with Indigenous philosophies,⁴¹ and explains that it is the very fact of everyone's human and non-human mind-bodies' participation in the continuing creation of the world that implies that facts and values are,

³³ W.Bristow, 'Enlightenment', *The Stanford Encyclopedia of Philosophy*, ed. by E.N.Zalta (Fall 2017 Edition), URL = <<https://plato.stanford.edu/archives/fall2017/entries/enlightenment/>> [Accessed: 20 March 2023].

³⁴ Wilshire, *Fashionable Nihilism: A Critique Of Analytic Philosophy*, p.33.

³⁵ L.T.Smith, *Decolonising Methodologies*, 2nd ed. (London: Zed Books Ltd., 2012).

³⁶ Wilshire, *Fashionable Nihilism: A Critique Of Analytic Philosophy*, p.34.

³⁷ Wilshire, *The Primal Roots Of American Philosophy*, p.23.

³⁸ R.Peels, 'The Fundamental Argument Against Scientism'. Peels' argument is in part based on Mary Midgley's work, which is also referenced extensively in this thesis.

³⁹ Wilshire, *The Primal Roots Of American Philosophy*, p.177.

⁴⁰ Ibid., p.178.

⁴¹ Ibid., p.179.

in fact, one. By making this statement, he illustrates his point regarding his common ground with Indigenous philosophies, as we have seen that Cordova's balancing board analogy introduced at the beginning of the previous chapter, and Deloria's search for the right road above, both point to the same conclusion.⁴²

The authors considered up to now have outlined some ways in which our Enlightenment freedom, while still being capable of realistically being defined as freedom (as there genuinely is no longer any threat of persecution for suggesting that the earth revolves round the sun), has also, through scientism, become a restraint for us now. What they have not yet accomplished is to answer the question of why this took place in the first place. Having considered the work of Wilshire and Peels, we are in a position to see why it is difficult for us *now* to have a Covid vaccine, and to retain our freedom to be co-creators of a meaningful world at the same time. We cannot yet see what happened between the seventeenth century and now to bring about our loss of freedom to have both, and we cannot yet see why we chose to allow it to happen.

It is Apffel-Marglin who attempts to cast light on this question. After agreeing with Wilshire regarding the emotional and spiritual loss implied by our loss of our sense of participation with the world, Apffel-Marglin describes us as a culture addicted to certainty and, within this paradigm, our very act of knowing as an estrangement.⁴³

With regards to the question of developments between the seventeenth century and now that brought this about, Apffel-Marglin has no doubt that these were largely politically motivated. Renaissance philosophies in Europe, in their diversity, had hylozoism⁴⁴ as their common denominator. For Apffel-Marglin, it is the political usefulness of agency-less objects in rendering invisible all manner of power moves, particularly those motivated by the emerging discipline of economics, that allowed Cartesian dualism to take hold to the extent that it did.⁴⁵

In a first step, Apffel-Marglin points out that Cartesian dualism enables definition of

⁴² **Section 6.f.iii** below, as well as **Part 2** of this thesis, are going to discuss a challenge frequently made to Indigenous philosophers at this point: it is easy, when exclusively arguing from within a Western, representationalist paradigm, to miss the important distinction between the implications of our participation in continuing creation on the one hand, and relativism on the other. While the main body of the thesis predominantly considers this distinction from a philosophical point of view, questions of science which are relevant to this are considered in **Appendix B**.

⁴³ Apffel-Marglin, *Subversive Spiritualities*, p.4.

⁴⁴ The conception of matter as being capable of being animate.

⁴⁵ Apffel-Marglin, *Subversive Spiritualities*, pp.21-28.

someone according to what they are *not*. This facilitates the creation of a perceived “abject other”, whereby we consider someone’s difference to be a shortcoming because we are only able to see where they fall short of an arbitrary ideal that we have, despite the absence of any indisputable reason for doing so, elevated from particularity to norm.⁴⁶ Apffel-Marglin’s affinity to feminist thought is obvious here, and she cites Judith Butler regarding the role of binary dualisms in the creation of an “abject other”.⁴⁷

In terms of our consideration of the disappearance of hylozoism from the philosophical mainstream in Europe, the above already offers a partial explanation: Cartesian dualism is – as has just been demonstrated – conducive to creating false dichotomies, and to thinking in terms of exclusive “or”s even outside those situations where this is realistic. This is not to say that exclusive “or”s are always inappropriate: for example, my computer can only be either switched on or switched off. However, there would be no reason to suppose that the Sahara cannot be experiencing a heatwave just because Death Valley is already in the grip of one. Similarly, without Cartesian dualism introducing exclusive “or”s beyond those that prove realistic, there would be no reason to assume that nature cannot, in most situations that we humans perceive, follow the laws of Newtonian physics that we humans find it easy to relate to, and yet be free of determinism at the same time, leaving room for what we now, with William James, refer to as “The More”, and what we may or may not, one day, become capable of making more sense of, in the same way that we, one day, became capable of making sense of dog whistle frequencies. It is Cartesian dualism *itself* that is already turning this thought process into a difficulty for us and, once Cartesian dualism had arrived, it would have taken more intellectual effort not to succumb to such false dichotomies than it used to.

It was, however, intellectual effort that was still being expended. As Apffel-Marglin reminds us, “A world spirit or Nature having consciousness and feelings is no less intelligible than God’s having them.”⁴⁸ In the case of God, the additional intellectual effort continued to be expended even after Cartesian dualism arrived; in the case of Nature and its other-than-human members, it did not.

It is at this point that Apffel-Marglin’s second argument becomes relevant. After outlining the role of the Church itself in the elimination of hylozoism from the mainstream – the

⁴⁶ Ibid., pp.25-28.

⁴⁷ Ibid., p.27.

⁴⁸ Ibid., p.33.

role of the very body that had just shown itself capable of juggling the above, newly created intellectual difficulty with it in a different context, where it wanted to – she goes on to reason that it was in fact early modern economic thought that was instrumental in the “de-spiriting” of the non-human world.⁴⁹ She characterises this process as one that transformed social and spiritual communities of humans and non-humans into perceived resources, and she traces the journey by citing its landmarks: from the creation of enclosures that turned land from a part of nature that humans interacted with into a commodity to be bought and sold, to the transition from gift exchange with humans and non-humans to a market economy where perceived ownership of our bodies as independent entities from our actual selves went hand in hand with the commodification of labour.⁵⁰

Ultimately, it was the Church’s conception of God as a transcendent being (as opposed to a spiritual force that material nature was imbued with) that allowed science and religion to coexist peacefully. Killing two birds with one stone, the same concept also allowed the new discipline of economics to thrive unimpeded by concerns regarding (now conveniently de-spirited) non-human well-being.⁵¹

It is important to note here that it is not the fact of humans benefiting from their interaction with the land – or even the arrival of far-flung markets, per se – that Apffel-Marglin is critical of: it is the fact of our interactions having been removed from their original context of reciprocity, communication, and gift exchange, and placed into a new context of calculation of the encloser’s advantage, measured in abstract quantities of money as opposed to particular qualities of relationship.⁵² In other words, the arrival of the discipline of economics can be seen as instrumental in giving ourselves permission to ride roughshod over any concerns of relationship that we might otherwise have felt – with regards to our fellow humans in this world, and with regards to the non-humans participating in the same world.⁵³

⁴⁹ Ibid., pp.35-54.

⁵⁰ Ibid., p.38.

⁵¹ F.Apffel-Marglin and S.Varese, ‘Introduction: Cosmic Dialogues’, in *Contemporary Voices From Anima Mundi: A Reappraisal*, ed. by F. Apffel-Marglin and S.Varese (New York: Peter Lang, 2020), p.20.

⁵² Ibid., pp.43-44.

⁵³ Insight into what Apffel-Marglin means by non-humans participating in the same world is amply provided in her anthology published in collaboration with PRATEC, which will be considered in more detail below (F.Apffel-Marglin (ed.) with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998).

It is clear that the new attitude described by Apffel-Marglin as emerging from the early seventeenth-century economics of Thomas Mun and Edward Misselden,⁵⁴ and our new behaviours following in its wake, are easier to maintain if we convince ourselves that as much of the world as possible is not really alive, and that it is therefore up to us humans, unilaterally, to decide what parts of it, if any, are worthy of our consideration.

It is not Western environmental ethics that is at fault here: it is its wider context of an entire paradigm of unquestioning acceptance of the wisdom of unilateral human decision-making in a world where non-human nature, individually and collectively, has been deprived of its own agency that is. If humans are understood to be in sole charge of a world that has no say, then – frequently through selfishness, and on other occasions through miscalculations arising from ill-conceived attempts at stewardship⁵⁵ – anthropocentrism is almost bound to result. Unilateral, human assumptions regarding the properties and needs of non-humans, arrived at without first finding a way of allowing the non-humans concerned to have a voice of their own, are in danger of producing a replica of the Chinese servant's, Lee's, situation in John Steinbeck's *East of Eden*.⁵⁶ Lee found that he was visible to the dominant majority only to the extent that he was prepared to conform to its mistaken assumptions about him. The problem persisted for years. The same dynamic has been observed between humans and chimpanzees.⁵⁷ If assumptions remain unquestioned because only one voice is heard, it is unrealistic to expect comprehensive wisdom to emerge.

It would have been easy for Apffel-Marglin simply to close by recapitulating the effect of the emergence of the discipline of economics in the form that it did on human behaviour and well-being. However, this is not what Apffel-Marglin intends. While she does condemn the fact that the above transformation places weak or unlucky humans in a precarious position,⁵⁸ her main concern is with the effect of post-seventeenth-century attitudes and practices on the system as a whole: explicitly distancing herself from historians who would define community in anthropocentric terms,⁵⁹ she speaks of non-

⁵⁴ Apffel-Marglin, *Subversive Spiritualities*, p.45.

⁵⁵ For example, D.Schmidt, 'When Preservationism Doesn't Preserve', *Environmental Values*, Vol.6, No.3 (August 1997), pp.327-339, <URL = <https://www.jstor.org/stable/30301587>> , [Accessed: 20 March 2023].

⁵⁶ J.Steinbeck, *East Of Eden* (New York: Penguin, 2002), p.161.

⁵⁷ De Waal, pp.222-223. Humans found it easier to accept chimpanzees when these conformed to the stereotype of chimpanzees being messy eaters than when they did not.

⁵⁸ Apffel-Marglin, *Subversive Spiritualities*, p.36.

⁵⁹ *Ibid.*, p.39.

human nature as a “constitutive outside” that sustains us humans, to the point of making us possible at all – and, crucially, characterises this constitutive outside as having agency, and furthermore as being “not an absolute outside in that we share matter, mind, soul, and spirit with it.”⁶⁰ Apffel-Marglin is emphatic that “humans do not monopolise meaningful speech (and mind).”⁶¹

Apffel-Marglin has no doubt that it is the very cohesion of this system that had to be eliminated in order to enable the West to create its conception of an “other” to be used as a resource, and that it is the loss of this cohesion that is now at the heart of the modern-day difficulties we are experiencing: “By its very nature, calculation of one’s purely material advantage draws boundaries between them and us. In contrast, gift exchange connects one to the whole.”⁶² Apffel-Marglin’s most recent work provides additional clarity that it is, above all, our relationship with non-human nature that she is referring to here: “(...) one of the most crippling implications of the rejection of this living, sentient and numinous cosmos and our integrality with it is for finding our way out of the present global ecological and climate crisis (...)”⁶³.

For Apffel-Marglin, our lost communication and gift exchange with non-humans inherently involves ritual,⁶⁴ and she is certain that it is going to be ritual (albeit not necessarily religion)⁶⁵ that is going to enable us to reclaim our place, and shoulder our responsibility, as participants in nature again. It is the performative aspect of this form of participation that brings her argument back to Merleau-Ponty’s conception of the subject weaving the network that carries its existence,⁶⁶ to Cordova’s sense of responsibility, and to Karen Barad’s conception of agential reality based on the findings of quantum theory.⁶⁷ It is her commitment to sacredness being part of the material world, and not outside it,

⁶⁰ Ibid., p.40.

⁶¹ Ibid..

⁶² Ibid., p.49.

⁶³ Apffel-Marglin and Varese, ‘Introduction: Cosmic Dialogues’, p.13.

⁶⁴ Apffel-Marglin, *Subversive Spiritualities*, p.25. A wide range of examples of ritual performances can be found in later chapters of this thesis, and it may be helpful to clarify from the beginning that these tend to be understood to be part and parcel of a mutually responsive form of human interaction with the sacred in the (human or non-human) material. A more detailed discussion is going to be offered in the context of performative knowledge processes in **Part 2**, alongside a conception of culture as “together-doing” put forward by Jack D. Forbes.

⁶⁵ F.Apffel-Marglin, ‘Western Modernity And The Fate Of Anima Mundi’, in *Contemporary Voices From Anima Mundi: A Reappraisal*, ed. by F. Apffel-Marglin and S.Varese (New York: Peter Lang, 2020), p.30.

⁶⁶ Merleau-Ponty, p.176.

⁶⁷ A more detailed discussion of Karen Barad’s thinking is provided in **Appendix B**.

that grounds her conviction that it is going to be the involvement of ritual in everyday activity that is capable of re-imbuing our world with meaning.

While it is going to be pertinent to note the existence of alternative approaches,⁶⁸ alongside ritual, to establishing communication with non-human nature, consideration of these is not going to take away from the fact that the reason for the cessation of human communication with non-humans in the first place, and the resulting loss of meaning in a substantial part of our interactions with each other, is highly likely to have been economic as much as it was philosophical.

5.c. Bi-cultural views of our interaction with the non-human world

The Indigenous authors cited in this paper can be said to be bi-cultural, in the sense that their socialisation as adolescents and young adults included elements of both Indigenous and Western enculturation: Anne Waters' anthology, for example, as noted above, includes works by Indigenous academics with PhDs in Western philosophy, a development that was greatly encouraged by the late Vine Deloria.⁶⁹ Frédérique Apffel-Marglin spent her early years in the West, to subsequently progress to a lifetime of collaboration with Indigenous groups on Indigenous regeneration projects.⁷⁰ The Indigenous members of the PRATEC project in the Andes that a great proportion of Apffel-Marglin's work was carried out in partnership with are academics educated at Western universities who decided to "de-professionalise" themselves at a time in their Westernised, professional lives when the gap between their Western, formal and Indigenous, informal education turned out to be wider than they were prepared to tolerate.⁷¹

When Apffel-Marglin describes our Western conception of knowledge as an act of estrangement,⁷² it may initially appear to our Western ears as if she were exclusively referring to what she calls the theoretical egalitarianism of "objective" knowledge⁷³, and

⁶⁸ For example, Meijer, pp.228-232.

⁶⁹ Burkhart, *Indigenizing Philosophy Through The Land*, p.xiii.

⁷⁰ Apffel-Marglin, 'Western Modernity And The Fate Of Anima Mundi', pp.38-45.

⁷¹ F.Apffel-Marglin, 'Introduction: Knowledge And Life Revisited', *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development*, ed. by F.Apffel-Marglin with PRATEC (London/New York: Zed Books, 1998), pp.1-8.

⁷² Apffel-Marglin, *Subversive Spiritualities*, p.4.

⁷³ Apffel-Marglin, 'Introduction: Knowledge And Life Revisited', p.20.

contrasts with her former colleague's, Kathryn Pyne Addelson's conception of knowledge as an emotional and bonding experience involving a "gestalt switch"⁷⁴ – which, by its very nature, cannot be open to any individual because most individuals are not involved in the process concerned. To return to my earlier example of Rebecca Romero's Olympic career, a sizeable proportion of Romero's knowledge about sculling is bound to be particular to her experience in the 2004 quadruple scull at Athens. It is neither open to the rest of us, nor would it have been open to Romero without her involvement in this crew: in fact, it would not have existed in exactly the same form without Romero's involvement in this crew.

Apffel-Marglin, in the same vein, describes relationships of great importance that were formed through her work, and through these relationships came learning.⁷⁵ However, this is not all that she means when she makes her above statement. As well as being personal, her statement is at once political and philosophical and, through the latter, it connects her thinking with that of the Indigenous authors' work encountered in this research.

Politically, Apffel-Marglin is emphatic that the perceived objectivity of knowledge generated and disseminated by Western universities is in fact more accurately characterised as particular knowledge universalised and, in an almost inevitable next step due to the embeddedness of academic institutions in wider society, far from being neutral, is all too easily made subservient to the perpetuation of existing power structures.⁷⁶ Apffel-Marglin exemplifies this by stating that during the Holocaust in 1930s and 1940s Germany, no legislative reform in relation to universities was necessary to enable research that contributed to the abominable political persuasion that sanctioned genocide: prevalent delusions of neutrality and universality of existing structures were sufficient to lend credibility to delusions of neutrality and universality of the abhorrent convictions they produced.⁷⁷ Similar mechanisms are described by McPherson and Rabb with regards to the treatment of Indigenous groups in colonial North America: as the

⁷⁴ Ibid.

⁷⁵ Apffel-Marglin, *Subversive Spiritualities*, pp.202-204.

⁷⁶ Apffel-Marglin, 'Introduction: Knowledge And Life Revisited', p.20.

⁷⁷ Ibid., pp.24-25. A further example is the over-simplification of an early form of evolutionary theory and its subsequent misuse to justify genocide, which is going to be discussed in **Part 2**. Additional insight on this point is also provided by Enrique Dussel in **section 6.f.** and in **Part 2**, as well as by Jacques Ellul in **Part 2**. In this context, it may be appropriate to recapitulate that the term **universalism** is used in this thesis as it is used by Brian Burkhart and by Enrique Dussel, i.e. to refer to the normalisation and subsequent treatment as universals even of those ideas and phenomena that are in fact, on closer examination, better understood as particular and/or as localised.

dominant group had elevated their particular knowledge to universality, and assumed its neutrality, their knowledge became subservient to the oppression of those outside the dominant group.⁷⁸

Philosophically, Apffel-Marglin's statement extends the space for an encounter between phenomenology and Indigenous thought that was first opened up by Wilshire above. Having renounced representationalist thinking as anthropocentric in its assumption of the human subject as a "stable, rational centre of what-is",⁷⁹ and citing Merleau-Ponty as well as drawing on feminist thought and the experiences of a dairy farm in Wisconsin to illustrate her point, Apffel-Marglin's purpose is explicitly to "de-exoticise" the metaphysics, epistemology, and work of PRATEC.⁸⁰

If we are co-creators of a meaningful world,⁸¹ and if knowing is conceived as "an intimate relationship with locality",⁸² then metaphysics and epistemology begin to interact in ways that non-phenomenological Western philosophical models do not typically recognise.⁸³ Merleau-Ponty speaks of a new ontology of kinship alongside causality;⁸⁴ PRATEC members refer to wisdom emerging from whole-bodied conversation with the non-human world, in the absence of any dualism between humans and the world, and in a world that turns on nurturing and allowing oneself to be nurtured.⁸⁵ In Apffel-Marglin's introduction, Cartesian doubt is interpreted as "lack of trust towards the world as it is" by PRATEC founder member, Eduardo Grillo, with remarkable similarities to the thinking of Indian philosopher-saint Gopinath Kaviraj: "Such an attitude of doubt, however, which in the West was first stated by Descartes, involves a breach of faith towards everything that is."⁸⁶ PRATEC's overarching premise in its work and philosophy could not be more

⁷⁸ McPherson and Rabb, pp.23-59. One example – which is by no means the only one – is that recognition of Indigenous individuals in Canada as "civilised" (and thus eligible to enjoy civil liberties and legal rights) was subject to their demonstrating their ability to speak English or French. (Ibid., p.57.)

⁷⁹ Apffel-Marglin, 'Introduction: Knowledge And Life Revisited', p.27.

⁸⁰ Ibid., p.34.

⁸¹ Apffel-Marglin, *Subversive Spiritualities*, pp.61-2.

⁸² Burkhart, *Indigenizing Philosophy Through The Land*, p.121.

⁸³ These concepts may initially appear unwieldy when considered from within a Western paradigm. Further case studies to illustrate what is meant are provided in the context of Indigenous conceptions of performative knowledge processes in **Part 2**, and supported by a scientific stepping stone to (albeit partial) understanding through Karen Barad's work in relation to quantum theory in **Appendix B**.

⁸⁴ Merleau-Ponty, p.251.

⁸⁵ Apffel-Marglin, 'Introduction: Knowledge And Life Revisited', p.32.

⁸⁶ Ibid., pp.34-35.

different: it is “to love the world as it is.”⁸⁷

Apffel-Marglin’s and PRATEC’s anthology does go on to make reference to extensive labour taking place on the land, often resulting in profound change such as the transformation of soil and the creation of terraces and irrigation systems. This should, however, not be interpreted as being in any way similar to superficially equivalent change effected by Western agriculturalists: any work undertaken is supported by ritual and, through ritual, those contemplating such work first ascertain whether or not they can proceed. The expression “to love the world as it is” is lived as a commitment to let the world have its say in the particular shape that any nurturing is going to take, in a particular location, at a particular time.⁸⁸ Changes made to the landscape by Western development agencies, without the involvement of ritual, tend to turn out not to integrate well with what is around them, rendering implements introduced by developmental projects useless for the function they were intended to fulfil and, as a consequence, frequently ignored and left to be destroyed by the weather. Eduardo Grillo refers to these abandoned implements as the “archaeology of development”.⁸⁹

Grimaldo Rengifo, another founder member of PRATEC, defines culture as an activity that all species engage in.⁹⁰ An ocean of difference opens up between this on the one hand, and Western engagement with non-human nature on the other, as a result of the latter being embedded in a generalised assumption that it is up to us (humans) to make unilateral judgements with regards to our treatment of non-humans, due to their being perceived as “other”: the nation state tacitly assumed as a foundation, for example, in Kymlicka’s and Donaldson’s work on our relationship with animals,⁹¹ was a development based on unilateral human judgement. With entire civilisations now relying on its existence, it may be unrealistic to expect to ask non-humans at this late stage whether or not this was a good idea. However, if we take PRATEC’s work seriously, we may want to consider exploring ways of finding out how non-humans might want to *adapt* the nation

⁸⁷ Ibid., p.34.

⁸⁸ Ibid.

⁸⁹ E.Grillo, ‘Development Or Cultural Affirmation In The Andes?’ in *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development*, ed. by F.Apffel-Marglin with PRATEC (London/New York: Zed Books, 1998), pp.124-145 (p.138).

⁹⁰ G.Rengifo, ‘The Ayllu’, in *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development*, ed. by F.Apffel-Marglin with PRATEC (London/New York: Zed Books, 1998), pp.89-123 (p.89). PRATEC’s inter-species conception of culture is shared by Indigenous thinkers from other parts of the world. One example is J.D.Forbes’ description of culture as “together-doing”, referenced in **Part 2**.

⁹¹ W.Kymlicka and S.Donaldson, ‘Animals And The Frontiers Of Citizenship’.

state, as opposed to merely granting non-human animals rights within the unchanged, existing, human-created version of it.⁹²

5.d. Cabbies, violinists, and their relevance to Western engagement with the possibility of there being spirits

Being Western, when I think of non-humans, I think of animals first, then plants next, and finally of those tangible parts of nature that the West usually believes to be inanimate, such as rocks.

Human attempts have been made to assert which of the former have consciousness, but these attempts have tended to be hobbled by the problem of the Argument from Analogy: although Peter Singer, for example, makes a compelling case for the prevalence of sentience in the animal world,⁹³ it is impossible for us humans to know what it is actually *like* to be a non-human.⁹⁴ This means that we may well miss forms of sentience that fall outside our own, human experience: other organisms may have other ways of being sentient, and of experiencing emotion, and of engaging in rational thought. They may even have ways of engaging with the world that do not fit into these human categories at all. Wilshire puts it plainly: it is impossible for us humans to know how others' mental capacities might manifest themselves, because all we have are our own. He applies this insight to the – at the moment, imaginary – potential existence of extraterrestrial intelligence.⁹⁵

An alternative approach has been to use our response as a guide. When we feel empathy with a fellow creature – in David Cockburn's case, with a squid – we have a sense of their experiencing *something* that is causing us to respond.⁹⁶ We know from Wittgenstein's work that it is empathy with another being that we are experiencing, and not simply

⁹² The question of how multilateral forms of decision-making might be achieved in the West is going to be explored in the remainder of this chapter, and also extensively in **Part 2**.

⁹³ P.Singer, 'All Animals Are Equal', *Philosophical Exchange* Vol. 1 (1974), pp. 103-116. I believe Singer's work in relation to animal sentience to be of importance, particularly for the reasons outlined in the **Part 2** section on the potential helpfulness of an anthropocentric starting point (which is then moved away from) in conversations with sceptics. I do not, however, mean to imply that investigation of what it is "like" to be a non-human is the only form of meaningful engagement with one, as will become clear in the remainder of this section, as well as (in more detail) in **Part 2**.

⁹⁴ T.Nagel, 'What Is It Like To Be A Bat?', *The Philosophical Review*, Vol.83, No.4 (1974), pp.435-450, URL: <https://www.jstor.org/stable/2183914> [Accessed: 20 March 2023].

⁹⁵ Wilshire, *The Primal Roots Of American Philosophy*, p.76.

⁹⁶ D.Cockburn, 'Human Beings And Giant Squids', *Philosophy*, 69 (268) (1994), pp.135-150.

concern for their injured limb.⁹⁷

Our primitive response to another being's mental state varies with similarity and with practice. It has been shown that our reliability at identifying Ekman's basic emotions initially correlates with our cultural similarity with subjects experiencing these, so that where there is insufficient similarity, we are initially likely to struggle.⁹⁸ It has also been shown that this improves once we have had a chance to become more familiar with each other.⁹⁹

Besides research data, common sense would suggest that it cannot be any other way: returning to the earlier example of Rebecca Romero's Olympic career, we know that athletes in team boats train together to become attuned to each other. It would not occur to anyone simply to download a crew mate's ergometer scores, because everyone intuitively knows that this would be insufficient.

If Wittgenstein is right, then the mental and physical changes that result from training as a crew are going to be subtle: one of the central features of the riverbeds we create is that we do not consciously know what exactly is in them.¹⁰⁰ What we do know, however, is that such changes pertain to body and mind alike. Without, at this point, entering into any debate on whether or not the mind it is reducible to the brain, it is clear that what we do with our mind-bodies not only has the ability to build muscle, but also results in changes in our neurological makeup. London cabbies' neural capacity for spatial cognition is more pronounced than the rest of ours – as a result of their time spent being London cabbies. Accomplished violinists' brains look different from cabbies' – as a result of their time spent being accomplished violinists.¹⁰¹

Indigenous societies have developed their own, distinctive practices in their interaction

⁹⁷ L.Wittgenstein, *Philosophical Investigations*, ed. by P.M.S.Hacker and J.Schulte (John Wiley & Sons, Incorporated, 2010), ProQuest Ebook Central, p. 105e. Available at: <https://ebookcentral.proquest.com/lib/trinity/detail.action?docID=514408> [Accessed: 20 March 2023].

⁹⁸ A.H.Elfenbein and N.Ambady, 'Cultural Similarity's Consequences: A Distance Perspective on Cross-Cultural Differences in Emotion Recognition', *Journal Of Cross-Cultural Psychology*, Vol. 34 No. 1, (2003) pp.92-110, DOI: 10.1177/0022022102239157 [Accessed: 20 March 2023].

⁹⁹ A.Jasini, J.De Leersnyder, K.Phalet, and B.Gomes de Mesquita, 'Tuning in emotionally: Associations of cultural exposure with distal and proximal fit in acculturating youth', *European Journal of Social Psychology*, (2018), DOI: 10.1002/ejsp.2516 [Accessed: 20 March 2023].

¹⁰⁰ O.Hanfling, *Wittgenstein's Later Philosophy* (New York: SUNY, 1989), pp.162-163.

¹⁰¹ J.J.Holder, 'James And The Neuroscience Of Buddhist Meditation', in *William James Studies*, Vol.10 (2013), pp.1-11, URL = <https://www.jstor.org/stable/10.2307/26203772> [Accessed: 20 March 2023].

with non-human nature. This is bound to have resulted in profound change in the mind-bodies of those involved. If this was not the case, then we could all travel to the next Olympics and take part in any final of our choice without training. Since London cabbies' neural capacity for spatial cognition has been found to have changed as a result of their being London cabbies, I expect that an Indigenous person's mind-body will have become drastically different from mine after years of relating to non-human nature in ways that I am too Western even to fully comprehend.

Peat gives an early example of this, taken from Mayan culture.¹⁰² Without modern telescopes at their disposal, Mayans created their observatories by digging deep pits to observe the skies from. Although the pits were obviously helpful in blocking out light and other distractions, Peat argues that this alone is insufficient to be explanatory of the knowledge gained through this process: our present civilisation would be unlikely to be capable of achieving the same with the naked eye.¹⁰³

On the one hand, Peat, as does Holder above, points to the influence of training here. On the other hand, however, he leaves the reader in no doubt with regards to the importance of the role of ritual in the process.¹⁰⁴ Peat, the Western scientist, is adamant that there is more to this than contemporary Western science.

The role, and even the existence, let alone any precise definition of "The More", of that which lies outside the realm accessible to contemporary Western science, can be a difficult subject in the West. On the one hand, we speak of love, and of meaning, as parts of *cognitive* reality.¹⁰⁵ The Church speaks of a God, and this God is deemed to reside outside the material world. But to make reference to any spiritual realm *within* the world carries a danger of raising eyebrows in educated circles in the West. Even while working on Indigenous regeneration projects – which would suggest that others working there were similarly sympathetic to Indigenous causes – Frédérique Apffel-Marglin encountered Indigenous, Western-educated colleagues meeting engagement with ritual with "guffaws".¹⁰⁶ Consistent with her above assessment of the motivation for our Western acceptance of Cartesian dualism being largely political, she believes that such ridicule, and other forms of rejection, are "in the last instance based on the threat" that

¹⁰² Peat, *Blackfoot Physics*, pp.209-211.

¹⁰³ *Ibid.*, p.210.

¹⁰⁴ *Ibid.*, p.211.

¹⁰⁵ Gaita, *The Philosopher's Dog*, pp.79-80.

¹⁰⁶ Apffel-Marglin, *Subversive Spiritualities*, p.183.

ritual is perceived to pose to the existing, Western order.¹⁰⁷

Bruce Wilshire relates some experiences shortly after losing his daughter that would suggest her continued presence, albeit not in her previous form, for several months after her death. He is well aware that, especially in light of his position as a renowned Western academic, his comments are unusual:

Oughtn't a professor of philosophy ensconced within a great research university at the end of the twentieth century be embarrassed by all this? – Perhaps. But I think one ought rather to be more embarrassed to be deterred from thinking by a feeling of embarrassment.¹⁰⁸

It is in this spirit that I am going to continue to consider the potential presence of invisible non-humans with an open mind. As Wilshire pointed out above: it is impossible for us humans to know how others' mental capacities might manifest themselves, because all we have are our own.¹⁰⁹ Taken seriously, and synthesised with Nagel's bat, this can be applied to all sorts of capacities, including the potential existence of a capacity to be a spirit.

Even when arguing from an exclusively Western point of view (and thus deferring participationalist considerations until **Part 2**), it would be perfectly coherent for Western science not to know about these: Western science examines phenomena that Western humans become aware of and then, for whatever reason, become interested in learning more about. Bearing in mind what we have learnt about neuroplasticity above, we Western humans are, at this point in our development, unlikely to be sufficiently attuned to "the More" beyond the realm of Western science to be capable of becoming aware of spirits, irrespective of whether these currently exist as part of our part of the world. This, in turn, implies that there is currently no incentive for Western science to become interested in learning more. As a consequence, scarcity of Western scientific data in relation to spirits does not in itself exclude the possibility of their existence.

5.e. *Runa*, *huaca*, and *sallqa* in the Andes

The Qechua term *runa* does not translate as "human being";¹¹⁰ nor does the term *huaca* satisfactorily translate as "deity", or the term *sallqa* as "a part of non-human nature". These translations provide a starting point for us Westerners on our journey

¹⁰⁷ Ibid., p.87.

¹⁰⁸ Wilshire, *The Primal Roots Of American Philosophy*, p.232.

¹⁰⁹ Ibid., p.76.

¹¹⁰ Rengifo, 'The Ayllu', p.89.

towards understanding, and I find myself intuitively falling back on them, as they are all I have – but to think of them as carrying the same meaning as the original term is a misinterpretation.

The reason for this is that the entire concepts of human beings, of deities, and of non-human nature differ vastly between the Andes and the West. Some overlap does exist, and this is why the above translations can provide a helpful starting point at first glance. At second glance, it all appears to turn out to be quite different.

One obvious reason for this is the interpenetrability of different forms of life: participants in an Indigenous dance, for example, when dressed as another species, do not represent the species they are dressed as, but experience themselves as members of that species.¹¹¹

It is highly unlikely that this is simply a dream or a hallucination. David Abram describes in great detail the layers of affinity between humans and animals in shamanic experiences, and relates his own period of apprenticeship with a shaman in South East Asia while travelling before the final year of his medical degree in the West.¹¹² The apprenticeship culminates in Abram's ability to experience himself as a raven.¹¹³

Abram's experience does not come about as a result of being persuaded to ingest a dose of a psychedelic substance, nor of being humoured when asking for one. It comes about as the result of extensive training of his powers of concentration, of his ability to attune his senses to the raven's, and of his ability to merge several of his senses into one, in a guided quest to attain a capability commonly referred to, and pathologized, by neuroscientists as "synaesthesia".¹¹⁴ Reflecting on the experience, Abram states that "It was through Sonam's tutoring that I came to recognise the astonishing malleability of my animal senses."¹¹⁵ In a similar way to the London cabbies and accomplished violinists

¹¹¹ Ibid., p.93. Vine Deloria offers a more detailed discussion of the issue at stake, stressing that representation, in an Indigenous context, should be understood to denote actual membership of the group represented, as opposed to mere symbolism. (V.Deloria; P.J.Deloria and J.S.Bernstein (eds.), *C.G.Jung And The Sioux Traditions* (Wheat Ridge: Fulcrum Publishing, 2022), pp.191-192.) A Western stepping stone to approach understanding here might be the difference between a pictogram symbolising an athlete at the Olympics on the one hand (with everyone knowing that the pictogram is a mere symbol), and an athlete representing their nation at the Olympics (with everyone knowing that they are an actual member of the group represented) on the other.

¹¹² Abram, pp.201-258. Bruce Wilshire's comments regarding the potential loss of wisdom incurred by premature categorisation, discussed in **section 4.a.**, are arguably relevant to this.

¹¹³ Abram, pp.257-258.

¹¹⁴ Ibid., pp.251-252.

¹¹⁵ Ibid., p.251.

referenced by Holder above,¹¹⁶ Abram's extensive training of his mind-body had resulted in neurophysiological change enabling perception that would previously have been out of his reach.

In the Andes, as a corollary of the interpenetrability of species, a deep sense of equivalency is experienced.¹¹⁷ Conversation with a stone, for example, might be misunderstood in the West as the stone being humanised, when in fact it involves nothing of the sort: there is no need for the stone to be humanised before it can be communicated with. The stone is already alive as a stone, and "the whole *Pacha* is a community of interconnected living beings, in which man and water are as important and alive as are the *huacas* and the wind in terms of the regeneration of life."¹¹⁸ Not only is the Western dichotomy between animate and inanimate inapplicable here,¹¹⁹ but also Western conceptions of time as exclusively linear,¹²⁰ and of logic as exclusively of the sort involving non-contradiction and an excluded middle.¹²¹ Change is expected, and not inevitably understood as progress towards improvement¹²² in a worldview that involves cyclical as well as linear time, and that centres on loving the world as it is.¹²³ New life forms are understood as already being contained in existing ones;¹²⁴ death is understood as going on to live according to another form of life.¹²⁵

With regards to conversation between members of the *Ayllu*, PRATEC members stress the importance of understanding what each life form is saying, with each sign being an

¹¹⁶ Holder, 'James And The Neuroscience Of Buddhist Meditation'.

¹¹⁷ Rengifo, 'The Ayllu', p.97.

¹¹⁸ Ibid., p.97. A stepping stone to understanding of what is likely to be meant here is offered by Kyle Whyte's reference to "diverse animacies" in different species. (K. Whyte, 'An Ethic Of Kinship' in *Kinship: Belonging In A World Of Relations, Vol.05: Practice*, ed. by G. van Horn, R.W. Kimmerer, J. Hausdoerffer (Libertyville: Center for Humans and Nature Press, 2021), pp.30-38 (p.32).) We are not being asked to think of the stone as leading a similar type of life to a human being: we are being asked to think of the stone as being alive in a way that may be very different from our own.

¹¹⁹ Examples do exist of references to Indigenous worldviews that appear to distinguish between animate and inanimate beings: for example, by Irving Hallowell, cited in G. Harvey, *Animism: Respecting The Living World* (London: C. Hurst & Co., 2017), p.31, while Cordova, from a Navajo perspective, states that since matter without energy is inconceivable in Indigenous thinking, nothing in the universe can be truly inanimate: Cordova, *How It Is*, p.150.

¹²⁰ Rengifo, 'The Ayllu', p.96.

¹²¹ Ibid., p.101.

¹²² Ibid.

¹²³ Apffel-Marglin, 'Introduction: Knowledge And Life Revisited', p.34.

¹²⁴ Rengifo, 'The Ayllu', p.96.

¹²⁵ Ibid., p.101. Due to Western conceptions of time usually concentrating almost exclusively on its linear features, these concepts may appear unusual at first. However, even Western science appears to be beginning to consider time beyond the exclusively linear, as demonstrated, for example, in **Appendix B**. An accessible case study of a postgraduate student of botany interacting with such complexities is provided in **Part 2**.

invitation to give an answer, to attune oneself, so that life flows.¹²⁶ Ritual – which is interwoven with day-to-day activity¹²⁷ – amplifies the senses for this.¹²⁸ Decisions are made jointly by *Ayllu* members of different species, with authority being situational,¹²⁹ and ritual itself being understood as custom as opposed to habit.¹³⁰ It is not institutional continuity that is aimed for here, but the inclusion of all forms of life in a conversation that, at the same time as flowing from ancestral tradition, is shaped by situational responsiveness.

Besides the interpenetrability of species, and the resulting absence of any hierarchy or any dichotomy between animate and inanimate members of the *Ayllu*, several additional differences between worldviews render the above attempts at translation inadequate except as a starting point on a journey towards understanding.

It appears, for example, to be profoundly misleading to imagine *runas* to be conceivable solely as individual human beings. Research output generated by Western developmentalists was roundly rejected by those concerned, on the grounds that it was unrealistic to base the research on this assumption.¹³¹ A new study had to be commissioned, and found that

agency in all affairs involving irrigation could only be located in the relationships among several entities: a source of water, a human community, a community of deities, a network of irrigation channels, and the fields to be irrigated (...) they found that agency could only be located in the orchestrated activity of all of these entities together.¹³²

The relevance of shared learning and creation in relationship is going to be further explored in **Part 2**. For now, a conversation between an Andean grandmother and her granddaughter further illustrates the point made by critics of the above study: the Western conception of our human bodies solely as individual entities enclosed by skin is not applicable to the Andean worldview.¹³³ In the context of a man and a woman experiencing their first sexual intercourse, reference is made to a unity between the

¹²⁶ Rengifo, 'The Ayllu', p.106.

¹²⁷ J.Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', in *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development*, ed. by F.Apffel-Marglin with PRATEC (London/New York: Zed Books, 1998), pp.51-88 (p.61).

¹²⁸ Rengifo, 'The Ayllu', p.106.

¹²⁹ Ibid., p.116.

¹³⁰ Ibid., pp.118-120.

¹³¹ Apffel-Marglin, *Subversive Spiritualities*, p.134.

¹³² Ibid., p.134.

¹³³ Ibid., p.141.

water in our bodies and the water outside, and to the relevance of this to a couple's union needing to be blessed by the world that they are embedded in.

The world that Andeans are embedded in includes *huacas* as naturally as it does visible members of the *Ayllu*. The above-mentioned conception of ritual and labour as one is testament to this.¹³⁴ *Huacas* are not conceived as deities in the sense of supremacy or transcendency: an Andean “converses and reciprocates with them on terms of equivalence; he or she recognises that the *huacas* are incomplete just as he or she is, that they make mistakes (...).”¹³⁵ – “Since there is no (...) supernatural world – the Andean deities or *huacas* (...) are within the world and are, like any other being, treated like persons.”¹³⁶

Against this background, a vital piece begins to shine through in the mosaic of our emerging understanding of the profound sense of equivalency mentioned above: without a transcendent God, nature itself carries its own meaning, without deriving it from an outside entity's sanction. Without a transcendent God's mandate, we humans – even if we were solely human, and solely individual, as we in the West would assume – have no base to our claim to supremacy, neither in the form of exploitation nor in the form of stewardship. In a world where the sacred is as natural a part of the material world as any stream we may place our hand in, we have no mandate to take decisions unilaterally. *Apus* (deity mountains) and potatoes are experienced as relatives, as are all other *runas*, *huacas*, and *sallqas* who are members of the *Ayllu*.¹³⁷ Reciprocity is not experienced as obligation, but as nurturing with affection¹³⁸ of those we live in communion with.

In a world where the sacred is in the material, and where spirits eager to converse are waiting for us to become attuned,¹³⁹ nothing is more natural than to listen to the moon before pruning the trees,¹⁴⁰ if only we can hone our senses to be ready to hear it.

5.f. Some specific barriers to understanding

5.f.i. Difficulties may persist even in the presence of expertise and integrity

¹³⁴ Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', p.61.

¹³⁵ *Ibid.*, p.62.

¹³⁶ Rengifo, 'The Ayllu', p.98.

¹³⁷ *Ibid.*, p.91.

¹³⁸ *Ibid.*, p.92.

¹³⁹ *Ibid.*, p.106.

¹⁴⁰ *Ibid.*, p.116.

Western interest in Traditional Ecological Knowledge (TEK) has begun to emerge¹⁴¹ and, with it, the growing realisation that Indigenous TEK cannot be separated from Indigenous worldview.¹⁴² If ritual and labour are one, in a knowledge system where meaning and the sacred are contained in the material as opposed to transcending it, then it is unrealistic only to look at labour, and to expect that this will allow us to see the knowledge system concerned in its entirety.

Part 2 of this thesis contains a detailed discussion of this point. For now, it may be helpful to consider that even within the Western worldview, there is, for example, growing acceptance of the role of emotion in knowledge acquisition,¹⁴³ and of the role of existing paradigms in shaping knowledge production.¹⁴⁴ In a world where ritual and labour are one, it is impossible to separate the material actions performed by human members of a group from their ritual relationships with non-human members.¹⁴⁵

This realisation is turning out to be hard-won. Even those of us Westerners who genuinely aim to learn as opposed to starting from the assumption that we know best, seem to have difficulty refraining from imposing our incomplete understanding on what we find, for the simple reason that we perceive it to be complete before it is. There is every possibility that I am doing this now. The very point is that it would be impossible for me to see that I was doing it, at least until my learning had grown beyond its current level, providing a new vantage point and enabling me to see my error.

Fikret Berkes appears to be an author of impeccable intellectual honesty, without the slightest trace of any intention to discriminate. Citations in this thesis are from the fourth edition of his *Sacred Ecology*, published in 2018,¹⁴⁶ and it contains prefaces to previous editions dating back to the very first in 1999. From these prefaces, it is possible to trace the intellectual and emotional journey involved. Some detail on this is provided in **Appendix D**.

As well as having the integrity to allow the reader to chart the journey of his work through his prefaces, Berkes is as good as his word: his notes and bibliography are

¹⁴¹ Berkes, *Sacred Ecology*, p.xiii.

¹⁴² *Ibid.*, p.276.

¹⁴³ K.Milton, *Loving Nature: Towards An Ecology Of Emotion* (London: Routledge, 2002), p.149.

¹⁴⁴ Bohm and Peat, *Science, Order, And Creativity*, pp.1-52.

¹⁴⁵ E.Grillo, 'Development Or Decolonisation In The Andes?' , in *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development*, ed. by F.Apffel-Marglin with PRATEC (London/New York: Zed Books, 1998), pp.193-243 (p.224).

¹⁴⁶ F.Berkes, *Sacred Ecology*, 4th ed. (Abingdon: Routledge, 2018).

generous, and the list of Indigenous authors contained is impressive.

And yet, despite Berkes' impeccable credentials, as well as his obvious integrity, shining through all that has just been said, many examples can be found not only in this book, but also in papers co-authored by Berkes, of his patchy acknowledgement of the inseparability of ritual and labour in Indigenous practice. As cited above, the final chapter of *Sacred Ecology* does make clear reference to this.¹⁴⁷ However, earlier chapters, as well as papers published prior to the fourth edition of *Sacred Ecology*, do not consistently do so, and they also – on occasion, and presumably inadvertently – slip into applying a Western yardstick for validation as opposed to using it as an aid to generate increasingly knowledgeable questions in a quest to genuinely approach a new vantage point. For example, traditional knowledge is spoken of as having come “of age probably in the 1990s”¹⁴⁸, when it is clear from the context that it is not a particular breakthrough within the knowledge system itself that is meant by this, but its beginning acceptance into Western thought. It is also clear, after the above section of this thesis outlining PRATEC's description of the Andean view of kinship and reciprocity in the *Ayllu*, that to cite PRATEC's work and then to refer to the shaman as a “powerful force in the control and management of resources”¹⁴⁹ is to miss the point made by PRATEC entirely. Indigenous strategies for relating to the land are then described entirely in terms of their material side; the ritual relationship is omitted.¹⁵⁰ A paper co-authored by Berkes, published two years before the fourth edition of *Sacred Ecology*, then shows some sensitivity to the unity of ritual and labour,¹⁵¹ but lays the blame for difficulties in collaboration with the West that might arise from this squarely at the door of the Indigenous worldview:

We also observe though two limitations to Indigenous sciences' ability to collaborate effectively with sustainability science. (...) The second related critique is that Indigenous science is integrated into the spiritual belief systems of Indigenous communities adding to difficulties in finding protocols to share this knowledge with the West.¹⁵²

The wording is, “limitations to Indigenous sciences' ability to collaborate,” not “difficulties arising from the presence of two very different vantage points”. Despite Indigenous

¹⁴⁷ Ibid., p.276.

¹⁴⁸ Ibid., p.55.

¹⁴⁹ Ibid., pp.78-79.

¹⁵⁰ Ibid., for example pp.106-107.

¹⁵¹ J.T.Johnson, R.Howitt, G.Cajete, F.Berkes, R.P.Louis, and A.Kliskey, 'Weaving Indigenous And Sustainability Sciences To Diversify Our Methods', *Sustain Sci* (2016) 11:1-11, <DOI 10.1007/s11625-015-0349-x> [Accessed: 20 March 2023], p.8.

¹⁵² Ibid., p.8.

involvement in co-authoring this paper, no mention is made of any need for Western sustainability science to adapt, and to learn to cast its epistemological and metaphysical net wider.

As stated above, it is clear that Berkes is an author of impeccable credentials and of utmost integrity. His *Sacred Ecology* contains a wealth of insight with regards to, for example, fuzzy logic being used as a potential Western starting point for approaching aspects of the Indigenous vantage point. If the work of this accomplished author can so easily be shown to have fallen into some of the traps of Western misrepresentation of Indigenous thought, then I have little hope that mine is going to be free from it. It is not: coming from a Western vantage point, it cannot be.

This section has given a brief outline of some errors that may arise even in the presence of expertise and intellectual honesty. The following section is going to consider what may result when these are absent.

5.f.ii. What may happen in the absence of sufficient relevant background and sensitivity: McPherson/Rabb and others on outside view predicates

Dennis McPherson's and Douglas Rabb's *Indian From The Inside* was written to remedy the scarcity of options available to prospective students of Native American philosophy.¹⁵³ The shortage of programmes and of literature available at the time of publication reflects a wider issue of discrimination against Indigenous groups and individuals around the world, while the remedy provided by McPherson and Rabb, besides giving a detailed history of the problem, also provides additional insight into the links between discrimination and epistemic injustice.

When McPherson's grandmother told a young McPherson not to act like an Indian, what she meant by this was an admonition not to act like a European conception of one.¹⁵⁴ In the same vein, the authors relate the story of Patrick Russell LeBeau who, after 23 years of teaching Native Studies to groups ranging from elementary schoolchildren to adults, at the time of writing had yet to come across his first student to draw a realistic picture of a Native American when asked: students drew tepees, warriors, and all manner of stereotypes, but never LeBeau, who was standing in the classroom in front of them.¹⁵⁵

¹⁵³ McPherson and Rabb, p.5.

¹⁵⁴ Ibid., p.25.

¹⁵⁵ Ibid., pp.186-187.

LeBeau's story illustrates what was said in the previous section on Fikret Berkes' work: even those of us who are better informed than most, and who arrive with the very best of intentions (after all, LeBeau's students had just enrolled on a Native Studies course), are at least at times going to be incapable of seeing the reality in front of us for what it is, because our perception has been influenced by what we think there is going to be.

McPherson's childhood experience shows what may happen next: those affected – in McPherson's case, his grandmother – may internalise the outside view they are presented with, in all its inaccuracy. Unsurprisingly, McPherson and Rabb cite Sartre in this regard,¹⁵⁶ and go on to reflect on the role of the residential school system in bringing about this internalisation of negative stereotypes prior to the development of critical capacity.¹⁵⁷ McPherson grew up looking for "savage" traits in his ancestors and, as a corollary, in himself.¹⁵⁸

5.f.iii. What may happen once "othering" has taken hold: education as an instrument of colonialism, and the role of the Western conception of knowledge in blurring the boundaries between helpful and unhelpful development

Before proceeding any further with McPherson and Rabb's history of discrimination against Native American populations and its epistemic consequences, it is important to stress that such mechanisms of control through education, and the damage inflicted, are not in any way particular to their native Canada, but appear to fall into a similar pattern the world over.

Cordova was expelled from summer school and threatened with perdition for suggesting that the Sun was necessary for life on earth.¹⁵⁹ Vitebsky, in relation to his experience with the Even in Soviet as well as in post-Soviet Siberia, demonstrates that irrespective of the particular political system involved, the very fact of colonisation by a "modern" power entails instrumentalisation of the school system for colonialist purposes.¹⁶⁰ Diane Bell's history of discrimination against Aboriginal peoples in Australia includes forced removal

¹⁵⁶ Ibid., p.24.

¹⁵⁷ Ibid., p.200.

¹⁵⁸ Ibid., p.25.

¹⁵⁹ Cordova, *How It Is*, p.38.

¹⁶⁰ P.Vitebsky, *Reindeer People* (London: Harper Collins, 2005). The Even are a nomadic, Indigenous tribe in the Verkhoyansk Mountains of Siberia. (Ibid., p.399.)

of children.¹⁶¹ Linda Tuhiwai Smith, besides also making reference to the residential school system as an undermining influence in New Zealand,¹⁶² describes the tertiary education system in her country as alienating for Indigenous academics to this day. A further example of this is provided by Apffel-Marglin by means of the experience of Marcela Machaca when attempting to challenge the exclusive acceptance of Western science in the agronomy department of a university in Peru.¹⁶³ It is for reasons such as these that Vine Deloria and Daniel Wildcat refer to education as the "handmaiden of development".¹⁶⁴ In the same vein, Grimaldo Rengifo, for PRATEC, not only denounces the Western school system as an instrument of coercion into compliance,¹⁶⁵ but locates the root of its inability to facilitate the emergence of wisdom in the very root of the Western worldview: citing Raimon Pannikar, Rengifo states that it is the very separation of humanity from nature, and our resulting loss of contact with reality through participation, that has transformed knowledge from empathy into knowledge of the "other" and, as a result, turned education into a justification for the conquest of nature.¹⁶⁶ It is clear that any worldview based on this is going to be unwilling to accommodate Indigenous conceptions of kinship and reciprocity: Rengifo wryly concludes that despite outwardly proclaiming the role of knowledge as an end in itself, the colonists arriving in the Andes sent soldiers rather than poets.¹⁶⁷

5.f.iv. Keeping the "other" in its box: past and present manifestations of discrimination against Indigenous peoples in the Americas

McPherson and Rabb's history of discrimination against Indigenous peoples in North America makes for uncomfortable reading. As does Alcoff,¹⁶⁸ they make reference to de Las Casa defending Native American rights in the 16th century.¹⁶⁹ As does Alcoff, they find

¹⁶¹ D.Bell, 'Respecting The Land: Religion, Reconciliation, And Romance – An Australian Story', in *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, ed. by J.Grim (Cambridge: Harvard University Press, 2001), pp.465-484 (p.470).

¹⁶² Smith, *Decolonising Methodologies*, p.67.

¹⁶³ Apffel-Marglin, *Subversive Spiritualities*, pp.66-70.

¹⁶⁴ Deloria and Wildcat, p.124.

¹⁶⁵ G.Rengifo, 'Education In The Modern West And In The Andean Culture', in *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development*, ed. by F.Apffel-Marglin with PRATEC (London/New York: Zed Books, 1998), pp.172-192 (pp.186-191).

¹⁶⁶ *Ibid.*, pp.172-174.

¹⁶⁷ *Ibid.*, p.183.

¹⁶⁸ L.M.Alcoff, ., 'Philosophy And Philosophical Practice: Eurocentrism As An Epistemology Of Ignorance', in *The Routledge Handbook Of Epistemic Injustice*, ed. by I.J.Kidd, J.Medina, G.Pohlhaus Jr., (Abingdon: Routledge 2017), pp.397-408.

¹⁶⁹ McPherson and Rabb, p.27.

little to redeem Western behaviour in its relationship with Native Americans in the years since.

Historically, European expansion in North America involved Spanish, French, and British colonists. Exploitation of Natives was largely driven by the fur trade.¹⁷⁰ What is now known as “aboriginal title” dates back to the Royal Proclamation issued by King George III of Britain in 1763 (i.e., a few years before American independence), and forms the basis of the reserve system, as well as settling some disputes between France and Britain in relation to North American territories that arose in the aftermath of their war in Europe. It also curtailed Native Americans’ rights to what little land they were now left with, as opposed to securing these: although the Royal Proclamation enshrined Native Americans’ right to use their territories as hunting grounds, it did not enable them to sell land to anyone but the Crown.¹⁷¹ Predictably, in a capitalist system, curtailment of a group’s rights to accumulate capital has since led to worse outcomes for this group. A contemporary account of this is provided, for example, in Velma Wallis’s *Raising ourselves*.¹⁷²

Philosophically, McPherson and Rabb trace Western tendencies to misogyny and anthropocentrism not only to Cartesian thinking, but as far back as reason being placed above sense perception in Plato’s cave.¹⁷³

While it is clear that even on the assumption of a Western paradigm, where land is viewed as a commodity to be bought and sold, to remove one group’s ability to sell land to anyone but the Crown is to discriminate against them, the authors point out that the root of the problem goes deeper than this: in an Indigenous world, the idea of “title” is an alien concept, and was imposed from the outside without the consent of those involved.¹⁷⁴ PRATEC’s description of the profound relationships of kinship involved in the mutual nurturance practised in an *Ayllu* can be understood as an expression of this.¹⁷⁵ The Western expectation of being able to earn land through labour, based on John

¹⁷⁰ Ibid.

¹⁷¹ Ibid., pp.28-29.

¹⁷² V.Wallis, *Raising Ourselves: A Gwich’in Coming Of Age Story From The Yukon River* (Kenmore: Epicenter Press, 2002).

¹⁷³ McPherson and Rabb, p.31.

¹⁷⁴ Ibid., p.36.

¹⁷⁵ G.Rengifo, ‘The Ayllu’.

Locke's thought,¹⁷⁶ and the Western perception of "undeveloped" land being there for the taking, do not exist here.¹⁷⁷

McPherson and Rabb make reference to an argument put forward by some that at least Canada is in fact a Métis country with regards to myths and values. The authors remain unconvinced by this, however, giving examples of Native populations being seen as a problem rather than as contributors.¹⁷⁸

What follows is a series of examples of further treaties benefiting European settlers, but not Native Americans,¹⁷⁹ and the all-too-familiar pattern¹⁸⁰ of some benefits being given "to a small privileged minority of Aboriginals in return for their help in pacifying the majority."¹⁸¹

The Indian Act of 1876 was drawn up to "civilise" Indians by requiring them to meet certain educational and behavioural standards set by the colonial power and, for those thus assimilated, to grant citizens' rights. This enfranchisement process was not repealed until 1985 and, even though "civilisation" recently became reversible, reversal involves loss of certain citizens' rights to this day.¹⁸²

Perhaps most disturbingly, the authors' final words at the end of the chapter, which are usually those that an author wants the reader to remember, are not a recapitulation of the fact that Native Americans have been prevented from interacting with the land that they belong to in a way that is consistent with the relationships involved. The authors' final words at the end of the chapter, which are usually those that an author wants the reader to remember, recapitulate the extent of the damage inflicted by the use of outside view predicates in the language used in the treaties cited:

Such outside view predicates prevented the British and the Americans from seeing Native American Indians for who they really were, and ultimately caused the Indians, themselves, to lose sight of who they really were.¹⁸³

¹⁷⁶ For example, A.Tuckness, 'Locke's Political Philosophy', *The Stanford Encyclopedia of Philosophy* (Winter 2020 Edition), ed. by E.N. Zalta, URL = <https://plato.stanford.edu/archives/win2020/entries/locke-political/> [Accessed: 20 March 2023].

¹⁷⁷ McPherson and Rabb, pp.37-38.

¹⁷⁸ *Ibid.*, pp.42-45.

¹⁷⁹ *Ibid.*, pp.48-54.

¹⁸⁰ For example, Vitebsky, pp.40-55, and Grillo, 'Development or Decolonisation In The Andes?', p.207.

¹⁸¹ McPherson and Rabb, p.55.

¹⁸² *Ibid.*, pp.57-59.

¹⁸³ *Ibid.*, p.59.

The authors choose their words carefully throughout the book. It is unlikely that the choice they made here is a random one. The more likely explanation is that they are conveying that the damage inflicted by the lack of understanding displayed by the dominant group of humans is even greater than the damage inflicted by the disturbance of the relationship between Indigenous humans and their land, when we already know that the latter is capable of causing a measure of distress that some have found impossible to survive.¹⁸⁴ In other words, it is likely that the effects of epistemic injustice are being experienced as even more damaging here than a related form of loss that has already been shown to have been capable of causing death.

At the time of publication of Anne Waters' anthology, eight Indigenous academics in the USA held PhDs in Philosophy.¹⁸⁵ Thirteen years later, in 2017, according to a blog post by Kyle Whyte on the *politicalphilosopher.net* web site edited by a member of staff in the Philosophy department at the University of Michigan,¹⁸⁶ their number had increased to about twenty – if one counted those retired, and those who were close to obtaining their PhDs. The author has been active in the APA's newsletter dedicated to Indigenous philosophy, and it is clear from his blog post that he is familiar with Anne Waters' work, as well as with Linda Tuhiwai Smith's thinking. This makes him unlikely to have missed anyone. His blog post goes on to provide a list of institutions in the United States providing opportunities for Indigenous research. There are no more than a handful.

Even at the time of writing – in 2017 – Whyte concludes that in the United States, a philosopher's choice to engage in Indigenous research and any success in their professional career may well be mutually exclusive, although he expresses hope for the future.¹⁸⁷ Several years after the publication of Kyle Whyte's blog, an article by Andrea Sullivan-Clarke published while this thesis was being researched shows that the problems continue.¹⁸⁸

¹⁸⁴ Cajete, *Native Science*, p.188.

¹⁸⁵ A.Waters, *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing, 2004), p.xv.

¹⁸⁶ K.Whyte, 'Indigenous Research And Professional Philosophy In The U.S.', 3 February 2017, *Philosopher* blog, 3 February 2017, <<https://politicalphilosopher.net/2017/02/03/featured-philosopher-kyle-whyte/>> [Accessed: 20 March 2023].

¹⁸⁷ Ibid.

¹⁸⁸ A.Sullivan-Clarke, 'A Case Of Epistemic Injustice', in *APA Newsletter On Native American And Indigenous Philosophy*, Vol.21, No.1 (Fall 2021), URL: <<https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/NativeAmericanV21n1.pdf>>, pp.3-4 [Accessed: 20 March 2023].

5.f.v. The interaction of discrimination and innocent ignorance: implications for knowledge transfer and collaboration

Where does this leave us with regards to any potential knowledge transfer between the two worldviews, and any potential future collaboration?

Despite the bleak picture painted by Kyle Whyte, we could hope that knowledge transfer will simply take place outside an academic setting. At first glance, this appears reasonable: it has been suggested that Indigenous philosophising typically takes place outside an academic setting anyway.¹⁸⁹ At second glance, however, it becomes clear that Indigenous philosophising taking place outside an academic setting does not automatically imply that knowledge transfer to non-Indigenous groups can take place in the same way. Discrimination, and resulting epistemic injustice of Miranda Fricker's types 1 and 2 would have to be eliminated and,¹⁹⁰ in a world where some citizens' rights are still being removed from Indigenous individuals who choose to reverse their process of "civilisation",¹⁹¹ it is obvious that this has not yet been achieved.

In addition, it was shown that we are going to struggle with the further form of epistemic injustice caused simply by the occupation of different vantage points, and the impossibility of a complete phenomenological reduction, which elements of Berkes' work have been shown to have fallen victim to, and which I fully expect to be victim to as I write: the form that even in the absence of any intent to discriminate can only be remedied by a continuing process of familiarisation.

The situation is exacerbated when the two forms of epistemic injustice interact. For example, in McPherson and Rabb's chapter on the history of discrimination against Indigenous peoples in Canada,¹⁹² reference is made to discrimination against Indigenous peoples by only allowing them to sell their land to the Crown, when everyone else's land transactions were not restricted to this. There can be no doubt that this must have been intentional. The underlying assumption of everyone understanding land to be a commodity to be bought and sold, however, was arguably a case of ignorance rather than

¹⁸⁹ Cordova, *How It Is*, pp.59-60.

¹⁹⁰ M.Fricker, 'Evolving Concepts Of Epistemic Injustice'. Fricker's two types of epistemic injustice are introduced at the beginning of **section 4.d.** .

¹⁹¹ McPherson and Rabb, p.59.

¹⁹² *Ibid.*, pp.23-59.

intent: it is part of our Western, Wittgensteinian riverbed and, as such, we are prone to failing to see that it does not necessarily go without saying. If an Indigenous person, at the time that the legislation was issued, had spoken out to explain that the land could not be sold, it is likely that their Western counterpart would have misunderstood them and thought they were trying to say that the price was not right. It is thus through the interaction of ignorance without intent on the one hand, and discrimination with intent on the other, that utmost damage was inflicted.

Every year, at least when there is not a pandemic, school leavers from all over the West set out to begin gap years in poorer countries. They are eighteen; they want to expose themselves to new experiences and in the process, they want to help. It is unlikely that many of them want to subjugate anyone. And yet, many return with the uncomfortable impression that their presence has not had an altogether positive effect.¹⁹³ I would agree that, as the report states, it is in part simply innocent ignorance that is preventing the positive contribution that they are eager to make. An eighteen-year-old raised in the West is unlikely to know, for example, that the Andean worldview is based on loving the world as it is and that from this, it follows that *chacras* are first and foremost planted to support diversity. They are therefore unlikely to realise that Andean agriculture does not have a concept of weeds and,¹⁹⁴ from a genuine wish to help, while blissfully unaware of their imposition based on tacit assumptions carried over from another world, may remember weeding their parents' vegetable patch, start weeding where they are now, and inadvertently ruin a *chacra*.

However, I would also argue that innocent ignorance turns into a much more powerful negative influence if it is embedded in a system in which discrimination is still rife, and in which someone's innocent willingness to help may be co-opted into, for example, one of the development projects referred to by Grillo, involving development aid given with the intent of facilitating the deployment of international capital to serve its own purposes.¹⁹⁵ Apffel-Marglin makes reference to similarly discriminatory projects from a feminist point of view, whereby birth control as a developmentalist "feminist" intervention was imposed on women in an Indigenous society at the very moment it was beginning to recover from

¹⁹³ D. Boffey, 'Students given tips to stop gap year travel being "a new colonialism"', *The Guardian*, 30 July 2011. Available at: <https://www.theguardian.com/education/2011/jul/30/gap-year-volunteers-demos> [Accessed: 20 March 2023].

¹⁹⁴ Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', p.71.

¹⁹⁵ Grillo, 'Development Or Decolonisation In The Andes?', p.214.

demographic collapse experienced as a result of colonisation.¹⁹⁶ Vandana Shiva provides further examples of Western development in poorer countries mainly benefiting the West, which she describes as “maldevelopment”.¹⁹⁷ Such development projects, aimed at control and exploitation, will run all the more smoothly if their front line is staffed by those who can smile genuinely as they say truthfully that they are trying to help.

5.f.vi. From assumptions taken out of context to assumptions leading to subjugation: perceived objectivity as a risk factor

Innocent ignorance may not always manifest in the shape of a youthful gap-year student. We Westerners, of all ages, genuinely struggle to understand what is being said to us by those who are not Western. Apffel-Marglin, arguably one of the most experienced bi-cultural academics in the world, openly admits to initially failing to understand that the reason for women being barred from making a particular offering during an Andean ritual was that the offering was being made *to* the women, and that it would therefore make no sense for the women to make an offering to themselves.¹⁹⁸

Such mistakes are easy to make. The discredited study cited by the same author above, which was rejected by the community concerned, was based on underlying assumptions that are so much part of our Western, Wittgensteinian riverbeds that for most of us, they would go without saying, and we would make them even in the absence of any intent to discriminate. According to Apffel-Marglin, some of these were: that a boundary exists between humans, non-humans, and other-than humans; that time is linear and measurable; that we are individuals.¹⁹⁹ These tacit assumptions serve us Westerners well in our own worlds. It is when we fail to realise that we are making them, and continue to make them in a world where they do not fit, that misunderstandings occur.

Mere potential to create misunderstandings is a difficulty that would apply to any tacit assumption continuing to be made in an incompatible context. A Mohawk friend of David Peat’s relates an amusing story of a reception being put on for a visiting Cree sports team, with the Mohawk hosts working on the tacit assumption that to be a good host was to lay on a spread that vastly exceeded their guests’ ability to consume, and the Cree visitors

¹⁹⁶ Apffel-Marglin, *Subversive Spiritualities*, pp.130-132.

¹⁹⁷ V.Shiva, *Staying Alive: Women, Ecology And Survival In India* (London: Zed Books, 1988), ch.1, <URL: www.arvindguptatoys.com/arvindgupta/stayingalive.pdf>, [Accessed: 20 March 2023].

¹⁹⁸ Apffel-Marglin, *Subversive Spiritualities*, p.124.

¹⁹⁹ *Ibid.*, p.133.

working on the tacit assumption that to be a good guest was to show respect by eating all before you. Both assumptions were rooted in the respective histories and worldviews of the tribes involved, and in their particular relationships with the non-human parts of nature and the spirits on their respective land. The feast ended in confusion on both sides, and in some illness on the part of some Cree elders, but apparently no lasting damage was done.²⁰⁰

However, there is a case to be made that the trouble has an added dimension if the assumptions concerned are Western ones: the Western worldview is based on what Burkhart terms “delocality”, meaning that we Westerners have difficulty appreciating that patterns encountered may not necessarily be universal.²⁰¹ This is likely to be a consequence of our Cartesian heritage, and of Boyle’s establishment of the first laboratories based on conditions designed to remove any trace of subjectivity, allowing us to believe we could now control nature by placing it on Bacon’s rack,²⁰² and discover universal laws that would enable us not only to predict what nature was going to do, but also to determine what it was going to do by determining the relevant input parameters.²⁰³ A worldview that allows itself only to consider those aspects of reality that appear to be universally reproducible is in danger of reversing the argument and believing that whatever it can perceive must therefore be universally applicable. It is for this reason that Grillo concludes:

(...) to adhere to development is to contribute to the legitimisation of this imperialist enterprise and to betray the people. It does not matter if we call it eco-development, endogenous development, or some other term; what is at issue is to find anew the path that belongs to each people, what is at issue is to be ourselves

²⁰⁰ Peat, *Blackfoot Physics*, pp.40-41.

²⁰¹ Burkhart, *Indigenizing Philosophy Through The Land*, p.45.

²⁰² Wilshire, *The Primal Roots Of American Philosophy*, p.16.

²⁰³ Apffel-Marglin, ‘Western Modernity And The Fate Of Anima Mundi’, p.21.

once again, to reject imperialism and its colonising instrument: development.²⁰⁴ In other words, the Western notion of “development”, based on its universalist, Western paradigm, assumes that the desirable state of affairs would be for everyone to develop into a Westerner, while those who are not Westerners are beginning to remind us that this is not necessarily the case.

The Brundtland report, at the same time as being an important milestone for emerging environmental ethics in the West, provides a further example of Western universalism: despite pointing out clearly that it saw an urgent need for action, it did not expect the West to change our lifestyle.²⁰⁵ With hindsight, this represents a staggering failure in self-awareness, to the point that it now begs the question of how it was even possible.

Apffel-Marglin argues that it may well have been due to the Western scientific method being largely based on abstraction: once an assumption of separation between the observing subject and the observed object is made,²⁰⁶ and “objectivity” enforced by rules effectively removing the experimenter from the equation in the laboratory,²⁰⁷ assumption of the observed as a universal is only a small deductive step away. Encumbered by all this, then, it took us centuries, for example, to acknowledge that Newtonian physics, while still as “correct” as it was before, simply did not succeed in telling the whole story. Viewed through the lens of quantum theory, and synthesised with Bohm’s thinking on different

²⁰⁴ Grillo, ‘Development Or Decolonisation In The Andes?’, pp.218-219. For additional clarity, it may be useful to recapitulate here that no one is disputing the usefulness of appropriate change in regions where populations may be struggling: least of all Grillo, arguing as he does from the point of view of his organisation PRATEC. PRATEC not only have a history of supporting profound, appropriate change to agricultural practice in their region since the 1990s (as outlined, for example, in **section 5.c.** above) but their very worldview has been shown (for example, in **section 5.e.**) to understand human relationships with humans and with non-humans as inherently dynamic. Based on this understanding, PRATEC have been running a Higher Education programme at Master’s level in the discipline of agronomy, which is centred on nuclei of Indigenous-led, localised inter-species interaction (for example, J.Ishizawa, ‘Community-Based Learning In The Peruvian Andes: Decolonising The Academic Disciplines’, *Modernity, Frameworks Of Knowledge, And The Ecological Survival Of Plurality*, 7 November 2014, <URL: <http://www.pratec.org/wpress/pdfs-pratec/modernity-frameworks-of-knowledge-and-the-ecological-survival-of-plurality.pdf>> [Accessed: 20 March 2023]). With this background in mind, Grillo’s argument here is best understood to be in the same vein as Shiva’s conception of “maldevelopment” in the previous section: Grillo is rejecting a Western conception of development that works on a tacit assumption of a Western paradigm being universally applicable while failing to respect local relationships and wisdom.

²⁰⁵ Apffel-Marglin, *Subversive Spiritualities*, p.129.

²⁰⁶ *Ibid.*, p.137. For additional clarity with regards to Apffel-Marglin’s thinking, it may be useful to refer to **Appendix B** at this point: it is not the act of producing a laboratory report per se that Apffel-Marglin takes issue with here; it is the tacit assumption of the laboratory report then necessarily being capable of being universalised and applied outside the laboratory (when, in fact, not only quantum theory but also a range of macroscopic phenomena provide evidence to the contrary).

²⁰⁷ Apffel-Marglin, *Subversive Spiritualities*, p.84.

layers of order, Newtonian physics eventually became conceivable as what Peat framed as an expression of Bohm's explicate order, with quantum theory being closer to reflecting the implicate order.²⁰⁸ Prior to these discoveries, the Cartesian abstraction of a clockwork universe reigned supreme.²⁰⁹

Outside the realm of physics, the same underlying worldview can be said to have produced the same tacit assumptions. Apffel-Marglin describes the process as follows:

Since the Enlightenment, the individual has been imagined as the basic atom of the economy, of the polity, and of civil society, preceding all collectivities. (...) The sovereign individual is stripped of all relationships, all particularity of time and place, and all specificity. It is also, of course, radically separated from the non-human and other-than-human worlds. The modern bourgeois individual is an abstraction.²¹⁰

The author goes on to point out that since the eighteenth-century bourgeois revolutions in the West, the modern bourgeois individual has been a white, propertied male.

Once an abstraction is treated as reality, the actual reality that the abstraction was originally based on becomes invisible. The abstraction thus creates a standard, whereby one particular aspect of reality is, without any incontrovertible reason, elevated to become the norm, and whereby those who do not comply with this norm begin to be perceived as an "other", which then becomes objectified, and is perceived to be available to be acted upon.²¹¹

It is thus conceivable that those who published the Brundtland report simply had no idea that it was even a possibility for the West to be any other way than it was.

Once our abstraction is treated as reality, we can no longer see that domination "also works through the construction of a particular type of person and a particular epistemology and ontology."²¹² It is for this reason that – despite *any* paradigm, applied in an incompatible context, being likely to lead to misunderstandings – the Western paradigm in particular, due to its assumption of its own universal applicability, is particularly prone to wreaking havoc in other parts of the world.²¹³

²⁰⁸ Peat, *Blackfoot Physics*, p.170. Bohm's conceptions of explicate and implicate order are going to be discussed in more detail in the section on causal and acausal relationships below.

²⁰⁹ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.1.

²¹⁰ Apffel-Marglin, *Subversive Spiritualities*, p.137.

²¹¹ *Ibid.*, p.138.

²¹² *Ibid.*, p.140.

²¹³ Enrique Dussel's thinking on this point was introduced in **section 3.b.** above, and is going to be explored in more detail in **section 6.f.** and also, in connection with Jacques Ellul's, in **Part 2**.

It is for this reason that I would argue that the importance of Karen Barad's concept of agential realism based on the findings of quantum physics cannot be overestimated for our quest to find a way forward.²¹⁴

Once we accept that our actions, and the way that our actions interact with everyone else's actions, as Cordova's ripples interact with everyone else's ripples in her pond, will result in continuing co-creation of our world, we may find it easier to appreciate that our responsibility is, first and foremost, one of feeling our way towards balance. Once we accept that this balance involves listening to those around us, humans and non-humans alike, we may find it easier to appreciate that different localities may require different actions. Newtonian physics is capable of reliably predicting tides all over the world,²¹⁵ but the advent of post-Newtonian physics, encompassing relativity, quantum theory, and chaos theory, has taught us that the control we may believe ourselves to be able to exercise is neither as complete nor as desirable as we think.²¹⁶

5.f.vii. Locality as a form of engagement and, arising from this, the question of how the West might accomplish it

Our *chacra*-weeding gap-year student from the section above could simply be asked not to do any weeding. If they then showed interest in the philosophical underpinnings, they could be told about the background provided by PRATEC. Either way, this would save the *chacra* from being weeded and ruined: McPherson and Rabb's notion of Indigenous philosophies being transformative philosophies²¹⁷ applies to the deeper realities and relationships involved. It does not preclude the passing on of simple instructions.

However, the passing on of simple instructions from Indigenous to Western populations is not going to be enough to regenerate humanity's wider relationship with non-human nature. Indigenous knowledge is local knowledge.²¹⁸ Western attempts to control nature

²¹⁴ Additional detail on Karen Barad's thinking is provided in **Appendix B**.

²¹⁵ Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.52.

²¹⁶ Cajete, *Native Science*, p.16.

²¹⁷ McPherson and Rabb, p.159.

²¹⁸ For example, Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', p.57.

mechanically are, by their very universalist nature explored above, universal.²¹⁹ As Appfel-Marglin states, and supports with a range of examples,²²⁰ it is not the fact of long-distance trade per se that is the problem when globalisation goes wrong: it is the application of universalised control mechanisms to situations where this is inappropriate. Long-distance trade relationships, without these mechanisms, have been known to operate without the effect of brutalising non-human nature, as Cordova also reports from the history of her own background.²²¹ We are thus faced with two challenges: on the one hand, the West needs to regenerate its own, particular relationships with the various, diverse, localities that it engages with. On the other hand, the world as a whole needs to find ways of repairing, globally, some of the global damage caused by the West failing to do just this. Since neither of the two appears to be going very well without Indigenous involvement at the moment, it seems reasonable to suggest that – besides considerations of fairness and participation – Indigenous involvement may be a fruitful avenue to explore. After all, Indigenous groups demonstrably already knew how to mitigate the occurrence of bush fires when Australia was burning in 2020.²²²

Of the two tasks listed above, neither the West's attunement to its own localities, nor the world's mitigation of global damage caused by Western, universalised, mechanical control, can be accomplished by the simple passing on of a piece of Indigenous information, such as an instruction to our gap-year student that a particular *chacra* is not to be weeded.

The questions are rather: how might it be possible to learn from Indigenous groups to find the attunement to a particular local area that would allow a social group to live in harmony with it? And, how might it be possible to draw on Indigenous and Western

²¹⁹ It might appear tempting at this point to ask the question of where the "line" is: is it being suggested here that activities such as planting seeds are problematic? (Similar questions are going to arise in **Chapter 7** in the context of whaling, and again in **Part 2**, where this is discussed, for example, with regards to our eating vegetables.) However, the points made in **section 5.c.** above showed that decision-making in this regard need not be framed in terms of a "line": what is at stake here, rather, is the difference between unilateral choices to apply what may appear to be universal best practice on the one hand, and an attitude of responsiveness and respect towards humans and non-humans around us on the other. These points are going to be considered in greater depth in the context of performative knowledge processes in **Part 2**.

²²⁰ Appfel-Marglin, *Subversive Spiritualities*, p.48.

²²¹ Cordova, *How It Is*, p.190.

²²² L.Allam, 'Right Fire For A Right Future: How Cultural Burning Can Protect Australia From Catastrophic Blazes', *The Guardian*, 18 January 2020. Available at: https://www.theguardian.com/australia-news/2020/jan/19/right-fire-for-right-future-how-cultural-burning-can-protect-australia-from-catastrophic-blazes?CMP=Share_iOSApp_Other [Accessed: 20 March 2023].

knowledge alike to mitigate some of the global effects of the fact that so far, we haven't managed the former? Abram, for example, is the first to admit that Western science is likely to be helpful in accomplishing this, but he is also aware that on its own, it is going to be insufficient.²²³

These are questions that I believe that McPherson and Rabb's notion of a transformative philosophy is relevant to, and this is where Brian Burkhardt's work is going to be of particular interest.

When Burkhardt speaks of locality and of delocality, he is not only referring to our Western difficulties in accepting the limitations of universalism,²²⁴ although he is clearly doing that too.²²⁵ He is also referring to the deep bonding between Native populations and their land, a relationship which allows for communication between humans, the land itself, and the non-humans and more-than-humans on the land, whereby humans are "not generic delocalised phenomena that can be understood through universal ideas," but "originary and continual manifestations in locality and out of the land."²²⁶ If these expressions of locality are then only apprehended in what Burkhardt refers to as "the delocalised space of reason", this will transform them "into seemingly senseless gibberish":²²⁷ the incompatibility between the world described and the world of the language describing it is preventing understanding in the same way that Vitebsky already observed in Siberia above.²²⁸ This is a divide that cannot be bridged by books alone, and I am aware that, being Western, I am unable to cross it without physical as well as intellectual immersion into a world where ritual and labour are one. Cajete, in this context, speaks of animal rights in terms of a natural democracy. Non-humans' opinion is sought through ritual.²²⁹

Burkhardt speaks of the land as constructing people, and of epistemic locality as a process that operates through kinship.²³⁰ Contrary to the Western, delocalised expectation of a proposition being either false, or alternatively true in all locations, Burkhardt characterises

²²³ Abram, pp.73-74.

²²⁴ It may be useful here to recapitulate the **section 3.b.** footnote clarifying Burkhardt's (and also Enrique Dussel's) use of the term "universalism": it is used by the authors to refer to the normalisation and subsequent treatment as universals even of those ideas and phenomena that are in fact, on closer examination, better understood as particular and/or as localised.

²²⁵ Burkhardt, *Indigenizing Philosophy Through The Land*, p.45.

²²⁶ *Ibid.*, p.131.

²²⁷ *Ibid.*, p.60.

²²⁸ Vitebsky, p.263.

²²⁹ Cajete, *Native Science*, p.168.

²³⁰ Burkhardt, *Indigenizing Philosophy Through The Land*, p.86.

Indigenous knowledge as arising through relational kinship, in a particular context of meaning.²³¹ In this context, sovereignty is then experienced as responsibility more than as authority:²³² in a world where epistemology and metaphysics are inextricably intertwined, what we come to know is in constant interaction with the world we are involved in creating. Burkhart goes further than Abram here: where Abram sees the relationship between narrative and reality as metamorphic,²³³ Burkhart, with apparent parallels to Apffel-Marglin's thinking above,²³⁴ is adamant that ritual – for example, a Navajo sand painting – “literally creates something in locality that manifests a medicine or power from the spirit world into the material world,”²³⁵ and strongly rejects Freud's classification of this as “savage” philosophy.²³⁶ Black Elk, after first experiencing his vision, spends the rest of his life in a quest to perform it in order to co-create the reality that may be capable of saving his world.²³⁷

This interwovenness of epistemology and metaphysics in locality is further illustrated by Cajete:

Native science mirrors and celebrates the cycles of time, space, and being, in individual action, community action, ritual and ceremonial activities, and direct relationships with the land.²³⁸

It is thus inconceivable in the Indigenous world to accumulate knowledge for its own sake: “Native scientific philosophy reflects an inclusive and moral universe.”²³⁹ With Barad, and with PRATEC, those who live on the land, and who learn through their localised relationships, also co-create the land. Equally, the land co-creates those who live

²³¹ Ibid., p.116.

²³² Ibid., p.85.

²³³ Abram, pp.295-296.

²³⁴ Apffel-Marglin, *Subversive Spiritualities*, p.56.

²³⁵ Burkhart, *Indigenizing Philosophy Through The Land*, p.128.

²³⁶ Ibid., p.129.

²³⁷ J.G.Neihardt, *Black Elk Speaks* (Lincoln: Board of Regents of the University of Nebraska, 2014). It may, at this point of the thesis (i.e., before a detailed discussion of Indigenous conceptions of performative knowledge processes has taken place in **Part 2**) be challenging to relate to what is likely to be meant by the Indigenous authors here – not least due to the term “spirit” taking on a different meaning from its Western one when used within a paradigm understanding the sacred to be in the material. A useful stepping stone, for now, may be located in Leroy Little Bear's above description of the manifest as corresponding to the material, and of the manifesting (i.e., of the diverse potentialities capable of being actualised, in a way that shares similarities with wave/particle duality) corresponding to the spiritual.

²³⁸ Cajete, *Native Science*, p.79.

²³⁹ Ibid., p.76. For additional clarity, Cajete is not commenting here on whether or not non-Native groups are capable of being moral and inclusive. His point is that in Indigenous worldviews, the interwovenness of epistemology and metaphysics and, relatedly, the interwovenness of science and philosophy, preclude the development of a fact/value distinction. This point is going to be considered in detail in **section 6.f.** and in **chapter 10** below.

on it. Peat, for example, argues that the assertion by some Indigenous groups that they have “always” lived on their land, and the fact that this assertion may be made even in cases where Western observers report a history of migration, may be understood through René Dubos’ conception of the changing face of the land shaping those who share in it.²⁴⁰ if the people were shaped by the land, then, with or without a history of migration, there is a way in which they would not have been the same people before their lives merged with the life of the land.

What would it take, then, for a post-Enlightenment Westerner to share in the type of symbiotic relationship that began to emerge above, and to be able to feel, and live, as well as think our way towards fruitful communion with non-human nature in our own locality?

Although to become an Indian is not the aim here (we are, at this point, looking for a way to become Indigenised in our own, Western locality), I find it encouraging that Lee Hester relates a story of a Creek elder conducting a question-and-answer session for Hester’s students, and suggesting that might well be possible for a white person to become a Creek if they attended ceremonies, took the medicines and danced the dances for four years.²⁴¹ What Hester appears to be saying is that the physical, emotional, and social transformation required in order to develop a new mode of being, sufficiently acculturated to a locality to allow meaningful interaction with it, can be completed in the time between two Olympics – the time that it took Rebecca Romero to transform herself from an Olympic medallist rower into an Olympic medallist cyclist above.²⁴²

The elder’s suggestion of there being time and experience involved, more than exclusively intellectual understanding, in becoming attuned to a locality’s spirit appears to chime with the ideas emerging above with regards to Indigenous philosophies being transformative philosophies. McPherson and Rabb stressed the importance of

²⁴⁰ Peat, *Blackfoot Physics*, pp.107-108.

²⁴¹ T.L.Hester, ‘On Philosophical Discourse: Some Intercultural Musings’, in *American Indian Thought: Philosophical Essays*, ed. by A.Waters (Oxford: Blackwell Publishing Ltd., 2004), pp.263-267 (p.264). The Creek elder’s comment may become more easily accessible through the discussion of performative knowledge processes in **Part 2**.

²⁴² It is probably at this point that a caveat needs to be applied with regards to the Creek elder’s reference to medicines. What is being suggested here is ritualised use of plants in order to converse with the spirits of the locality concerned, to attain shared understanding. What is emphatically not being suggested here is recreational use of mind-altering substances, taken out of context, and for its own sake: as Cajete points out, the 1960s phenomenon of “pilgrims” to Mexico getting high on peyote, without appropriate cultural and physical preparation, is nothing but another instance of cultural appropriation (Cajete, *Native Science*, p.209).

experiencing (as opposed to being told about) a vision quest, and of interacting with the non-humans and more-than-humans present throughout the experience.²⁴³ They supported their claim conceptually by also making reference to Eastern philosophies.²⁴⁴ The dynamic is further exemplified by Western authors cited in this thesis, who typically relate having a life-changing experience before fully being able to engage with the Indigenous philosophies introduced in their work.

For Apffel-Marglin, it was her work with PRATEC and beyond, where she experienced ritual as involving the participation of non-humans, which proved formative in this respect.²⁴⁵

For Peat, who had already felt a sense that he might be about to enter a new world before participating in the first of the Dialogues,²⁴⁶ it was his participation in the Sun Dance that proved transformative in the sense that it was here, through experience, that he felt he was being given a glimpse of a different form of relationship with place and with time.²⁴⁷

For Abram, as detailed above, it was his apprenticeship with the shaman, Sonam, that changed his perception and honed his senses, merging his participation in the world with that of a friendly raven.²⁴⁸

Since Indigenous philosophies are about relationships,²⁴⁹ it stands to reason that, as any relationship, our relationship with the place we inhabit, and with its non-human and more-than-human fellow inhabitants, would grow best through interaction: this appears to ring true in a variety of contexts, from Wittgenstein's riverbed model,²⁵⁰ to recent research on emotional attunement between humans from different parts of the world,²⁵¹

²⁴³ McPherson and Rabb, p.76.

²⁴⁴ Ibid., p.159.

²⁴⁵ Apffel-Marglin, *Subversive Spiritualities*, p.11.

²⁴⁶ Peat, *Blackfoot Physics*, p.14.

²⁴⁷ Ibid., p.37.

²⁴⁸ Abram, pp.201-258.

²⁴⁹ Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue*, p.89.

²⁵⁰ L.Wittgenstein, *Philosophical Investigations*, ed. by P.M.S.Hacker and J.Schulte (John Wiley & Sons, Incorporated, 2010), ProQuest Ebook Central, p. 105e. Available at: <https://ebookcentral.proquest.com/lib/trinity/detail.action?docID=514408> [Accessed: 20 March 2023].

²⁵¹ A.Jasini, J.De Leersnyder, K.Phalet, and B.Gomes de Mesquita, 'Tuning in emotionally: Associations of cultural exposure with distal and proximal fit in acculturating youth', *European Journal of Social Psychology*, (2018), DOI: 10.1002/ejsp.2516 [Accessed: 20 March 2023].

to the mutual adjustments between a new crew coming together in a rowing boat as, for example, reflected by Frances Houghton, Rebecca Romero's crewmate from 2004: "We would share our learnings from previous crews, but for the performance we were creating we all needed to know what it felt like in this crew."²⁵² The effect was powerful every time: in the run-up to the 2016 Olympics in Rio, two higher-ranked athletes, both experienced Olympic finalists in sweep boats although sculling in a small boat at the time, challenged for seats in Houghton's established eight. On paper, they should have won their seat races hands down, but the eight had already embarked on the process of mutual attunement that was later to win them Silver at Rio. Despite the challengers' otherwise superior performance, seat racing showed them to be slowing the eight down, because they had not had time to grow into attunement to the shared learning that was in the process of taking place.²⁵³

Cajete, in a section of his *Native Science* entitled "Finding Heart",²⁵⁴ stresses the importance of the role of emotion in this relationship, arguing that the survival of our species depends on our ability to develop a passion to strive for ecological personhood. He relates this claim to the Mesoamerican conception of the heart housing our highest form of compassion, thus adding his voice to numerous others cited above regarding the role of emotion in our interaction with the world and, at the same time, linking this to place: "We must begin with our own communities and bioregions."²⁵⁵ He goes on to give an example of a non-Indigenous instructor offering experiential learning based on elements of ancient Greek culture to Western students, and concludes:

Only by truly touching the Earth can we honour and enable the vision and action necessary to recapture the feeling and understanding that we have always been part of a living and 'conscious' Earth.²⁵⁶

Although Cajete affirms the indispensability of ritual as a form of communication with

²⁵² F.Houghton, MBE, *Creating Performance: Learnings From Five Olympic Games* (London: Independent Publishing Network, 2020), p.57.

²⁵³ *Ibid.*, p.44. The process of shared learning and creation referenced by Houghton is going to be explored as a more detailed case study in **Part 2**.

²⁵⁴ Cajete, *Native Science*, pp.288-289.

²⁵⁵ *Ibid.*, p.289.

²⁵⁶ *Ibid.*.

non-human nature in an Indigenous context,²⁵⁷ he is thus, for the Western world, hopeful that our recent history of not having trained our mind-bodies to engage in this form of relationship may not preclude us from finding our own forms of positive participation with the natural world in our own localities in the future.

This means that at least for the first task identified at the beginning of this section – the task of the West regenerating its own, particular relationships with the various, diverse, localities that it engages with – there appears to be a way forward that is available to the West even prior to becoming attuned to any spiritual dimension to non-human nature, and this way forward appears to involve our emotions and our participation, perhaps in the way that Wilshire suggests, continuing James’s thinking, and calling us to experience our world at “a primal level anterior to the very distinction between subject and object.”²⁵⁸

I would argue that, due to the fact that as a society, at least since the Enlightenment, we in the West have not trained our mind-bodies to be receptive to any spiritual dimension to non-human nature, our immediate future in our own, particular localities is unlikely to be able to involve fruitful engagement with ritual. I am emphatically not arguing this from an essentialising position: I am, rather, suggesting that it is our lack of knowledge, experience, and attunement that is currently preventing this. We may well be capable of becoming J.J.Holder’s²⁵⁹ London cabbies in the future but, for now, we have at our disposal only those neurophysiological capacities that we have co-created by our choice to live our lives to date in a different way.

In the longer term, however, I would not rule out the possibility of appropriate attunement, resulting in in our future ability to engage with ritual, being beneficial even in the West. Potential pathways to this are going to be explored in **Part 2** of this thesis, focusing on the possibility of ritual emerging naturally from shared, mutually respectful action.

²⁵⁷ Cajete, *Native Science*, p.93. The importance here of the Indigenous conception of ritual as a responsive form of engagement with the sacred within the material (not as repeated enactment of a preconceived form of behaviour regardless of others’ response) cannot be overstated: Rengifo’s above characterisation of ritual as custom rather than habit, and as whole-bodied exchange with those around him, may be more easily understood by our Western mind-bodies in light of the section on acausal relationships below, as well as in light of the **Part 2** discussion of Indigenous conceptions of performative knowledge processes.

²⁵⁸ Wilshire, *The Primal Roots Of American Philosophy*, p.21.

²⁵⁹ Holder, ‘James And The Neuroscience Of Buddhist Meditation’.

For now, Apffel-Marglin defends the importance of ritual in her *Subversive Spiritualities* : while acknowledging that “for most theorists, rituals work on humans, not on the non-human world,”²⁶⁰ Apffel-Marglin is emphatic that her experience, as well as alternative theoretical work that is beginning to emerge,²⁶¹ suggests that the opposite is true. As a corollary, she describes what she has found as requiring “nothing less than a deconstruction of the modernist onto-epistemology.”²⁶² I suspect that the author’s choice of the indefinite article here (“a” deconstruction, as opposed to “the” deconstruction) may point to the very heart of the matter: if Karen Barad is correct in proposing her agential realism above,²⁶³ then it becomes perfectly conceivable that, as a result of performances of rituals in localities inhabited by Indigenous groups,²⁶⁴ and as a result of rituals not usually having taken place in Western localities since the Enlightenment, spirits may well constitute a very real part of, for example, the Andean world, whereas any spirits that may have constituted part of the reality of, for example, Stonehenge, may currently lie dormant or have gone elsewhere. This would confirm that the Newtonian paradigm may well describe almost all of our currently experienceable reality in the West, while at the same time being ill-suited to exclusive application universally.

The practice of Holy Communion regularly takes place even in Western churches, and there are congregations, even in the West, who would argue that they experience the presence of the Christian God as a reality during this. As previously conceded, I am aware that these are unusual thoughts to put forward in a Western academic setting. As previously argued, I would suggest, with Wilshire, that I believe it to be more fruitful to think something that may be considered embarrassing by my peers, than to allow

²⁶⁰ Apffel-Marglin, *Subversive Spiritualities*, p.15.

²⁶¹ For example, J.Mabit, ‘The Sorcerer, The Madman, And Grace’, in *Contemporary Voices From Anima Mundi: A Reappraisal* , ed. by F.Apffel-Marglin and S.Varese (New York: Peter Lang Publishing, 2020), pp.113-154.

²⁶² Apffel-Marglin, *Subversive Spiritualities*, p.14.

²⁶³ *Ibid.*, p.57. A discussion of Barad’s theory of agential realism, as well as of its overarching relevance to both parts of this thesis and of its (albeit only partial) ability to act as a stepping stone to increased understanding of Indigenous concepts, is provided in **Appendix B** .

²⁶⁴ It may be useful to point out here that (as briefly considered in a first discussion of some terminology at the end of **section 1.a.** , and initially revisited in **section 5.c.** , to be explored in depth in the context of performative knowledge processes in **Part 2**) the term “ritual”, in this context, is used in the sense of customary, responsive (rather than solely habitual), embodied relationship engaged in on the basis of an understanding of there being no dichotomy of sacred vs. material, nor of the individual vs. the whole. These concepts will become more relatable when they are revisited once some discussion of Vine Deloria’s and Benedict de Spinoza’s thinking has taken place in **Part 2** , and, especially, near the end of **Part 2** , in a **Chapter 18** exploration of potential ways forward. For the moment, what is at stake is the claim of our interactions being capable of playing a part in shaping reality – and, as a corollary, of any limitations we may place on our interactions being likely to result in limitations in scope on the realities we participate in creating.

embarrassment to prevent thinking.²⁶⁵

The thrust of Apffel-Marglin's, and Barad's, argument is that different rituals will be capable of enacting different agential cuts, and therefore of resulting in the manifestation of different more-than-humans in different localities.²⁶⁶ Taken seriously, this implies that there is no inevitable dichotomy between the presence of different spirits being reported from different locations on the one hand, and these spirits being actual parts of reality on the other. If Apffel-Marglin, and Barad, are correct with regards to agential realism, then the reality of different spirits in different locations becomes no more surprising than that of different tangible species.

It is important to note that Apffel-Marglin does not take a dogmatic approach to engagement with ritual. The account she gives of her experience with the Fair Trade movement, for example, is unequivocally positive, presenting the movement as a viable alternative to purely capitalist models.²⁶⁷ Existing difficulties involving insufficient consideration of local circumstances are presented as teething troubles, and not as intrinsic fault lines in the project. The Fair Trade movement is presented as a viable force for good in a region that has previously been treated, and is still being treated, unfairly by the West. The author makes this positive assessment despite the fact that the Fair Trade movement, at least at the time of writing, had not made any arrangements for the inclusion of ritual.

At the same time, Apffel-Marglin is clear that she believes that Fair Trade, and similar initiatives, would benefit from the inclusion of ritual. To this end, she recommends the creation of experiential training sessions in shamanic ceremonies for Fair Trade staff.²⁶⁸ She is aware that this may be difficult to achieve: teaching at Peru's universities, at least at the time of writing, was embedded in a Western paradigm, producing a generation of graduates largely unwilling to engage with her proposals.²⁶⁹ In addition, even Westerners with some pre-existing interest in ritual forms of agriculture, for example, may then find themselves having unexpected difficulty engaging with actual ritual practice. Apffel-

²⁶⁵ Wilshire, *The Primal Roots Of American Philosophy*, p.232.

²⁶⁶ Apffel-Marglin, *Subversive Spiritualities*, p.63.

²⁶⁷ *Ibid.*, pp.167-196.

²⁶⁸ *Ibid.*, p.195. It may be useful to bear in mind here that Apffel-Marglin is referring to Fair Trade staff participating in the community of humans and non-humans where the ritual in question developed in locality. She is not suggesting the appropriation of existing ritual for a locality where the relationships involved do not exist.

²⁶⁹ Apffel-Marglin, *Subversive Spiritualities*, p.192.

Marglin relates an amusing example of an American student on a “study abroad” programme with Apffel-Marglin’s regeneration project in Peru, who declined an opportunity to speak to the soil during a ritual that was being conducted, and was later found explaining to a handful of soil why she did not think she could speak to it.²⁷⁰ It seems that Kymlicka and Donaldson’s work on our learnt incompetence in relation to communication with animals²⁷¹ may apply to our communication with other non-humans, too. Apffel-Marglin’s work suggests that this may well extend to parts of nature currently perceived to be inanimate by much of the West.

Due to these intellectual and emotional difficulties, and an added institutional one represented by Fair Trade having its headquarters in the West, Apffel-Marglin, at least at the time of writing, was not optimistic regarding the inclusion of ritual in the Fair Trade movement becoming a reality. Her assessment of Fair Trade with regards to the potential involvement of ritual is clear: Fair Trade’s organisational model places Fair Trade, despite its unequivocally being a benign presence, decidedly into a developmentalist framework, and this precludes the relationship of dialogue between spiritual traditions that would be a prerequisite to drawing on the power of the spiritual side of, for example, plants, and on the power of shamanism to regenerate the forest from which these gain their power – an omission which is at best wasteful, and which the author calls “foolish”²⁷² with regards to humanity’s failure to allow ourselves to be supported by what exists there. Politically, Apffel-Marglin firmly places our omission in the context of continued colonial domination, “where Indigenous modes of knowing and doing are marginalised and delegitimised, and the other-than-humans are dismissed as mere projections, mere anthropomorphising.”²⁷³

However, it appears that all is not lost. Through the work of PRATEC, and through similar projects emerging with the support of PRATEC’s teaching and publications, Indigenous modes of knowing and doing are being affirmed and regenerated. Apffel-Marglin’s case study of her former colleague Marcela Machaca’s experience who, having been top of her year in her degree in agronomy at her university in Peru,²⁷⁴ amply demonstrated her ability to engage with Western science, only to find herself being ridiculed for continuing to support the efficacy of Indigenous ritual, is now testament to this. Faced with the

²⁷⁰ Ibid., p.201.

²⁷¹ W.Kymlicka and S.Donaldson, ‘Animals And The Frontiers Of Citizenship’.

²⁷² Apffel-Marglin, *Subversive Spiritualities*, p.194.

²⁷³ Ibid.

²⁷⁴ Ibid., p.65.

appearance of malfunctioning, cement-lined irrigation channels which had not been ritually introduced or subsequently nurtured, and with the engineers who had built these, Machaca framed the ensuing difficulties in terms of a reduction in vegetation on the edges of the channels for the benefit of the engineers – who had previously demonstrated that they would have been unlikely to engage with the ritual dimension of Indigenous thought – and simply continued her project’s engagement with ritual without the engineers’ involvement.²⁷⁵ There can be little doubt that the cement-lined irrigation channels in question now form part of the “archaeology of development” cited by Grillo above.²⁷⁶

Apffel-Marglin supports the engagement of non-Indigenous humans with ritual. However, it is clear from her writing that she, too, sees it as a capability requiring training and attunement before it can fruitfully be practised: her recommendation of related training sessions involving experiential learning for Fair Trade staff,²⁷⁷ as well as her regeneration project’s offer of a ritual-based “Study Abroad” programme for students from the United States,²⁷⁸ are examples of this.

For Cajete, what matters most is what Peat²⁷⁹ refers to as leaving an opening in the circle for the Trickster, which appears to share similarities with Wilshire’s and James’s expectation of experiencing surprises in “The More”.²⁸⁰ This “More”, according to Cajete, too, is place-bound:

If science uses its own reflection as a primary frame of reference (...), then the view of the natural world becomes skewed to only a physical description and the abstracted intellectual vision that is largely mute to the “sacred songs” that emanate from the land. Western science in its official capacity presents a kind of “freeze-dried” description of the natural, bereft of the water of life and the breath of the human spirit that animates knowledge towards meaning and ecological consciousness. The earth and the places on it have a story and a language through which that story may be told and remembered. Native peoples through long experience and participation with their landscapes have come to know the language

²⁷⁵ Ibid., p.88.

²⁷⁶ Grillo, ‘Development Or Cultural Affirmation In The Andes?’, p.138.

²⁷⁷ Apffel-Marglin, *Subversive Spiritualities*, p.195.

²⁷⁸ Ibid., p.199.

²⁷⁹ Peat, *Blackfoot Physics*, p.177.

²⁸⁰ Wilshire, *The Primal Roots Of American Philosophy*, p.24. William James’ work is going to be discussed in greater depth in **Part 2**.

of their places.²⁸¹

In other words, if we Westerners are to regenerate our relationships with the places where we live, in one way or another, we are going to have to engage with forms of knowing that contemporary Western science would not typically aim to include. More detailed exploration of this idea is going to form a substantial part of **Part 2** of this thesis.

The second question from above – regarding the implications of what has been said for potential collaboration and shared innovation – is going to be addressed in **chapter 7** below.

²⁸¹ Cajete, *Native Science*, p.306. Cajete's approach may initially appear unusual when considered from within a Western paradigm – not least because of the relinquishment of control that is implied. However, it is going to be shown in **Part 2** and in **Appendix B** that approaches such as Cajete's, far from being detrimental to scientific rigour, are more realistically understood as richer conceptions of rationality which are in fact more likely to promote than to prevent the development of comprehensive understanding.

Chapter 6 – The interwovenness of Indigenous thought, quantum theory, phenomenology, and monism

Some initial parallels between Indigenous thought and quantum theory were introduced near the beginning of this thesis in order to set the scene for the above exploration of past and present interactions between Cartesian and non-Cartesian paradigms, of some of the difficulties involved, and of the potential positive effect that our consideration of Karen Barad's agential realism, of Burkhart's related conception of locality, and of Cordova's rationale for the role of balance in responsibility, might have on our interaction with non-human nature.

With this accomplished, it is now time to consider these parallels in greater depth.

6.a. Quantum theory, phenomenology, monism, and Indigenous thought revisited: the bigger picture

The section discussing locality above shows that it would be impossible for Indigenous thought to be a monolith, but that it must, by its very nature of arising in location, from relationships between the forms of life sharing in the same land, encompass a variety of diverse worldviews. At the same time, some elements of philosophical unity in diversity do appear to exist, and have been explored by a variety of authors.

The initial, short overview above began with Leroy Little Bear's list:

1. firstly, of nature being alive and imbued with spirit,
2. secondly, of Indigenous people being coparticipants in nature, which shows patterns as opposed to following laws, and
3. thirdly, of knowledge including that which may be manifesting (also referred to as the spiritual) as well as that which is manifest (also referred to as the physical).¹

Norton-Smith makes reference to

1. relatedness,
2. an expansive concept of persons,
3. the semantic potency of performance, whereby a vision experienced is not manifest, and its performance will make it manifest,

¹ Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue*, p.89.

4. circularity.²

McPherson and Rabb's list includes

1. a notion of cosmic harmony,
2. emphasis on experiencing directly powers and visions, and
3. a common view of the cycle of life and death.³

A common feature to all the above, which is not always explicitly mentioned, but becomes apparent in the form of an underlying assumption through, for example, situations where knowledge is added to rather than replaced when apparent inconsistencies emerge,⁴ is the non-binary dualism discussed in detail by Anne Waters,⁵ and compared to the conception of Yin and Yang in Chinese philosophy by Brian Burkhart.⁶ The same non-binary dualism also follows from Karen Barad's conception of agential realism above, and from the related conceptions of Cordova's balancing board and ripples in a pond.

At first glance, the above authors' respective lists of similarities between Indigenous worldviews appear different. At second glance, some common ground begins to emerge. For example, if nature is alive and imbued with spirit, then it is likely that there is going to be an expansive concept of persons,⁷ including non-humans as well as humans, and it is likely that those involved are going to be alert to any direct experience of powers and visions.

² Norton-Smith, *The Dance Of Person And Place*, p.1. It is important to note in this context that circularity is not understood to imply repetition. (Ibid., p.127.)

³ McPherson and Rabb, p.12.

⁴ For example, it is possible for several creation stories to be accepted at once. M.E.Smith, 'Crippling The Spirit, Wounding The Soul: Native American Spiritual And Religious Oppression', in *American Indian Thought: Philosophical Essays*, ed. by A.Waters (Oxford: Blackwell Publishing Ltd., 2004), pp.116-129. In the particular case of creation stories, an explanation of their easy coexistence can be found in the fact that they tend to be understood to be local (Cajete, *Native Science*, p.13). The wider, epistemological issue at stake, however, is an Indigenous tendency to conceive dualisms as non-binary (for example, Waters, 'Language Matters: Nondiscrete, Nonbinary Dualism'), coupled with an Indigenous understanding of disagreement as progress (Burkhart, *Indigenizing Philosophy Through The Land*, p.263).

⁵Waters, 'Language Matters: Nondiscrete, Nonbinary Dualism'.

⁶ Burkhart, 'Red Wisdom', p.229.

⁷ With regards to Indigenous authors' (in this case, Norton-Smith's above) reference to an "expansive concept of persons", it may be helpful to bear in mind the earlier example of there being no need for a stone to be humanised before being conversed with. "Person" is not intended to have an anthropocentric connotation here. Rather, the term aims to convey a conception of a potential partner in relationship whose dignity is inalienable and exists without question. (For example, Norton-Smith, p.91.) Some kinship between these ideas and aspects of Raimond Gaita's thinking is going to be discussed in **Part 2**.

The latter (emphasis on direct experience of powers and visions), in turn, relates to Little Bear's conception of knowledge including the manifesting as well as the manifest, which then links to the semantic potency of performance, and on to humans being co-participants in a nature showing patterns rather than following laws, and from there to Norton-Smith's relatedness, as well as to McPherson and Rabb's notion of cosmic harmony.

Less obvious, at least initially, is the way that the above links to Norton-Smith's and McPherson and Rabb's conception of circularity. I believe that this becomes more easily relatable for our Western minds once Norton-Smith's emphasis on its not implying repetition is taken into account.⁸ It may also be helpful to bear in mind Cordova's notion of perpetual motion here:⁹ if Little Bear's idea of nature being alive is interpreted to include this – and, given Parry's statement on Little Bear's motivation for assuming his pivotal role in the Dialogues,¹⁰ this is likely to be a realistic interpretation – and if we then consider Cordova's statement of there always having been something, as opposed to the world having emerged from nothing¹¹ – then it becomes possible to understand the circularity cited by McPherson and Rabb, and by Norton-Smith, in the way it is understood by PRATEC, which is in terms of regeneration: in a world that is never still, we do not know the exact form in which regeneration will take place but, through mutual nurturing and conversation with our fellow members of this world that we are part of, we can participate in creating it.¹² This takes us back into the very heart of Karen Barad's agential realism above and, with this, finally, into the heart of a more detailed discussion of the common ground between Indigenous thought, quantum theory, phenomenology, and elements of Spinoza's thought.

Gregory Cajete puts it like this:

From this view, science becomes essentially a story, an explanation of the how and why of the things of nature and the nature of things. The human mind as an extension of nature and as creator of story becomes the fertile ground where myth,

⁸ Norton-Smith, p.127.

⁹ Cordova, *How It Is*, p.120.

¹⁰ Little Bear saw parallels between quantum theory's conception of motion being the norm rather than the exception, and the Native American view of the cosmos always being in flux (Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue*, p.62).

¹¹ Cordova, *How It Is*, p.117.

¹² Rengifo, 'The Ayllu', pp.98-104.

science, and our human perception of reality meet.¹³

Cajete believes that quantum physics has come to similar understandings about the world as Native science, and may therefore be helpful in underpinning the emergence of fruitful dialogue.¹⁴ It is evident from his citations of David Peat, and from the foreword to his *Native Science*, written by Leroy Little Bear,¹⁵ that he is familiar with the work of Bohm, Peat, Little Bear, and others in the context of the Dialogues. According to Parry, Little Bear's motivation for initiating the inaugural dialogue in 1992 was his perception that quantum theory was "in consonance of spirit with Native views of the cosmos in dynamic flux."¹⁶

Almost in the same breath as his comments on quantum theory, Cajete then launches into a chapter on creative participation that could just as easily have been written by Merleau-Ponty.¹⁷ The link to Spinoza is not made by Cajete himself, but by Cordova,¹⁸ who – through ample citations of Wittgenstein's later work in *How It Is* – then demonstrates her affinity to phenomenological thinking, and who also makes reference to quantum theory.¹⁹ David Peat²⁰ and David Abram²¹ both explore links between Indigenous thought, phenomenology, and quantum theory, with David Abram also including Spinoza, and David Bohm and David Peat providing more detail on the link between Indigenous thought, quantum theory, and Bohm's implicate and explicate

¹³ Cajete, *Native Science*, p.13. An illustration of Cajete's thinking here is provided in the case study of Robin Wall Kimmerer's postgraduate student's interaction with the plant of sweetgrass, and through this with the science and stories of evolutionary relationships dating back to a time before the arrival of humans, in **Part 2**.

¹⁴ Cajete, *Native Science*, p.14. It may be useful to reiterate at this point that the intention here is not to use one worldview to validate another: rather, with Mary Midgley, as first discussed in **chapter 2**, it is to embrace familiar ground as a helpful starting point on a journey towards increased understanding of the unfamiliar on its own terms.

¹⁵ Little Bear, pp.ix-xii.

¹⁶ Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue*, p.62.

¹⁷ Cajete, *Native Science*, pp.15-31, and M.Merleau-Ponty, *Nature: Course Notes From The Collège de France* (Evanston: Northwestern University Press, 2003). A particularly striking example of a parallel between the two is Cajete's assertion of the "primacy of a lived and creative relationship with the natural world" (Cajete, *Native Science*, p.20) and Merleau-Ponty's above comment regarding our participation in weaving the network that carries our existence (Merleau-Ponty, p.176).

¹⁸ Cordova, *The Concept Of Monism In Navajo Thought*, pp.93-94. The relevance of Spinoza's thinking in the context of the ideas put forward by Indigenous philosophers is going to be discussed in detail in **Part 2**.

¹⁹ Cordova, *How It Is*.

²⁰ Peat, *Blackfoot Physics* and, to a lesser extent, also F.D.Peat, *Synchronicity: The Bridge Between Matter And Mind* (New York: Bantam, 1987), and F.D.Peat, *Synchronicity: The Marriage Of Matter And Psyche* (Pari: Pari Publishing Sas, 2015).

²¹ Abram, *Becoming Animal*.

orders.²² Wilshire initially approaches the interwovenness of these thought systems from the vantage point of phenomenology and American pragmatism, to then make reference to Indigenous thought, to quantum theory, and to Spinoza.²³ A range of further Indigenous authors can be seen to draw parallels between Indigenous thought and phenomenology in the remainder of this chapter and in **Part 2**, particularly in the context of performative knowledge processes, below.

David Bohm sees the significance of quantum theory as mainly consisting in these four elements:²⁴

1. indivisibility of quantum action
2. wave/particle duality
3. properties of matter as statistically revealed probabilities
4. existence of non-causal relationships.

What each of these refers to has been outlined in **chapter 4**. Some of the parallels cited are now going to be explored in more depth and, for this, it is going to be useful to consider a cluster of analogies provided by David Bohm in relation to non-causal relationships.

6.b. Causal and acausal relationships: ink drops, fish tanks, and entanglement

It has been shown above that those involved in the Dialogues thought of Newtonian physics as largely relating to Bohm's conception of the explicate order, and of quantum theory as being more closely aligned with Bohm's conception of the implicate order.²⁵ The difference between the two is illustrated by David Bohm and David Peat using the example of two concentric cylinders:²⁶ if a viscous substance is inserted into the space between the two, and a drop of indissoluble ink introduced into this substance, rotation of the outer of the two cylinders will result in the ink drop being drawn out into a thread. The thread can at first be observed with the naked eye; then, as it keeps being drawn out, it eventually becomes so thin as to be invisible. Any order contained in the system is thus

²² D.Bohm and F.D.Peat, *Science, Order, And Creativity* (Abingdon: Routledge Classics, 2011). Bohm's different types of orders are going to be discussed in the following section.

²³ Wilshire, *Fashionable Nihilism: A Critique Of Analytic Philosophy* and Wilshire, *The Primal Roots Of American Philosophy*.

²⁴ D.Bohm, *Wholeness And The Implicate Order* (Abingdon: Routledge Classics, 2002) pp.162-166.

²⁵ Bohm and Peat, *Science, Order, And Creativity*, pp.170-171.

²⁶ *Ibid.*, pp.168-170.

no longer perceptible to the human observer.

However, if the outer cylinder is then rotated back in the opposite direction, it is found that the ink drop will retrace its steps exactly, returning to its original form as if from nothing. Bohm and Peat refer to the order that we can see (i.e., to the ink drop first being present, and then not being present, and finally being present again) as the explicate order of the system. The implicate order, on the other hand, is the information contained that is invisible to the human eye: in this case, the information that enables the ink drop to return to its original state.

I consider the analogy to be helpful; however, at the same time, I appreciate that it may also have been unfortunate in the sense that it may have contributed to Bohm's views being interpreted as deterministic by some.²⁷ While this may or may not have been the case with Bohm's earlier thinking, his later work shows that this is not, or at the very least no longer, what is intended.²⁸

David Bohm extends his notion of the implicate order, within the particular context of quantum entanglement, to provide an additional analogy to illustrate the difference between causal and acausal relationships.²⁹ Bohm interprets the phenomenon of quantum entanglement as "projections of a higher-dimensional reality which cannot be accounted for in terms of any force of interaction between them."³⁰ Bohm is thus stating that when one particle changes its spin to be opposite to the spin of another, which is too far away for any signal to have been able to travel between the two in the time available, then both particles are in fact expressions of an already existing, underlying order – an order that simply happens to be inaccessible to human perception for now. He likens our perception of the particles to two television screens showing images taken by two television cameras placed at right angles to each other, observing a fish tank: the images are going to be related, but they are not going to be caused by each other, as they are

²⁷ For example, Polkinghorne, making reference to Bohm's early work: Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.53.

²⁸ Bohm and Peat, shortly before Bohm's death, address the issue, stating that although they appreciate the clear parallels between their above analogy and the behaviour of fractals (where it is input parameters which are responsible for an outcome that is generated from basic principles), their notion of an implicate order is intended to be understood in the context of creativity within an ordered setup (Bohm and Peat, *Science, Order, And Creativity*, p.168). Their use of this particular analogy is then justified by its similarities to the quantum properties of particles (ibid., p.170).

²⁹ Bohm, *Wholeness And The Implicate Order*, pp.236-238.

³⁰ Ibid., p.237.

both caused by the bigger picture of what is happening in the fish tank.³¹ Importantly, the analogy does not contradict the existence of causal relationships: it simply demonstrates that some aspects of reality exist where causality does not apply.

The existence of acausal relationships is highly relevant to Indigenous thought. In the context of ritual, for example, while some references do exist to ritual performance being aimed at achieving a particular outcome desired by the humans involved (for example, for a hail shower to stop³² – so that the ritual performed would be aiming to *cause* the end of the hail shower), the more usual situation appears to be that it is balance that is aimed at,³³ so that natural co-occurrences – which may be causally or acausally linked – can be given space to unfold.

Cajete speaks of this concept in terms of a harmonisation of human and non-human inhabitants of a place, with ritual, periods of being alone, and service to the community all combining to realise the goal of “finding and honouring the spirit of place”.³⁴ This emphasis on coming into harmony with the human and non-human community around us, of creating resonance with the more-than-human world,³⁵ is then taken up again in the context of Native astronomy in a later chapter: “Star watching and star stories provided valuable insight and inspiration for their personal and collective participation in the greater order of the universe.”³⁶

Cordova’s balancing board analogy expresses a similar sentiment:³⁷ in a world of perpetual movement, our role is to find a co-evolving form of balance, as opposed to imposing stasis, as much as to driving events unilaterally. McPherson and Rabb, in the

³¹ Ibid.

³² Apffel-Marglin, *Subversive Spiritualities*, p.123.

³³ I am aware that the term “balance” is likely to appear vague at this point in the thesis. An in-depth discussion of what may be involved is offered in the context of performative knowledge processes in **Part 2**, once relevant aspects of Vine Deloria’s, Benedict de Spinoza’s, and Brian Burkhardt’s thinking have been considered. For now, it may be helpful to place the term into the context of Viola Cordova’s cluster of analogies and their shared ground with Merleau-Ponty’s thinking, both introduced in **section 4.a**, and to note from these that it conceives the individual to be participating in the continuing creation of a dynamic whole of which it is part.

³⁴ Cajete, *Native Science*, p.93.

³⁵ Ibid., p.99.

³⁶ Ibid., p.217. Considered from within an exclusively Western paradigm, the points made here regarding community and harmony would be likely to raise questions with regards to a perceived dichotomy between individualism and collectivism (for example, W.Kymlicka, *Multicultural Citizenship* (Oxford: Oxford University Press, 1996), p.153). This is, however, not what is at stake here, as will become clear as part of the discussions of the relevance of Spinoza’s thinking and of Indigenous conceptions of performative knowledge processes in **Part 2**. A glimpse of what is meant is going to be available in a first introduction of Brian Burkhardt’s jazz analogy in **section 6.f.iv.** below.

³⁷ Cordova, *The Concept Of Monism In Navajo Thought*, p.99.

context of Cardinal's vision quest, also stress the importance of harmony as opposed to dominion.³⁸

Wilshire, in his final chapter, appears to be echoing this notion of our needing to rein in our human ambition to impose ourselves and to cause events to unfold according to our own logic:

Things constantly flow into what intellectualistic logic says they are not. So this logic, with its strangling verbalisms, must go. We must just look closely, feel clearly, and trust experience to take us where it will.³⁹

Peat, then, frames these concepts in a way that is probably most easily accessible to our Western minds, by contrasting Western and Indigenous science with regards to events unfolding.⁴⁰ Whereas Newtonian physics postulated movements of energy and of particles entirely independent of human involvement, both quantum theory and Indigenous thought point to a world that is alive. Human participation in creation, then, becomes a reality, and it is a reality that is not universally causal. A rain dance, then, is framed as a process of restoring balance within the environment. This balance, in turn, is known to include the eventual appearance of rain – but the sentiment involved is very different from one that attempts to cause it to rain, now, with or without there being balance involved:

Indigenous science, however, does not talk in terms of causal influences. The sun, Earth, and The People are not separate actors, mechanically and mindlessly obeying impersonal laws. Rather, all things connect and are the manifestations of underlying powers and beings. The rising of the sun is one expression of the harmony of all things, a harmony that extends from sky to earth and can never be fragmented into separate domains.⁴¹

Peat also makes us aware of the wider context of acausal relationships in ancient worldviews,⁴² as well as in Jungian psychology, and in the connections made between Jungian psychology and physics through Jung's friendship and collaboration with Wolfgang Pauli.⁴³ Although Peat ultimately believes Jungian psychology to be insufficient

³⁸ McPherson and Rabb, p.80.

³⁹ Wilshire, *The Primal Roots Of American Philosophy*, p.224.

⁴⁰ Peat, *Blackfoot Physics*, pp.285-286.

⁴¹ *Ibid.*. The exact nature of the balance discussed may not be immediately accessible to us in the West. Louise Westling's conception of a horse and rider becoming attuned to each other to the point of their respective movements simultaneously being both cause and effect of each other's may be a helpful Western stepping stone (Westling, p.140).

⁴² Peat, *Blackfoot Physics*, p.171.

⁴³ *Ibid.*, p.168.

to be explanatory of Indigenous thought,⁴⁴ as do others engaging in Indigenous ritual and providing academic insight into their work,⁴⁵ Jung's and Pauli's conception of synchronicity provides a helpful Western stepping stone from which to approach not only acausal relationships, but also the Indigenous conception of ritual and labour as one. It is for this reason that I am going to explore it in more detail in the following section.

6.c. Synchronicity as an example of acausal relationships

Some of the ideas considered in this section may feel unwieldy at first, at least to our Western minds perhaps unaccustomed to them. As a direction of travel, therefore, it may be helpful to bear in mind that the ideas in this section are going to be shown to interact with Indigenous conceptions of performative knowledge processes in **Part 2**. What is at stake is a conception of our creative, meaningful participation in the world, and of this participation, in turn, being distinct from unilateral control. Relatedly, some thought is going to be given to our experience of the material world as alive and as meaningful being likely to elicit a different response from us from the desire to seize control of a clockwork mechanism deplored by Apffel-Marglin in **section 5.f.vi.** above.

If not all relationships are causal, and if some events are instead interacting with an underlying order as illustrated by the example of the two images of Bohm's fish tank above, then it is at least conceivable that this underlying order may contain meaning. It is also at least conceivable that this underlying order may bridge the divide between mind and matter that Western science traditionally assumes: some chinks already started to appear in that particular construction, even in the West, with the arrival of our London cabbies above,⁴⁶ demonstrating improved spatial cognition after some years of working as London cabbies, alongside corresponding neurophysiological change.⁴⁷

These are some avenues that David Peat explores in the context of Carl Jung's and

⁴⁴ Ibid., p.257.

⁴⁵ For example, D.Ahmed, 'Lost And Found: Gifts, Dreams, And Sanity', in *Contemporary Voices From Anima Mundi: A Reappraisal*, ed. by F.Apffel-Marglin and S.Varese (New York: Peter Lang Publishing, 2020), pp.45-86, and J.Mabit, 'The Sorcerer, The Madman, And Grace', in *Contemporary Voices From Anima Mundi: A Reappraisal*, ed. by F.Apffel-Marglin and S.Varese (New York: Peter Lang Publishing, 2020), pp.113-154.

⁴⁶ Holder, 'James And The Neuroscience Of Buddhist Meditation'.

⁴⁷ I find it useful to note in this context that the phenomenon of neuroplasticity is by no means restricted to humans: Frans de Waal, for example, makes reference to songbirds' song-related brain areas expanding with use (F. de Waal, *Are We Smart Enough To Know How Smart Animals Are* (London: Granta Publications, 2017), p.267).

Wolfgang Pauli's conception of synchronicity.⁴⁸ Peat's first book on the subject dates from the time before the Dialogues;⁴⁹ his second was published after the Dialogues took place.⁵⁰

Peat distinguishes between coincidences on the one hand, and meaningful coincidences on the other, drawing on examples of the latter, and likening the latter to "jokers in nature's pack of cards", as their significance is, of course, unsupportable in a Newtonian, mechanistic conception of the universe.⁵¹

Outside a Newtonian, mechanistic conception of the universe, meaningful coincidences, far from being perceived to be unsupportable, have formed parts of a variety of worldviews since ancient times. Jung's first lectures on the subject of synchronicities drew on the *I Ching*.⁵² Peat, by way of introduction, points out that causality relies on assumptions that apply to billiard balls, but not automatically to all other cases: in order for a system to be solely governed by cause and effect, it is necessary for it to consist of separate bodies with a flow of influence from one to the other, as well as exclusively having a clear, linear flow of time.⁵³ None of these can be said to apply – at least, not reliably – for example, to mental events. Even in the Western world, application to phenomena such as the slime mould – or the immune system – already causes difficulty, and outside the Western world, a raft of other considerations enter into the equation, as was shown in Apfel-Marglin's example of human fluids being merged with non-human fluids in the Andes.⁵⁴

The worldviews referenced by Peat (besides the *I Ching*, he includes the Naskapi and the

⁴⁸ Jung defines synchronicity as "the coincidence in time of two or more causally unrelated events which have the same meaning." (Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.35.)

⁴⁹ F.D.Peat, *Synchronicity: The Bridge Between Matter And Mind* (New York: Bantam, 1987).

⁵⁰ F.D.Peat, *Synchronicity: The Marriage Of Matter And Psyche* (Pari: Pari Publishing Sas, 2015).

⁵¹ Peat, *Synchronicity: The Bridge Between Matter And Mind*, pp.5-7.

⁵² *Ibid.*, p.22.

⁵³ *Ibid.*, p.41.

⁵⁴ Apfel-Marglin, *Subversive Spiritualities*, p.141. The example, introduced in **section 5.e.**, involves unity being experienced between human bodily fluids and water beyond these, and of this unity carrying significance beyond that which is likely to be considered by contemporary Western science. **Section 5.e.** uses this example in the context of illustrating some of the points of philosophical unity in diversity between Indigenous worldviews discussed in **chapter 4**, and of exploring some potential incommensurabilities between worldviews arising from these. In this vein, the example offers an introductory glimpse of some of the dynamics involved in performative knowledge processes to be discussed in **Part 2**. By then, the discussion is going to be able to take place against the background of relevant aspects of Vine Deloria's, Benedict de Spinoza's, and Brian Burkhardt's thinking. For now, it may be helpful to think of the example as a reminder of issues raised which are also relevant to the interplay of causal and acausal relationships considered here, and which are going to be able to be discussed in greater depth in the context of **Part 2**.

ancient Shang),⁵⁵ rather than limiting themselves to causality alone, assume that the cosmos is in harmony. Contrary to the Newtonian worldview that turns on cause and its inevitable effect, they first and foremost sought to understand patterns and meanings contained in situations encountered, and supported this process with forms of divination. With remarkable parallels to the Indigenous conception of balance put forward by Cordova in her balancing board analogy,⁵⁶ Peat makes reference to an ancient Chinese “rainmaker” restoring balance to a village, which then included rain, without rain being sought as a particular, individual occurrence.⁵⁷ It is not that societies engaging in divination would deny the existence of causality: rather, they would affirm the existence of both causal and acausal relationships, with causal relationships being the more trivial.⁵⁸ Pre-empting critics, Peat points out that the Shang’s synchronistic worldview survived for longer than Enlightenment science has existed to date.⁵⁹

Peat is emphatic that worldviews supporting divination do *not* as a rule support determinism: rather, in a similar way to that found in quantum theory, the observer is included in the experiment, and thus brought into contact with the balance of the forces of nature at play, to respond creatively and responsibly.⁶⁰

More parallels between acausal relationships and quantum theory are drawn throughout both Peat’s “Synchronicity” books, and are developed from the context of the friendship between Jung and Pauli that was at the heart of the development of their theory of synchronicity. These parallels echo those outlined in the previous section. However, one particularly striking one may be worth recalling here: we know that Pauli’s exclusion principle is explanatory of the spin change observed in quantum entanglement,⁶¹ and we know the spin change to be acausal due to a signal being unable to travel the distance required in the time available:⁶² Peat, for example, likens the underlying pattern of movement to a symmetric dance.⁶³ Against this background of Pauli’s discoveries, it

⁵⁵ Peat, *Synchronicity: The Bridge Between Matter And Mind*, pp.122-145.

⁵⁶ Cordova, *The Concept Of Monism In Navajo Thought*, p.99.

⁵⁷ Peat, *Synchronicity: The Marriage Of Matter And Psyche*, pp.106-107.

⁵⁸ *Ibid.*, p.118.

⁵⁹ Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.132.

⁶⁰ *Ibid.*, p.140.

⁶¹ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.63. Pauli’s exclusion principle states that two electrons cannot be similar with regards to all four of their quantum numbers. One of the four is an electron’s spin, which means that if the remaining three are similar, then the two electrons’ spin must be different.

⁶² Some misconceptions in this regard were discussed in **chapter 3** and in **section 4.b.** .

⁶³ Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.16.

becomes understandable that Jung, who was working on acausal relationships between events in the field of psychology, and Pauli, who was working on acausal relationships in the field of physics, found common ground to explore.

It is Peat's conclusions with regards to meaning that are of particular interest at this point: citing Ilya Prigogine, Peat asserts that while each level of structure requires its own description, each level is also dependent on neighbouring levels, so that Nature requires pluralistic descriptions, consisting of causal as well as acausal ones.⁶⁴ For the particular case of communication and perception, then, Peat asserts that it is largely through their subtle interaction that paradigms are created and maintained, resulting in difficulties attaining genuine mutual understanding. It is at this point that Peat points out the usefulness of Jung's archetypes as expressions of a collective unconscious, bypassing layers of culture and potentially facilitating intellectual and emotional access to layers of meaning that might otherwise be out of reach.⁶⁵ He does not, in this instance, mention the material, and the reason for this becomes clear on consideration of a particular point of disagreement between Jung and Pauli.

It is the development between Peat's first and second *Synchronicity* books – i.e., between the time before and after his participation in the Dialogues – that makes for interesting reading in the context of this thesis in this regard. The latter includes a chapter on alchemy as a particular form of synchronicity,⁶⁶ and it is here that Peat offers some possible answers to the question of why Jung's and Pauli's theory of synchronicities did not achieve the breakthrough in the West that might have been expected, given the combination of their Western credentials and their affinity to ideas that had already proved their worth in a range of other parts of the world.

The pre-Enlightenment science of alchemy – which was initially also practised by Newton, although this tended to be omitted from later biographies⁶⁷ – has been largely discredited by Western science. Closer examination, however, shows that this is unlikely to have been the result of its being deficient with regards to its epistemology but, rather, likely to have been due to its refusal to subscribe to the new, Cartesian, mind-body dualism that was beginning to reign supreme: alchemy involved both an outer and an inner

⁶⁴ Ibid., p.64. Bohm's fish tank from the previous section would be a case in point.

⁶⁵ Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.143.

⁶⁶ Peat, *Synchronicity: The Marriage Of Matter And Psyche*, pp.78-91.

⁶⁷ Ibid., p.78.

dimension.⁶⁸ In this sense, its ontology and epistemology shared similarities with Indigenous thought. It also shared with Indigenous worldviews their deep sense of responsibility, with the scientist's aim being redemption rather than knowledge for its own sake. This was a precept that Pauli subscribed to, too.⁶⁹

The science of alchemy predated the Cartesian dualism of body and mind, and it was initially possible for it to unite the two and remain unscathed. This was no longer possible once Cartesian dualism had taken hold, and the scientific and political developments outlined by Apffel-Marglin above precipitated the discreditation of worldviews denying the separation of the material from the spiritual.⁷⁰

Those with a post-Enlightenment interest in alchemy frequently differed in this regard, and this also turned into a point of disagreement between Jung and Pauli: while Pauli, in all aspects of life, embraced a form of being in the world that included the physical, Jung saw alchemic transformations, and synchronicities, as being exclusively internal, within the psyche, and without the necessary participation of the layer of matter.⁷¹ Jacques Mabit, in his report from his rehabilitation centre for people suffering from drug addiction, where he makes extensive use of ritual, explores this absence in more detail, and comes to the conclusion that despite the *idea* of synchronicities pointing in the opposite direction (due to their nature of potentially bridging the divide between mind and matter), Jung's therapeutic *practice*, at least to the author's knowledge, never even once involved the use of ritual.⁷² Given the disagreement between Jung and Pauli regarding the scope of alchemical practice relevant to their theory of synchronicity, as outlined by Peat,⁷³ the reason for this is unlikely to have been exclusively a deferral until the West has had time to become re-attuned to a way of being it had scarcely engaged with for the last few centuries, and more likely to have been ideological. It is for this reason, then – due to insufficient space provided by Jung's work for the Indigenous conception of the sacred being contained in the material, and of ritual and labour as one – that both Mabit and Peat, while finding Jung's work helpful, believe it to fall short of

⁶⁸ Ibid., pp.81-83.

⁶⁹ Ibid., p.78.

⁷⁰ Apffel-Marglin, *Subversive Spiritualities*, pp.21-28.

⁷¹ Peat, *Synchronicity: The Marriage Of Matter And Psyche*, p.89.

⁷² J.Mabit, 'The Sorcerer, The Madman, And Grace', in *Contemporary Voices From Anima Mundi: A Reappraisal*, ed. by F.Apffel-Marglin and S.Varese (New York: Peter Lang Publishing, 2020), pp.113-154.

⁷³ Peat, *Synchronicity: The Marriage Of Matter And Psyche*, p.90.

doing justice to the full extent of the implications of the synchronicities it explores.

These implications, according to Peat, on the one hand fall into the realm of post-Newtonian Western science, and pertain to the parallels outlined in the previous section between quantum theory and Bohm's conception of the implicate order. On the other hand, and thus extending the conception of the implicate order beyond the exclusive physicality of an ink drop in a rotating cylinder, Peat defines synchronicities as "fusion of inner and outer orders in the meeting of surface and spirit."⁷⁴ Peat doubts that we are capable of understanding all that this implies, at least at this point: for example, he makes clear that he finds aspects of Sheldrake's morphic fields more amusing than convincing.⁷⁵ However, it is in this very context that he also makes clear that a new, undeveloped theory may be just that: undeveloped, rather than simply wrong,⁷⁶ and victim to a reductionism induced by premature application of Popper's test of falsifiability.⁷⁷

Peat's overall understanding is that mind and matter are two sides of the same coin, unfolding according to symmetries not necessarily visible to the human eye, and open to our creative engagement: "The elementary particles may therefore be closer to the gestures of a dance or the movements of a piece of music than to elementary building blocks of matter."⁷⁸

Peat then goes on to place a similar interpretation on the interaction between individual and collective unconscious, conceptualising Jung's archetypes as both fixed and malleable. Having cited research findings along similar lines as Holder's study of London cabbies above,⁷⁹ he concludes that as our brain modifies its own structure through our interaction with the world, it is this interaction with the world that in turn draws upon, and at the same time acts upon, our collective conscious and unconscious.⁸⁰

Peat's thinking here appears to show common ground with Cajete's on the dynamic as well as constitutive quality of shared story:

(...) community itself becomes a story, a collection of individual stories that unfold through the lives of the people of that community. This large community of story becomes an animate entity vitalised through the special attention given it by its

⁷⁴ Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.86.

⁷⁵ *Ibid.*, p.165.

⁷⁶ *Ibid.*.

⁷⁷ *Ibid.*, p.180.

⁷⁸ *Ibid.*, p.96.

⁷⁹ Holder, 'James And The Neuroscience Of Buddhist Meditation'.

⁸⁰ Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.110.

tellers and those who listen.⁸¹

Where does this leave us, with regards to viewing the above as one aspect of the connections seen by the authors cited between Indigenous thought, quantum theory, phenomenology, and elements of Spinoza's thought?

It is clear that the idea at the heart of synchronicity – of there potentially being an acausal, meaningful connection between events, precipitated by an underlying order not necessarily visible to the human eye – shows similarities with that of quantum entanglement, as demonstrated in this section.⁸²

With regards to phenomenological thought, I would argue that it is above all Peat's and Cajete's concluding statements above that show an affinity to the thought processes outlined in Merleau-Ponty's *Nature* lectures, as it is these remarks that most clearly show the relevance of our involvement in both causal and acausal events to our participation both in our immediate environments, and also in terms of our wider embeddedness in the world. In the first year of his lectures, Merleau-Ponty puts forward a participationalist conception – in his case, citing Mme Paulette Destouches-Février,⁸³ but with striking similarities in content to Karen Barad's thinking outlined by Apffel-Marglin above⁸⁴ – and already hints at causality, although not deficient as such, not being explanatory of all phenomena encountered in the world. By the third year of his lectures, he speaks of the alleged clarity of causality as being illusory,⁸⁵ and calls for a new ontology accommodating kinship alongside causality,⁸⁶ resulting in a sense of meaning that is “no longer a mechanical dispositive receiving causal action.”⁸⁷

When Viola Cordova provides insight into some parallels between the Navajo worldview and aspects of Spinoza's thinking, some of these are highly relevant to the question of

⁸¹ Cajete, *Native Science*, p.95. Cajete's statement is likely to feel unwieldy to our Western minds at this stage. However, if matter and meaning are related (as this chapter argues), then additional stepping stones are bound to emerge as soon as the issue is considered from the point of view of the meanings contained in performative knowledge processes in **Part 2**. This does, in fact, turn out to be the case and, for this reason, Cajete's statement is going to be revisited in **Part 2** in the context of Shay Welch's work on Indigenous conceptions of performative knowledge processes and of William James's thinking.

⁸² **Appendix B** contains some macroscopic examples of similar phenomena from other branches of contemporary Western science. Karen Barad's rationale for making reference to these in her work is to provide a stepping stone for our imagination, which may otherwise, at least initially, struggle with the minuscule scale of quantum phenomena.

⁸³ Merleau-Ponty, pp.97-98.

⁸⁴ Apffel-Marglin, *Subversive Spiritualities*, p.57.

⁸⁵ Merleau-Ponty, p.240.

⁸⁶ *Ibid.*, p.251.

⁸⁷ *Ibid.*, p.277. **Part 2** is going to examine some case studies in this regard.

acausal relationships alongside causal ones, as well as to a participationalist conception of our role in the world.⁸⁸ Cordova draws on her own background of a Navajo upbringing by her father⁸⁹ (which resulted in her being bicultural even prior to her academic career, as her mother was Spanish)⁹⁰ for the Navajo vantage point that she writes from. She is, however, clear from the beginning that similarities can be found between different Indigenous worldviews – for example, by likening the Navajo concept of *nilch'i* (which, according to Cordova, is best translated as “wind”, as this avoids the potentially anthropomorphising connotations of “air” or “spirit”)⁹¹ to the Apache concept of *usen*, as well as by making reference to others extending this concept to additional Indigenous worldviews.⁹²

The following section is going to revisit *nilch'i* and wave/particle duality in light of what has been said regarding acausal, meaningful events.

6.d. Nilch'i, and wave/particle duality, revisited in light of acausal, meaningful events

Cordova characterises *nilch'i* as a wind that “suffuses all of nature”,⁹³ and it is from this point that the relevance of the concept both to Spinoza’s thinking and to Peat’s and Merleau-Ponty’s concluding comments above emerges.

Peat’s comments above introduce us to the concepts of acausal events, and of these acausal events emerging from an underlying layer of meaningfulness that encompasses the material and the immaterial alike. He concludes that we participate in the universe in its entirety, being created by our surroundings at the same time as participating in creating them.

Cordova portrays the wind as being “both within and all around”, and as “worthy of awe”,⁹⁴ going on to define the Navajo universe as “wind in motion”.⁹⁵ She likens this to Spinoza’s concept of “substance”, stressing the similarity between the two worldviews in the sense that “whatever comprises the universe is only one thing which differentiates, or manifests, itself into many things,”⁹⁶ and locating sacredness within it, as opposed to

⁸⁸ Spinoza’s thinking is going to be revisited and discussed in more detail in **Part 2**.

⁸⁹ Cordova, *How It Is*, p.31.

⁹⁰ *Ibid.*, p.33.

⁹¹ Cordova, *The Concept Of Monism In Navajo Thought*, p.57.

⁹² *Ibid.*, pp.56-57.

⁹³ *Ibid.*, p.57.

⁹⁴ *Ibid.*, p.70.

⁹⁵ *Ibid.*, p.79.

⁹⁶ *Ibid.*.

viewing it as transcendental.⁹⁷

With regards to the relationship between the Navajo wind and quantum theory, Cordova is particularly interested in wave/particle duality, which she interprets as an example of the Indigenous conception of manifesting and manifest, and of Spinoza's conception of *Natura Naturata* and *Natura Naturans*.⁹⁸ Importantly, she stresses that in the Indigenous conception, no relationship of binary dualism exists between matter and energy: they are complementary.⁹⁹

Cordova provides more detail on the characteristics of the wind that is central to the Navajo worldview, emphasising its presence within us and within our organs.¹⁰⁰ Despite the fact that the Navajo and the Lakota occupy opposite ends of the United States (but bearing in mind Cordova's earlier assertion that comparable, special conceptions of winds exist beyond Navajo groups)¹⁰¹, it is impossible not to be reminded of a situation described by Black Elk, when Black Elk, as a young man, conducts an elaborate ceremony at a friend's tepee where one of the children has been critically ill. The ceremony culminates in Black Elk drawing "through him the cleansing wind of the north." The boy recovers.¹⁰²

Peat's above claim that ritual is first and foremost about balance, and that then, as a result of restored balance, life-giving change may emerge,¹⁰³ is likely to be relevant here, moving the situation described from our Western, causal interpretation into the realm of a potentially acausal one. This rings true particularly when it is considered in the context of Cordova's own balancing board analogy.¹⁰⁴ Cajete comments in the same vein:

In the philosophy of healing, disease was always caused by improper relationship to the natural world, spirit world, community, and/or to one's own spirit and soul. (...) the processes of healing (...) revolved around the reestablishment and maintenance of balance. Breath was seen as being connected to the breath and the spirit of the Earth itself.¹⁰⁵

⁹⁷ Ibid., p.94. The relevance of Spinoza's thinking as a stepping stone to Cordova's (and to other Indigenous) thought is going to be discussed in greater depth in **Part 2**.

⁹⁸ Cordova, *The Concept Of Monism In Navajo Thought*, pp.93-94.

⁹⁹ Ibid., p.94.

¹⁰⁰ Ibid., p.92.

¹⁰¹ An additional example of this is going to be considered as part of a discussion of Shay Welch's work in **Part 2**.

¹⁰² Neihardt, *Black Elk Speaks*, p.126.

¹⁰³ Peat, *Synchronicity: The Marriage Of Matter And Psyche*, pp.106-107.

¹⁰⁴ Cordova, *The Concept Of Monism In Navajo Thought*, p.99.

¹⁰⁵ Cajete, *Native Science*, p.117.

With this in mind, we can begin to appreciate why Wilshire calls the question of whether “it” really happened a “sledgehammer question”,¹⁰⁶ and casts doubt on whether we are even in a position to articulate what “it” is. A conception of ritual as aiming to regenerate balance was discussed in **section 6.b.** , and it has been shown (for example, in **section 5.e.**) that this balance is conceived to involve relationships in the universe between humans and non-humans alike. With this in mind, it begins to appear unlikely to be possible for any human to be conscious of all that this balance involves.¹⁰⁷ Even at the most basic, materialistic level, and arguing from within a representationalist paradigm alone, continuing new discoveries about the intricacies of complex ecosystems show that our existing knowledge of the world is incomplete.

Taking a first tentative step outside this paradigm, with Merleau-Ponty above, we saw that in a phenomenological framework, our participation in the world co-creates the world, and that this is a task which is not exclusively accomplished by causal relationships.¹⁰⁸ Faced with these complexities, Merleau-Ponty concludes that we can only ever be feeling our way: “We observe that there is the future in every present, because its present is in a state of imbalance. (...) It is not a positive being, but an interrogative being which defines life.”¹⁰⁹

With this, we are now absolved from the need to fit every phenomenon encountered neatly into a framework that we already have: we have admitted that there is a good reason why this is not going to be possible in every case.¹¹⁰ In addition, all this happens before we have even contemplated the implications of Apffel-Marglin’s and Barad’s work with regards to the potential involvement of what we – clumsily, for the reasons stated by Apffel-Marglin¹¹¹ – refer to as spirits.

¹⁰⁶ Wilshire, *The Primal Roots Of American Philosophy*, p.83.

¹⁰⁷ Conceptions of the necessity of there being a gap in our understanding are going to be revisited in light of Spinoza’s and of William James’s thinking in **Part 2** .

¹⁰⁸ Merleau-Ponty, pp.97-98 and p.240.

¹⁰⁹ *Ibid.*, pp.155-156.

¹¹⁰ This section mainly considers the above proposed move to an alternative conception of responsibility (away from the currently dominant, contemporary Western one emphasising control, and towards one that emphasises humility) from a philosophical point of view. The same question can also be approached through contemporary Western science as it begins to transcend an exclusively Newtonian paradigm. This is exemplified in **section e.** of **Appendix B** , yielding a similar answer.

¹¹¹ Apffel-Marglin, *Subversive Spiritualities*, p.87. The point made by Apffel-Marglin is that in the contemporary Western paradigm that the language of English usually interacts with, the spiritual does not tend to be considered to be contained in the material. Reference to a “spirit” therefore inadequately renders what is meant here, due to its – in its new context, unwarranted – connotation of otherworldliness.

I would argue that a sizeable proportion of our Western difficulty when attempting to approach Indigenous vantage points comes from our habit of thinking in terms of causal relationships alone. When confronted with an acausal one, we then attempt to place a causal interpretation on it – or, worse, assume that our Indigenous “informant” did, when in fact this is unlikely even to have occurred to them in the context under discussion. We then decide that we are not going to believe that “it” really happened when, in fact, the complexities of the causal and acausal balances involved are almost certain to mean that, as Wilshire stated above, we have little idea of what “it” even is.

In her later work, when Cordova returns to her above points first made in her PhD thesis, she concludes by locating the fundamental difference between Western and Indigenous worldviews in our almost exclusive acceptance of Cartesian dualism in the Western mainstream, whereas Indigenous worldviews, in a similar way to Spinoza, tend to leave awe in place by allowing space for the meaningful in the mundane.¹¹²

6.e. The role of awe in human relationships with human and non-human nature

The importance Native Americans traditionally place on “connecting” with their place is not a romantic notion that is out of step with the times. Instead, it is the quintessential ecological mandate of our time.¹¹³

Durre Ahmed, originally a Western-educated psychiatrist, and still practising in Pakistan at the time of publication, provides an unusual vantage point:¹¹⁴ she begins her journey as a professional woman in a position where engagement with “The More” would be seen as “non-scientific”,¹¹⁵ then loses the support of an old friend, as well as some of her social standing in her community, through her refusal to continue to subscribe to this worldview in the face of evidence to the contrary, before defiantly going on to provide a highly educated account of her journey into mysticism. While doing this, she is critical of attempts to use science to “prove” the truth of experiences that lie outside the realm accessible within the boundaries of its current, Western definition, and refers to the underlying scientism, which she relates to Cartesianism and categorises as a male orientation, as “logocentric supremacism”.¹¹⁶

¹¹² Cordova, *How It Is*, pp.106-112.

¹¹³ Cajete, *Native Science*, p.211.

¹¹⁴ D.Ahmed, ‘Lost And Found: Gifts, Dreams, And Sanity’, in *Contemporary Voices From Anima Mundi: A Reappraisal*, ed. by F.Apffel-Marglin and S.Varese (New York: Peter Lang Publishing, 2020), pp.45-86.

¹¹⁵ Ahmed, p.52.

¹¹⁶ *Ibid.*, pp.60-63.

The particular context in which Ahmed's transformation takes place is her work with a client coming to terms with a mystical experience. Citing Henry Corbin's work on Islamic mysticism, Ahmed is emphatic that she is not proposing the construction of something unreal, but the unveiling of a hidden reality. She is critical of the West's, post-Enlightenment role in discrediting mysticism, above all because she believes mysticism to be a common denominator that might be capable of reconciling otherwise adversarial relationships between religions.¹¹⁷ She initially exemplifies this by citing unexpected similarities found to be underlying Hinduism and Islam in her region, and goes on to include Taoism in her considerations.¹¹⁸ Consistent with her earlier interpretation of Cartesianism as a male orientation, Ahmed concludes by framing her journey into mysticism, and the related journey towards the beginning acceptability of a less binary form of dualism in wider society, as a journey towards the feminine.¹¹⁹

What is shown more than said, and made explicit only at the very end of Ahmed's paper, is Ahmed's underlying journey from her life as a professional woman functioning within the expectations placed on her by a largely Westernised, scientific society, towards a sense of wonder and gratitude for her newly-found membership in "an exquisitely interconnected web, a microcosm of a larger living unity."¹²⁰ Ahmed's final comments could just as easily have been made by PRATEC – which may well be why Apffel-Marglin and Ahmed became aware of each other.

Ahmed speaks of wonder and gratitude at being part of a larger living unity; she does not mention awe at the spiritual found within the material, and this may or may not be connected to Peat's above observations on the disagreement between Jung and Pauli on this point in the context of alchemical practice.¹²¹ Bohm and Peat mention wonderment and awe at the living world at the very beginning of their exploration of the relationships between quantum theory and conceptions of order in the world,¹²² proving Mary Midgley's point that scientists, poets, and children have a capacity to befriend even those aspects of the natural world that large parts of society would not usually consider engaging with.¹²³ Peat's own exploration of synchronicity concludes by reiterating the

¹¹⁷ Ibid., p.71.

¹¹⁸ Ibid., p.77.

¹¹⁹ Ibid., p.80. The latter chimes with elements of Genevieve Lloyd's thinking as discussed in **Part 2**.

¹²⁰ Ahmed, p.81.

¹²¹ Peat, *Synchronicity: The Marriage Of Matter And Psyche*, p.90.

¹²² Bohm and Peat, *Science, Order, And Creativity*, p.xi.

¹²³ Midgley, *Animals And Why They Matter*, p.145.

unity of mind and matter,¹²⁴ and by stating that in early civilisations, “the desires to wonder, worship, and understand may well have been all of a piece,” while today, we may well have lost some of “the spice and excitement of simply being alive.”¹²⁵

Cordova explicitly states that this sentiment constitutes a major difference between mainstream Western environmentalism and the Navajo worldview. Cordova is aware that mainstream Western environmentalism (which Peat’s goes beyond) does have strands that will invoke implications of monistic worldviews, but she is emphatic that the Navajo worldview goes further. The main point made by Cordova in this context is the Navajo seriousness about the belief that we live “as a sacred being in a field of sacredness,”¹²⁶ and, flowing from this conviction, a responsibility to engage in ritual performance to restore balance to the world, and an awareness of interrelationships and consequences, with a resulting responsibility to add to the beauty of the universe.¹²⁷

There is a world of difference between the awe-inspired responsibility of creative participation proposed by these authors on the one hand, and our recent mainstream, Western conception of nature as an object to be placed on Bacon’s rack and controlled on the other.¹²⁸

We post-Enlightenment Westerners do, demonstrably, still have a capacity for awe and wonder in our encounter with non-human nature. Mary Midgley’s account of Iris Murdoch’s response to her encounter with a kestrel is but one example;¹²⁹ contemporary Western environmentalists provide more: Karen Milton advocates an “ecology of emotion”,¹³⁰ Robin Attfield’s respect for non-human nature is expressed in his support for biocentric consequentialism,¹³¹ and in his call for participative policies aimed at encouraging people “both to save wildlife and to feed themselves”.¹³² We also still have a capacity to enjoy participationalist (as opposed to purely representationalist)

¹²⁴ Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.241.

¹²⁵ *Ibid.*, p.239. Peat’s point not only chimes with Cajete’s Indigenous argument for a wider conception of science (Cajete, *Native Science*, p.306), but also with his own discussion of alchemy above, showing that a richer conception of science used to be more acceptable in the West than it tends to be now.

¹²⁶ Cordova, *The Concept Of Monism In Navajo Thought*, p.107.

¹²⁷ *Ibid.*, pp.105-106.

¹²⁸ For example, Wilshire, *The Primal Roots Of American Philosophy*, p.16.

¹²⁹ Midgley, *Beast And Man*, p.346.

¹³⁰ K.Milton, *Loving Nature: Towards An Ecology Of Emotion* (London: Routledge, 2002).

¹³¹ R.Attfield, *Environmental Ethics*, 2nd ed. (Cambridge: Polity Press, 2014), pp.42-45.

¹³² R.Attfield, ‘Saving Nature, Feeding People, And Ethics’, in *Environmental Values* Vol.7, No.3 (August 1998), p.302, <URL = <https://www.jstor.org/stable/30301644>> [Accessed: 20 March 2023].

relationships with those we allow ourselves to get to know, and some aspects of this are going to be explored in **Part 2**.

We Westerners do not, however, as a rule – at least since Emerson¹³³ – relate to non-human nature as a partner in conversation, either ritually or through modes of communication typically practised between humans in the West. Attempts to do so may be pathologised.¹³⁴

Ahmed arrives at the same conclusion in her discussion of her client's mystical experience: citing Stanislav Grof, she expresses concern that Western medicine, in contrast to the vast majority of non-Western societies, does not value such direct communication with more-than-human nature, instead treating it as pathological.¹³⁵

When Indigenous authors speak of their awe experienced in their relationship with the natural world, they are referring to a deeply personal, reciprocal relationship of participation with each other. Tirso A.Gonzales and Melissa K.Nelson frame this relationship as follows:

Although there is not *one* Indigenous voice (...), most traditional Native peoples agree that the “environment” is Mother Earth – our Mother and the giver and sustainer of life. We come from her, so we are part of her and she is part of us. If she is sick, I am sick, and vice versa. This reciprocal relationship goes back to the creation myths of many Native nations. This exchange is not just one of give-and-take but (...) it is give and be given.¹³⁶

The crucial point here is that the meaningfulness, or sacredness, that is experienced through our sense of awe, is located in the natural world itself in Indigenous worldviews: Mother Earth is not transcendent, or located outside this world. And neither are we: our role is not one of stewardship, but one of participation.

We are operating from an Indigenous model of wholeness, where people and place, matter and spirit, nature and culture are interrelated in a dynamic process. (...) Creation is a holy process that is ongoing and, as human beings, we have the

¹³³ Wilshire, *The Primal Roots Of American Philosophy*, pp.9-11.

¹³⁴ Harvey, *Animism: Respecting The Living World*, pp.141-144. Viola Cordova, too, addresses this issue, citing several examples of contemporary fiction exploring it (Cordova, *How It Is*, p.121). A particularly pertinent one involves the protagonist blaming his own failure to nurture an established relationship with the land where he lives for this land then being affected by a drought (ibid., p.123). Cordova's evaluation of the situation is that European psychological theories would look for a “cure” within their own frame of reference, diagnosing a “paranoid fantasy” (ibid., pp.123-126). This point made by Cordova is going to be revisited in **Part 2**.

¹³⁵ Ahmed, p.67.

¹³⁶ T.A.Gonzales and M.K.Nelson, ‘Contemporary Native American Responses To Environmental Threats In Indian Country’, in *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, ed. by J.Grim (Cambridge: Harvard University Press, 2001), pp.495-538 (pp.497-498).

responsibility to participate in this creation, to co-create, in a balanced blending, like the confluence of two rivers. (...) To realise that, with each breath, thought, and action, we are at the threshold of creation is an enormous responsibility.¹³⁷

Gonzales and Nelson are the first to admit that this in no way implies infallibility on the part of Indigenous groups: Indigenous groups are as prone to making mistakes and wrong decisions as anyone else.¹³⁸ However, this does not mean that the underlying concept of seeking harmony between humans and the dynamic processes of the earth is wrong. “Restoring the spirit and structure of this harmony is humanity’s modern challenge – indeed, the lives of our children depend on it.”¹³⁹

Our Western reliance on our conception of causality alone and, combined with it, our conception of human responsibility as stewardship, of knowing best as opposed to asking questions, of setting billiard balls in motion and of believing that we have calculated their knock-on effects with precision, has placed the world in a precarious position.

With regards to potential knowledge transfer from Indigenous groups to the rest of humanity, the findings presented so far all appear to be pointing in the same direction. The findings of quantum physics, its implications regarding the concept of agential reality as outlined by Karen Barad, Cordova’s parallels between the Navajo concept of *nilch’i* and Spinoza’s monism, Merleau-Ponty’s characterisation of human beings not as souls having descended into a body, but as “emergence of a life in its cradle”¹⁴⁰ then growing to be participants in weaving the network that carries our existence,¹⁴¹ taken together, all suggest the same, deeper significance to Cajete’s statement regarding the importance of our connection to place at the beginning of this section.

They suggest that there is participation to be experienced and enjoyed in a way that the West largely appears to have given up in favour of the Enlightenment, when we could have chosen, and could be choosing now, to have both.

Within this thought process, those arguing from a non-Western point of view suggest that the concept goes to the heart of the trouble between humans and the more-than-human world, where knowledge transfer is needed not only for our experience, but for our very survival: they suggest that if we want the world to be saved, we will have to stop thinking

¹³⁷ Ibid., pp.496-497.

¹³⁸ Ibid., p.498. A similar point is made, for example, by Rengifo (Rengifo, ‘The Ayllu’, pp.116-117.)

¹³⁹ Gonzales and Nelson, p.498.

¹⁴⁰ Merleau-Ponty, p.218.

¹⁴¹ Ibid., p.176.

of ourselves as its saviours, who are on the outside looking in. They suggest that we are going to have to start participating with it on an equal footing instead. Burkhart, for example, would frame Cajete's above statement in terms of our need to free ourselves from the transcendentalist illusion implied by Cartesian dualism,¹⁴² allowing locality to re-emerge.

The PRATEC project, in keeping with Burkhart's conception of locality, above all stresses the importance of honouring the diversity of different localities.¹⁴³ They acknowledge that conversation between human and non-human nature is going to be different in each place.¹⁴⁴ This is to be expected, not only on the basis of Burkhart's thinking but also, as previously stated, Karen Barad's. PRATEC are, however, emphatic across locations that the very heart of the conversation they advocate consists in an attitude of kinship and humility:

In the ayllu the activity of its members is not modelled from the outside, it is not the product of a planning act that transcends it, but rather it is the result of conversations, (...) it does not derive from an imposition by man over nature.¹⁴⁵

6.f. Implications for ethics

6.f.i. A brief overview of some Western environmental ethics

In order to appreciate the opportunities for knowledge transfer offered by Indigenous worldviews with regards to ethics, it may be helpful to consider a brief overview of some contemporary Western approaches to environmental ethics first.

Western environmental ethics began to attract mainstream interest in the latter half of the 20th century, following the emergence of first accounts of human activity having a significant negative impact on non-human nature.¹⁴⁶ The ensuing discussion largely concentrated on two particular areas of interest: firstly, of who should be eligible for the more considerate treatment by humans that was being proposed for the future, and, secondly, which of the existing ethical models this new form of treatment should be based on – with the latter discussion largely revolving round choices between deontology, utilitarianism, and virtue ethics.

¹⁴² Burkhart, *Indigenizing Philosophy Through The Land*, pp.13-17.

¹⁴³ Grillo, 'Development Or Decolonisation In The Andes?', p.239.

¹⁴⁴ Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', p.78.

¹⁴⁵ Rengifo, 'The Ayllu', p.89.

¹⁴⁶ For example, R.Carson, *Silent Spring* (New York: Ballantine, 1962).

These choices were frequently perceived as binary choices, although this was not always the case: Mary Midgley's *Animals And Why They Matter*, for example, introduced a conception of moral reasons present in a case as an arrangement of petals, with petals, for example, representing kinship and wonder as well as need, justice, and responsibility.¹⁴⁷ Using the example of the killing of an elephant to illustrate her points, Midgley draws on deontological and utilitarian moral reasons alike when making her case. Such independence in reasoning could have descended into a relativistic free-for-all; however, with Midgley, it cannot: Midgley is emphatic that ethical expression of culture is bounded by facts contained in our nature,¹⁴⁸ and this entails the possibility that some expressions of culture will be unethical because they are out of tune with who we are as living beings in the world.

Further Western approaches prepared to consider moral reasons drawn from several ethical theories alongside each other do exist;¹⁴⁹ the most usual approach, however, is for Western ethicists to adopt one ethical theory and to consider ethical choices from within it. This also usually applies to the recently emerged discipline of environmental ethics.¹⁵⁰

With regards to the first question – the question of who should be eligible for moral consideration – a number of approaches have been considered in the West. Aldo Leopold's central concern was the well-being of entire ecosystems;¹⁵¹ his approach would nowadays fall into the category of ecocentrism. More frequently, Western approaches place the individual at the centre, attempting to locate criteria for their moral considerability in the type of value they are believed to represent. Taylor, for example, distinguishes between instrumental and non-instrumental value; within these categories, he does not distinguish further.¹⁵² Attfield's categories are more sensitive with regards to non-instrumental value, distinguishing between intrinsic value on the one hand, and inherent value on the other, thus taking into account whether value is derived from another individual's approval (inherent value), or whether value already exists prior to

¹⁴⁷ Midgley, *Animals And Why They Matter*, p.30.

¹⁴⁸ Midgley, *Beast And Man*, p.285.

¹⁴⁹ For example, J.Dancy, 'What Are The Options?' In *Ethics Without Principles*, ed. by J.Dancy (Oxford: Clarendon Press, 2004).

¹⁵⁰ Attfield, *Environmental Ethics*, pp.43-53.

¹⁵¹ A.Leopold, 'The Land Ethic' in *Environmental Philosophy*, ed. by M.Zimmerman et al. (Upper Saddle River: Prentice-Hall, 1998), pp.87-100.

¹⁵² P.Taylor, 'The Ethics Of Respect For Nature', in *Environmental Philosophy*, ed. by M.Zimmerman et al. (Upper Saddle River: Prentice-Hall, 1998), pp.71-86.

and without this, due to the very nature of the individual concerned (intrinsic value).¹⁵³ Following Goodpaster,¹⁵⁴ Attfield does not require rationality, sentience or relationships for an individual to have intrinsic value, but locates intrinsic value, and thus moral considerability, in the fact of an individual's being alive and having their own good.¹⁵⁵ His biocentric approach thus differs from anthropocentric and sentientist ones.

A frequent difficulty in the West is that moral considerability alone may not lead to moral consideration, let alone to moral consideration then translating into ethical action. For example, we live in a society that largely treats its companion animals with compassion, while this cannot consistently be said of our treatment of farm animals.¹⁵⁶ It is for this reason that Rebekah Humphreys and Robin Attfield call for the application of principles of justice, which tend to be stricter and more binding than considerations regarding compassion.¹⁵⁷

Their point is further illustrated by our continuing failure to resolve the problem of our excessive carbon emissions consistently harming many of those we deem to be morally considerable.¹⁵⁸ It is thus evident that our Western societies are currently unsuccessful in our attempts to establish ethically sound relationships with the non-human world around us. We have sophisticated ethical theories at our disposal and, at least for now, we are not succeeding in applying these wisely.

6.f.ii. Particular challenges faced by Western models of ethics

Hardin's Tragedy of the Commons¹⁵⁹ is testament to the fact that at least some environmental problems require collaborative solutions.¹⁶⁰

¹⁵³ Attfield, *Environmental Ethics*, p.12.

¹⁵⁴ K.Goodpaster, 'On Being Morally Considerable' in *Environmental Philosophy*, ed. by M.Zimmerman et al. (Upper Saddle River: Prentice-Hall, 1998), pp.56-70.

¹⁵⁵ Attfield, *Environmental Ethics*, pp.12-13.

¹⁵⁶ Compassion In World Farming, *Is The Next Pandemic On Our Plate?*, May 2020, p.15, <URL: <https://www.ciwf.org.uk/research/covid-19/is-the-next-pandemic-on-our-plate>> [Accessed: 20 March 2023].

¹⁵⁷ R.Humphreys and R.Attfield, 'Justice And Non-Human Beings, Part I', in *Bangladesh Journal Of Bioethics* (7:3), 2016, <URL: <https://repository.uwtsd.ac.uk/883/>>, pp.1-11, and Humphreys and Attfield, 'Justice And Non-Human Beings, Part II', in *Bangladesh Journal Of Bioethics* (7:4), 2017, <URL: <https://repository.uwtsd.ac.uk/884/>>, pp.44-57. [Accessed: 20 March 2023].

¹⁵⁸ NASA, *Global Climate Change* <<https://climate.nasa.gov/vital-signs/carbon-dioxide/>> [Accessed: 20 March 2023].

¹⁵⁹ G.Hardin, 'The Tragedy Of The Commons', in *Environmental Ethics*, ed. by J.Benson (London: Routledge, 2000), pp.185-196.

¹⁶⁰ R.Lozano, 'Collaboration As A Pathway For Sustainability', *Sustainable Development* 15, pp.370-381 (2007), DOI <10.1002/sd.322>, [Accessed: 20 March 2023].

Collaborative solutions require societies to create structures enabling individuals to cooperate, and they also require these individuals then to choose an ethical course of action over an unethical one when the unethical one is the one that appears to benefit them. To use an example taken from the early days of the Covid-19 pandemic, few would dispute that it is unethical to infect bus drivers with a potentially deadly disease where this can easily be prevented. However, statistics available from the Office for National Statistics (ONS) show that besides health and social care professionals (where it may be more difficult to prevent infection reliably than elsewhere), other occupational groups, amongst them bus drivers, also suffered a disproportionate number of deaths.¹⁶¹ In order to prevent this, collaborative effort would have been required – and in order to facilitate this, it would, first of all, have been necessary for society to create conditions for individuals travelling to be in a position to make the ethical choice not to travel when infected, or after close contact with an infected person. Then, in a second step, it would have been necessary for the individuals concerned to make this ethical choice. What happened instead, however, was that we created societal structures enabling self-isolation only for some, resulting in the virus being spread where it need not have been, including to bus drivers taking those to work who could have been given support to self-isolate, but in fact were not.¹⁶²

The moral principles contained in Western ethical models, on their own, are insufficient to equip us to deal with moral dilemmas such as those contained in the above situation.

Firstly, application of universal principles irrespective of context may end in justified moral regret once context is taken into account: in particular, utilitarianism is known to be able to lead to dehumanising choices.¹⁶³ At second glance, considering, for example, Milgram's experiment, it becomes clear that mere mechanical application of a (deontological) precept to remain committed to a perceived duty can lead to

¹⁶¹ Office for National Statistics, *Coronavirus (COVID-19) related deaths by occupation, England and Wales: deaths registered between 9 March and 28 December 2020*, <URL: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand28december2020>> [Accessed: 20 March 2023].

¹⁶² R.Booth, 'English councils refuse six in 10 requests for Covid self-isolation pay', *The Guardian*, 18 June 2021. Available at: <https://www.theguardian.com/world/2021/jun/18/english-councils-refuse-six-in-10-requests-for-covid-self-isolation-pay> [Accessed: 20 March 2023].

¹⁶³ T.Chappell, R.Crisp, 'Utilitarianism', in *Routledge Encyclopedia Of Philosophy*, ed. by E.Craig, vol. 9 (New York: Routledge, 1998), pp.551-557.

dehumanising choices too.¹⁶⁴

Secondly, application of universal principles will lead to different choices depending on the way the dilemma is framed. Mark Johnson refers to this as the problem of deciding *which* moral principles apply to a situation, and *how* they are going to be applied: “There is no algorithm for weighing likenesses and differences between a hard case we are now considering and some apparently similar previous case where we have more confidence about what we ought to do.”¹⁶⁵ Applied to the above example involving a choice about travel during the Covid-19 pandemic, this means that with universal principles alone, there is nothing to prevent a utilitarian from framing their travel to work as generating greater overall utility to the world than a choice not to travel would – or vice versa. Equally, with universal principles alone, there is nothing to prevent a deontologist from framing their travel to work as fulfilment of a promise (for example, to make a particular purchase for someone) – or, again, vice versa.

Thirdly, as outlined above, the social group in which the individuals in this example are participants has made life more difficult for itself by creating societal structures – in this case, by our failure to create adequate provision for self-isolation – that result in the dilemma being there in the first place, when it need not have been. At this level, too, it is easy to imagine politicians, and the rest of us who vote for them, managing to find universal principles to apply in order to justify our participation in the creation of this particular piece of world, despite its clearly not being our finest hour.

Universal principles have the appearance of preventing descent into an ethical free-for-all. However, Michael Walzer’s “dirty hands problem” already showed that at second glance, the world turns out to be more complex than this,¹⁶⁶ and Jonathan Glover’s, more recent, account of atrocities committed in the 20th century shows that the existence of universal principles alone does not necessarily entail wisdom in their application – and that there is more involved in making wise moral choices than the mechanical application

¹⁶⁴ J.Glover, *Humanity: A Moral History Of The Twentieth Century* (New Haven: Harvard University Press, 2000), p.332.

¹⁶⁵ M.Johnson, ‘Imagination In Moral Judgment’, in *Philosophy And Phenomenological Research*, Vol.46, No.2 (Dec.1985), p.265, <URL = www.jstor.org/stable/2107356> [Accessed: 20 March 2023].

¹⁶⁶ M.Walzer, ‘Political Action: The Problem Of Dirty Hands’, in *Philosophy & Public Affairs*, Vol.2, No.2 (Winter 1973), pp. 160-180. Available at: <URL = <https://www.jstor.org/stable/2265139> > [Accessed: 20 March 2023]. The point made by Walzer is the existence of situations when a choice deemed to be morally right according to a universal moral principle subscribed to by the protagonist would be untenable, and where the right thing to do may be to do wrong.

of universal principles alone.¹⁶⁷

Glover is acutely aware of the importance of factors beyond the immediate situation in this. In this regard, he first and foremost advocates cultivation of moral resources in the individual: the resource of humanity, consisting of sympathy and respect, and the resource of moral identity.¹⁶⁸ Glover is aware that character is largely *not* innate:¹⁶⁹ citing Aristotle, he frames our moral resources as being built up from individual decisions and actions over time.¹⁷⁰

Having stressed individual responsibility to build up moral resources to enable wise choices when faced with future dilemmas, Glover is equally emphatic regarding our collective responsibility. Citing the negative example of an early sanctioning of area bombing, Glover sketches the decline in societal character that followed, creating conditions for the acceptance of larger-scale cases, and eventually culminating in the events of Hiroshima and Nagasaki.¹⁷¹

On each of these occasions, universal principles alone would have failed to prevent tragedy. In the absence of moral wisdom, it would have taken no more than a few minutes for a utilitarian to prepare a case for the above atrocities having greater utility than any obvious alternative, or for a deontologist to prepare a case for the above atrocities being no more than fulfilment of their duty (for example, to keep a promise to end a war within a particular time frame).

As in the ONS example of disproportionate numbers of deaths among bus drivers above, collective and individual moral wisdom would have been required.¹⁷²

It is the same with Hardin's Tragedy of the Commons, and with the climate emergency. Individuals, and individual societies, as well as the world in its entirety, are now faced with dilemmas that exist because groups of individuals, and groups of societies, have made choices that have painted us all into a corner. We have created our environmental equivalent to the impossible choice faced by the Covid-19 pandemic's army of workers without adequate self-isolation pay: we have painted ourselves into a corner where we

¹⁶⁷ J. Glover, *Humanity: A Moral History Of The Twentieth Century* (New Haven: Yale University Press, 2000).

¹⁶⁸ *Ibid.*, p.22.

¹⁶⁹ *Ibid.*, p.410.

¹⁷⁰ *Ibid.*, p.26.

¹⁷¹ *Ibid.*, pp.87-88.

¹⁷² The question of moral wisdom is going to be revisited in light of John Dewey's, William James's, Jacques Ellul's, and Spinoza's thinking in **Part 2**.

are seriously considering the introduction of iron filings into the oceans of the world, with little idea of the consequences, because we think that the consequences of deciding against it might be even worse.¹⁷³

Environmental issues, too, require collaboration, both in the prevention of such dilemmas arising in the first place, and in the resolution of those dilemmas that have already arisen as a result of our failure to act responsibly in the past. They thus rely on the interplay between the individual and the collective exercising moral wisdom, which, for the reasons stated, cannot consist in the application of universal principles alone.

It is in this spirit that I am going to consider Indigenous conceptions of ethics next.

6.f.iii. Ethical considerations in Indigenous worldviews: an overview

Indigenous ethicists writing for a Western audience appear to be more acutely aware of one particular Western concern than of any other: McPherson and Rabb, for example, include a section renouncing relativism in the very first chapter of their book;¹⁷⁴ Burkhart devotes a lengthy section to a detailed explanation of why locality does not imply relativism;¹⁷⁵ Apffel-Marglin is equally careful to refute this misconception.¹⁷⁶ Deloria and Wildcat deal with the matter succinctly: “Postmodernists examined modern, essentially Western, theories of the real world and, finding them wanting, simply discarded the phenomenal world and kept theory.”¹⁷⁷

It is easy for us, as Westerners, nonetheless, to mistake locality for relativism. If different ethical precepts apply in different places, does this not mean that anything goes?

However, this conception conflates two issues that are actually disjunct.

When we in the West call for universal laws to be applied in order to prevent descent into an ethical free-for-all, what we are aiming to achieve is something along the lines of Mary Midgley’s thought, advocating an ethics where there is a clear distinction between right and wrong, as opposed to one where there is no wrong.¹⁷⁸ The question of how to achieve this “rightness” is a separate issue; it does not, on reflection, imply that the same action is going to be right in every circumstance. A one-size-fits-all approach to

¹⁷³ Attfield, *Environmental Ethics*, pp.212-213.

¹⁷⁴ McPherson and Rabb, pp.14-17.

¹⁷⁵ Burkhart, *Indigenizing Philosophy Through The Land*, pp.177-302.

¹⁷⁶ Apffel-Marglin, *Subversive Spiritualities*, p.162.

¹⁷⁷ Deloria and Wildcat, p.137.

¹⁷⁸ Midgley, *Beast And Man*, p.285.

environmental ethics has been shown, even by Western authors, to lead to anything but guaranteed “rightness”.¹⁷⁹

An ethics where some actions are definitely right and others are definitely wrong thus does not necessarily entail the application of universal laws, let alone the exclusive application of universal laws. Mary Midgley herself, for example, embraces moral complexity in the form of her petals of moral reasons;¹⁸⁰ Jonathan Dancy, making his case for Moral Particularism, frames this as a moral person being one who is sensitive to *all* the moral reasons present in a case,¹⁸¹ with Dancy offering more precision on the exact nature and potential application of the petals, but Midgley being the one who provides better clarity on the concept in no way implying the existence of a fact/value dichotomy.¹⁸²

Our Western belief that the application of universal laws is conducive to achieving an ethics where some actions are definitely right and others are definitely wrong is understandable in our Western context, where we have spent the last five centuries predominantly occupying ourselves with aspects of the world that respond to the application of universal laws. However, this is a different proposition from the application of universal laws being the only way of achieving an ethics where some actions are definitely right and others are definitely wrong. The conflation is linked to Enrique Dussel’s conception of the dynamics of modernity:¹⁸³ on the one hand, Western rationality, and some elements of universalism entailed by it, are realistic and conducive to our intelligent participation in the world. (Newton’s apple really will fall, rather than fly, in Europe and in the Andes alike). On the other hand, there is a danger inherent in the Cartesian dualism involved. Our placing ourselves, as Westerners, in binary opposition to the rest of the world as an “other”, entails a danger of our falling victim to what Dussel refers to as the “myth of modernity”,¹⁸⁴ which is a sense of superiority that places Western rationality and its universal laws in a position of exclusive validity that may

¹⁷⁹ For example, D.Schmidtz, ‘When Preservationism Doesn’t Preserve’, *Environmental Values*, Vol.6, No.3 (August 1997), pp.327-339, <URL = <https://www.jstor.org/stable/30301587>> , [Accessed: 20 March 2023].

¹⁸⁰ Midgley, *Animals And Why They Matter*, p.30.

¹⁸¹ J.Dancy, ‘Moral Particularism’, *The Stanford Encyclopedia of Philosophy*, ed. by E.N. Zalta (Winter 2017), <URL = <https://plato.stanford.edu/archives/win2017/entries/moral-particularism/>> , [Accessed: 20 March 2023].

¹⁸² Midgley, *Beast And Man*, p.285.

¹⁸³ E.Dussel, ‘Eurocentrism And Modernity (Introduction To The Frankfurt Lectures)’, *boundary 2*, Autumn 1993, Vo.20, No.3, pp.65-76, <URL = www.jstor.com/stable/303341> [Accessed: 20 March 2023].

¹⁸⁴ *Ibid.*, p.75.

ultimately result in our justification of genocide. A related danger, that of a self-perpetuating spread of standardisation undermining our ability to remain alive to the world, is going to be explored through Jacques Ellul's work in **Part 2** .

It is understandable that we Westerners, having spent the last five centuries focusing our attention on those parts of the world that are accessible to the universal laws of Newtonian physics, are currently finding it easier to engage with those than with anything else. They have served us well, too: without them, it is unlikely that we would now have a Covid-19 vaccine. The trouble starts when we start to think that because universal laws happen to be what we have trained our mind-bodies to engage successfully with, universal laws must be all that there is. Quantum theory alone has already shown us that they are not.

The question is, therefore, rather: since both Western and Indigenous ethicists are aiming for an ethics where some actions are definitely right and others are definitely wrong, and since we have seen from recent examples that universal laws are not sufficient on their own to achieve this, but rather that moral wisdom is a vital component of discerning the difference between the two, what resources can we draw upon to attain this wisdom?

And in an extension of the same question, as the example of the disproportionate death rate among bus drivers during the Covid-19 pandemic shows, how can we ensure that societal structures are present to allow wisdom, once attained, to be acted upon – i.e., how can we ensure that the environmental equivalent of a functioning system of self-isolation payments is in place, so that dangerous experiments such as the introduction of iron filings into the world's oceans do not need to be considered? To blame a low-paid individual for being faced with the impossible choice between keeping their family alive by travelling to work and keeping the bus driver alive by not travelling to work is to engage in victim-blaming. To have placed ourselves into a situation where we think that a dangerous experiment involving iron filings may be less dangerous than our decision against it is a sign that we have allowed ourselves to be caught napping. The examples show the truth of Merleau-Ponty's observation that as we weave the network that carries our existence, we create circumstances that place boundaries on what might otherwise have been perceived as a purely event-based freedom.¹⁸⁵ It is possible to paint ourselves

¹⁸⁵ Merleau-Ponty, pp.176-178.

into a corner – but it is equally possible to participate in the creation of liveable worlds,¹⁸⁶ and Indigenous authors have some interesting points to make about the latter.

In Cordova's work, ethical action first and foremost derives from the conception of the world as an interrelated whole, and of the universe as an energy field, where we humans are participants in a process of balance and harmony. This process is seen as beautiful, and humans, rather than predominantly thinking of themselves as having rights, above all feel accountable for their contribution to maintaining this balance.¹⁸⁷ While the uniqueness of the individual is a given in Navajo culture, it is by no means the sole source of "self": the role of humans is to fit into this world.¹⁸⁸ Examples of "incorrect" behaviour (for instance, greed) are framed as abnormal or incorrect states of a human being who is out of balance with the world they are part of.¹⁸⁹ Ritual may then be used to assist the individual in regaining balance, and in reclaiming their necessary place as part of the web of interrelationships they participate in. Awareness of interrelationships and of consequences implies responsibility as opposed to personal advantage, with responsibility being conceived as responsibility to add to the beauty of the universe. A Navajo artist, for example, would not intentionally create disruptive art.¹⁹⁰

Cordova's analogies, first touched upon at the beginning of this thesis, are highly relevant here. In her foreword to the collection of Cordova's later work, Kathleen Dean Moore relates the content of Cordova's final lecture before her unexpected death, when she provided a powerful image to illustrate the above point:

Together with the place we live, we are cocreators of the world, bringing it into existence moment by moment. So there is no escaping responsibility. (...) "Your life is a pebble thrown in a pond," she told the students (...). "And not just the pebble; your life is the pebble and the water and the energy that moves the waves and the movement of the waves themselves." (...) They knew the magnitude of the gift of self-respect and wisdom she was giving them.¹⁹¹

¹⁸⁶ Apffel-Marglin, *Subversive Spiritualities*, p.197.

¹⁸⁷ Cordova, *The Concept Of Monism In Navajo Thought*, pp.98-99.

¹⁸⁸ *Ibid.*, pp.100-101. To approach Cordova's conception of "fitting in" here, it may be helpful to bear in mind that her work draws parallels to Spinoza's thinking in this regard, which will be discussed in greater depth in **Part 2**. For the moment, a helpful stepping stone may be found in the idea of there being no relationship of binary dualism between the individual and the whole: an individual "fitting in" is not necessarily understood to be engaging in self-sacrifice to benefit others. Rather, the dynamic can be understood to be as described in Burkhart's jazz analogy in the following section, with the individual jazz player and their band embarking on a mutually supportive relationship.

¹⁸⁹ Cordova, *The Concept Of Monism In Navajo Thought*, pp.103-104.

¹⁹⁰ *Ibid.*, pp.105-106.

¹⁹¹ K.D.Moore, 'Introduction', in V.Cordova, *How It Is*, pp.xiii-xiv.

Apffel-Marglin's use of quantum theory, and of Karen Barad's work, makes the same ethical point: conceiving the world as a field of potentialities akin to Niels Bohr's complementarity principle contained in his findings regarding wave/particle duality, Barad's agential realism consists in our ability to make "agential cuts", bringing about the manifestation of new realities, by our actions – in the same way that Bohr's experiments brought about the manifestation of either waves or particles from an environment that previously contained the potentialities to manifest both.¹⁹² Barad's conception of ontology is thus different from a traditional representationalist one – we are not on the outside of the world, looking in, but we are involved in it, participating in creating it. This does not imply that objectivity no longer exists: it means, rather, that objectivity is recast, in the sense that it no longer means a pre-existing reality that we simply report on, but a reality that we participate in creating as we go about the daily business of living our lives.¹⁹³ If we participate in the creation of a society that fails to make adequate provision for self-isolation, then we are participating in the creation of an impossible choice for those on the receiving end. If we participate in the creation of carbon emissions that are beyond the earth's capacity to tolerate, then we are participating in the creation of a dilemma forcing us to choose between a dangerous experiment involving iron filings and a dangerous decision not to take the risk.

Cordova's snowball analogy again uses imagery to make a similar point:

My actions in the world are not meaningless (...). The future does not exist. "I" have not yet made it, contributed to it. My present actions are making it. Present actions are like layers of snow added to a snowball – the shape of the present outer layer determines the future shape of the whole.¹⁹⁴

If some of us Westerners think that this implies relativism, then that is simply a misconception: relativism only exists in opposition to universalism,¹⁹⁵ and Barad's work, thought through, implies locality and participation in the way outlined by Burkhart, and alluded to by Schmitz. It implies the correctness of horses for courses, and the need for a reliable source of moral wisdom, because we know less about horses and courses than

¹⁹² Apffel-Marglin, *Subversive Spiritualities*, p.57. A detailed discussion of Barad's thinking in relation to this point is offered in **Appendix B**.

¹⁹³ *Ibid.*, p.58. A selection of macroscopic as well as microscopic examples of this dynamic is included in **Appendix B**, and discussed in the context of the relevance of Barad's agential realism to both parts of this thesis, as well as of some differences in scope between it on the one hand and Indigenous worldviews on the other.

¹⁹⁴ Cordova, *How It Is*, p.175.

¹⁹⁵ *Ibid.*, p.162.

we think.¹⁹⁶ It implies the wisdom of Merleau-Ponty's conception of the individual being participant in weaving the web today that sustains it tomorrow. It implies the need to create functioning arrangements for self-isolation pay in a society that has people carrying a potentially deadly virus and bus drivers. It implies that different land is going to require different arrangements for mutual nurturing, and that we need to listen in order to learn what these may be.¹⁹⁷ It does not imply the absence of any distinction between right and wrong in the first place.

Universalism, applied as a sole source of wisdom, is the anthropocentric conception that it is within our gift as human beings to unilaterally discern universal laws exclusively governing which actions are correct and incorrect. Whether these universal laws originate from a transcendental God, who has placed us in charge in a position of stewardship, or whether these universal laws originate from Western science, makes little difference to the dynamic.¹⁹⁸ Either way, we are retracing the same pattern that Apffel-Marglin outlined in the context of the white, propertied male being universalised as a standard, for no incontrovertible reason:¹⁹⁹ we are universalising anthropocentric, and Eurocentric, circumstances and imposing them on other species and other localities because it does not occur to us to obtain input from others' vantage points – and we are doing this in a world that is demonstrably too complex for us to have sufficient understanding of to discern all the rules unilaterally,²⁰⁰ and we are persisting in doing it despite having known for decades that we are participating in creating a toxic world.²⁰¹

Burkhart's, and other Indigenous authors', conception of locality follows a profoundly different path.

6.f.iv. Burkhart's locality, applied: the absence of unilateral decision-making

Making reference to the Navajo concept of *nilch'i*,²⁰² Burkhart defines locality as

the way the human voice as the conveyer of human meaning arises from the voice of the land (knowing-from-the-land or meaning-from-the-land) – as in the manner of the Diné landscape whereby the wind gives rise to breath and makes the human

¹⁹⁶ **Part 2** is going to return to this in light of Spinoza's thinking.

¹⁹⁷ Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', p.52.

¹⁹⁸ Cordova, *How It Is*, pp.43-44.

¹⁹⁹ Apffel-Marglin, *Subversive Spiritualities*, p.136.

²⁰⁰ Peat, *Blackfoot Physics*, p.183.

²⁰¹ Attfield, *Environmental Ethics*, p.209.

²⁰² Cordova, *The Concept of Monism In Navajo Thought*. The term *nilch'i* was introduced in **section 6.c.** as a conception of a wind that suffuses the universe, which can (albeit partially) be approached through Western understandings of energy fields. Related concepts were shown (under a variety of names) to be part of several other Indigenous worldviews besides Cordova's Navajo one.

voice quite literally an extension of the voice of the land. Locality is a way of conceptualising place in Indigenous philosophy. It is more than place in the abstract, however. It is place as land. It is more than a concept; it is a materiality (...) ²⁰³

Burkhart appears to be aware that these concepts are going to be difficult for our Western-educated minds to grasp; he later provides the image of a jazz musician playing with others to illustrate his conception of our relationship with the world around us: the musician's individuality and the band's harmony are not in opposition, but are capable of being supportive of each other. ²⁰⁴

The important point made by Burkhart for our purposes in this section – of attempting to approach understanding of Indigenous conceptions of ethics as a potential source of moral wisdom – is that through the concept of locality, he wants to offer insight into a moral theory that does not hinge on any ascription of instrumental or intrinsic value to elements of the world. ²⁰⁵ In a more detailed comparison of Indigenous ethical thought to the Western conception of value-based environmental ethics, Burkhart refers to the Western belief that Indigenous ethical thought ascribes intrinsic value to non-human nature as a misconception. ²⁰⁶ His reasons for this arise from his overall conception of the world as interrelated, in a similar way to that outlined by Cordova. ²⁰⁷ Arguing from a vantage point where intersubjectivity precedes Cartesian subjectivity, ²⁰⁸ and citing Buber's conception of *I-thou* as opposed to *I-it* relationships, ²⁰⁹ Burkhart refers to wisdom as the capacity to grasp dynamics, ²¹⁰ and he leaves the reader in no doubt that the land has agency in this. ²¹¹ This means that in a similar way to that outlined by PRATEC, ethical

²⁰³ Burkhart, *Indigenizing Philosophy Through The Land*, p.xvi.

²⁰⁴ *Ibid.*, p.292. It may be helpful to note even at this early stage that the contemporary Western models of environmental ethics discussed at the beginning of this chapter do not appear to provide categories that Burkhart's thinking can easily be mapped to: while ecocentrism may be argued to reflect part of Burkhart's thinking due to its valuing the whole, and biocentrism may be argued to reflect another part of Burkhart's thinking due to its valuing the individual (both without anthropocentrism, although, conversely, also without any apparent ability to recognise, for example, a stone as an active member of a community), neither aspires to seek to balance the thriving of the individual and that of the whole in a way dynamically allowing the two to enhance each other. Such balance, however, is what Burkhart's jazz analogy aims for. This means that considered from within Burkhart's paradigm, the above Western models could be argued to be asking pertinent questions, but also to be stopping short of reliably developing these into harmonious answers. The importance of Burkhart's jazz analogy is going to be further explored in **Part 2** in light of Spinoza's thinking and in the context of Indigenous conceptions of performative knowledge processes.

²⁰⁵ Burkhart, *Indigenizing Philosophy Through The Land*, p.xxxiv.

²⁰⁶ *Ibid.*, p.181.

²⁰⁷ Cordova, *The Concept Of Monism In Navajo Thought*.

²⁰⁸ Burkhart, *Indigenizing Philosophy Through The Land*, p.104.

²⁰⁹ *Ibid.*, p.105. Martin Buber's thinking is going to be explored in more detail in **Part 2**.

²¹⁰ Burkhart, *Indigenizing Philosophy Through The Land*, p.121-122.

²¹¹ *Ibid.*, p.77-78.

action consists in a conversational relationship between human and non-human nature in locality, with the aim of nurturing harmony in a field of equivalents,²¹² with locality being understood as process and as kinship.²¹³ Right action arises from relationship, and this relationship may be conducted through ritual. Apffel-Marglin, for example, describes a ritual through which agency is located in the relationship between a number of entities: “(...) a source of water, a human community, a community of deities, a network of irrigation channels, and the fields to be irrigated(...)”.²¹⁴ Within this particular ritual relationship, it is the water that is conceived of as taking on a leadership role.

With regards to the associated conception of ethics, two precepts follow.

Firstly, the question of value is not a consideration here: it cannot be, in a field of equivalents where no one is in a privileged position to ascribe it. As Burkhart puts it, “The connectedness of all things then results in everything being alive and everything being sacred. (...) Everything has all the value there is.”²¹⁵

Secondly, in an ever-changing world where our role is that of balancing on a board on a barrel on ever-shifting sand, feeling our way towards harmony with the world around us as we participate in creating it,²¹⁶ it is inappropriate for human beings to pre-determine how someone should act in a future situation.²¹⁷ Unexamined application of pre-determined, universalised principles would bring danger of creating binary oppositions of anthropocentrism and misanthropy,²¹⁸ and of the individual and the whole,²¹⁹ when what is needed is sensitivity to the continuing emergence of truth through balance in the world as we participate in creating it.²²⁰ Routine arising from delocality would be perceived as a “conditioned response” potentially disrupting this balance:²²¹ the rituals nourishing the respective relationships involved in decision-making are alive and responsive to

²¹² Rengifo, ‘The Ayllu’, p.96.

²¹³ Burkhart, *Indigenizing Philosophy Through The Land*, p.86.

²¹⁴ Apffel-Marglin, *Subversive Spiritualities*, p.134.

²¹⁵ Burkhart, *Indigenizing Philosophy Through The Land*, p.200. Burkhart’s assertion may initially jar with our Western sensibilities. If everything has all the value there is, how can we eat vegetables? However, we are not being asked to refrain from sustaining our own lives; we are being asked to sustain them respectfully. Questions with regards to our taking the life of another being in order to sustain our own, and the tension inherent in our ability to create shared meanings as well as to cause each other’s deaths, are going to be revisited in **Part 2**.

²¹⁶ Cordova, *The Concept Of Monism In Navajo Thought*, p.99.

²¹⁷ Burkhart, *Indigenizing Philosophy Through The Land*, p.201.

²¹⁸ *Ibid.*, p.218.

²¹⁹ *Ibid.*, p.240-243.

²²⁰ *Ibid.*, p.246.

²²¹ *Ibid.*, p.230-231. It is going to be shown in **Part 2** that the dynamics involved in this disruption of balance may at least partially be approached through Jacques Ellul’s thinking.

knowledge understood as process, and to mutual empathy.²²²

The connection between the physical and the moral becomes natural and seamless in such a world,²²³ and any conception of science that failed to address meaning and value would simply be perceived as incomplete.²²⁴ Disagreements may occur, and are understood as progress.²²⁵ Fallibility is accepted as a fact of life in humans, non-humans, and deities alike;²²⁶ this entails that harm caused inadvertently will be more easily accepted than intentional disrespect.²²⁷

Throughout Burkhart's and other authors' considerations outlined in this section, one major difference between Indigenous and Western conceptions of ethics shines through in every facet compared: in the Western world, humans expect the human species to make decisions unilaterally. This also applies to those branches of Western ethics that ascribe moral considerability, entitlements to justice, or rights to non-humans, as the work of ascribing these is expected to be done by members of the human species. In Indigenous worldviews, on the other hand, this expectation does not exist.²²⁸ Decisions, moral or otherwise, are made through ritual nurturing of the relationships involved. Fallibility is readily admitted²²⁹ and, while it may be punished,²³⁰ it is ultimately tolerated; it is disrespect that is a serious failing, and respect requires the reciprocity involved in an *I-thou* relationship.²³¹

It is at this point that, once again, our Cartesian heritage appears to be what makes the difference. A human species in charge of discerning and applying universal laws, which are then predictably going to deliver morally sound choices, works on the assumption of a

²²² Rengifo, 'Education In The Modern West And In Andean Culture', p.174.

²²³ Burkhart, *Indigenizing Philosophy Through The Land*, p.266.

²²⁴ *Ibid.*, p.233-234.

²²⁵ *Ibid.*, p.263.

²²⁶ Rengifo, 'The Ayllu', p.117.

²²⁷ Burkhart, *Indigenizing Philosophy Through The Land*, p.285-286.

²²⁸ It may be useful to reiterate here that – as first touched upon in the discussion of some terminology in **section 1.a.**, and revisited especially in **chapter 4** and **chapter 5** since – references to "Western" and "Indigenous" worldviews are not intended to be references to perceived monoliths: they cannot be, first and foremost due to the fact that there are individuals as well as groups involved and, through this alone, diversity. In addition, the capacity to change has been discussed both in relation to individuals (for example, in **section 5.d.**) and to societies (for example, in **section 5.b.**). What is being said here is, rather, intended to be understood in the context of the influence of paradigm on the options we have made it easy, and likely, for ourselves to gravitate towards, in a dynamic first introduced near the beginning of **section 1.a.** through Bruce Wilshire's thinking.

²²⁹ Gonzales and Nelson, 'Contemporary Native American Responses To Environmental Threats In Indian Country', p.498.

²³⁰ Rengifo, 'The Ayllu', p.117.

²³¹ Burkhart, *Indigenizing Philosophy Through The Land*, p.287.

Newtonian, clockwork universe and, what is more, it works on the assumption of a Newtonian, clockwork universe that we understand, looking on from the outside when, in fact, we are not even managing to understand the effect that a non-functioning system of self-isolation payments is going to have on bus drivers in an immediate situation that we are involved in,²³² let alone the complexities involved in our longer-term interactions with the world.²³³

It is for this reason that we cannot continue to make a world without the involvement of those who do not happen to be Western, or who do not happen to be human. We are going to have to find a way to hear what everyone is communicating, because our existing vantage point is not enough.

Quantum theory has shown that the world is not a clockwork universe. Apffel-Marglin and Barad have shown that this means we are participants in creating the world,²³⁴ in the same way that Merleau-Ponty knew that we are participants in weaving the network of relationships in the world that sustains us.²³⁵ Cordova knew that as we roll our snowball of time spent in the world where today's layer contributes to shaping tomorrow's,²³⁶ the ripples of relationship we create in the pond of the world interact with the rest of the world's ripples on a level of complexity that we cannot fully predict, but are wise to take responsibility for to the extent that we are able to.²³⁷

All of these considerations, as well as Burkhart's above, point to a need for us Westerners to re-learn how to participate in meaningful relationships with the non-human world, in order to re-gain the ability to converse with it and to engage in a shared form of decision-making.

Apffel-Marglin strongly advocates ritual for this.²³⁸ Norton-Smith speaks of human persons as participating "in a familial social group with other human persons, with powerful spirit persons (...) and also with their plant and animal siblings."²³⁹ Referencing Vine Deloria, he goes on to state that non-Indians have also been able to experience such

²³² Booth, 'English councils refuse six in 10 requests for Covid self-isolation pay'.

²³³ Peat, *Blackfoot Physics*, p.183.

²³⁴ Apffel-Marglin, *Subversive Spiritualities*, p.57.

²³⁵ Merleau-Ponty, p.176.

²³⁶ Cordova, *How It Is*, p.175.

²³⁷ Moore, pp.xiii-xiv.

²³⁸ Apffel-Marglin, *Subversive Spiritualities*, p.194.

²³⁹ Norton-Smith, p.91.

communication when participating in natural environments.²⁴⁰

PRATEC, although writing from an Indigenous, Andean vantage point, where ritual is an unquestionable given for their own locality, stress the importance of other parts of the world having created their own, different circumstances.²⁴¹ This would imply that whether or not every part of the Western world could fruitfully employ ritual in its own interaction with the more-than-human world at this point – i.e., without an initial period of learning and attunement – is an open question. Other methods, perhaps more suited to the Western world in its current shape and before any such change is effected, may be available to us.²⁴²

Either way, it is evident that an environmental ethic based on relationship with the more-than-human world, in the expectation of the more-than-human world exercising its own agency, has the potential to make greater demands on humans' cooperation with it than an environmental ethic where – considerate or not, just or not – it is always going to be the human species who reserves the right to make unilateral choices.

²⁴⁰ Ibid., p.91.

²⁴¹ Grillo, 'Development Or Decolonisation In The Andes?', p.239.

²⁴² For example, Eva Meijer's suggestions for initiating communication with non-human animals without necessarily involving ritual: E.Meijer, *Animal Languages* (London: John Murray, 2019). **Part 2** is going to explore some of our current, non-ritual, Western forms of communication with non-humans, as well as the question of circumstances in which ceremonial engagement with the sacred in the material may be able to arise naturally from these.

Chapter 7 – Implications of the above findings for potential new forms of knowledge transfer and collaboration between Indigenous and Western societies

Epistemic injustice was identified at the beginning of this thesis as a barrier to the transfer of already existing knowledge. It has since become apparent that besides the transfer of already existing knowledge, regeneration of harmonious relationships between humans and non-humans is going to require new ground to be broken: for localities different from those that existing knowledge pertains to, and with new challenges present (such as the climate emergency) which are likely to require collaboration between localities, it is now also necessary to consider the potential effects of epistemic injustice on shared innovation.¹

Relations between Indigenous and Western groups remain strained. We are not only looking at present differences with regards to vantage points, resulting tacit assumptions, and diverging Wittgensteinian riverbeds providing a challenging environment for the development of mutual understanding. We are also looking back on a history of domination and discrimination, and we are looking at continuing domination and discrimination to this day.²

Even the most generous of Indigenous scholars – for example, Lee Hester – cannot but acknowledge that to this very day, non-Indigenous academics are de-facto gatekeepers in the academic world.³ Hydroelectric projects are still being commissioned by non-Indigenous majorities overriding Indigenous concerns of this being tantamount to cutting up their own flesh.⁴ Enclaved Indigenous groups dependent on resources deriving from the surrounding land are finding themselves suddenly deprived.⁵ Western societies are responsible for the vast majority of carbon emissions;⁶ Indigenous regeneration projects such as PRATEC cannot be categorised as major carbon emitters by any stretch of the

¹ This chapter is intended as a sketch of some of the challenges involved. Some dynamics of shared learning and creation inherent in Indigenous conceptions of performative knowledge processes are going to be discussed in **Part 2**.

² For example, McPherson and Rabb, pp.23-59, and Smith, *Decolonising Methodologies*, pp.198-216.

³ Hester, 'On Philosophical Discourse: Some Intercultural Musings', p.267.

⁴ McPherson and Rabb, p.87.

⁵ T.Greaves, 'Contextualising The Environmental Struggle', in *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, ed. by J.Grim (Cambridge: Harvard University Press, 2001), pp.25-46 (p.41).

⁶ Attfield, *Environmental Ethics*, p.205.

imagination; yet the delicate balance of their diversity of crops cultivated at different altitudes⁷ is bound to be disrupted by Western-made climate change. Some of these changes have already been documented by PRATEC.⁸ The damage done to Indigenous communities by this Western overgrazing of the Commons of carbon emissions has been further exacerbated by unhelpful financial arrangements imposed in the name of development aid since the Second World War, which, at least in some cases, does not appear to have served the interests of those in receipt of it:

(...) the so-called 'development aid', which takes place in the form of loans that enlarge our external debt, is in reality a contribution destined to facilitate the deployment of international monopolistic capital in our countries because it dedicates itself, for example, to providing an infrastructure that diminishes the cost of transnational operations.⁹

Acceptance of this "aid", as a corollary of acceptance of a Eurocentric, anthropocentric model of development, is ensured by a Westernised education system creating a Western-educated, compliant elite.¹⁰

These are issues that are going to need to be resolved before any form of cooperation can take place on an equal footing. Reparations alone, despite being necessary, and despite being no more than fair, are not going to be sufficient to achieve this.

7.a. Reparations: one element of a potential way forward

Besides their financial value, reparations perform an important function in acknowledging the wrong that has been done. Angelo Corlett, citing Joel Feinberg, places them in the context of redress for injury (in the same way that he does punishment), as well as

⁷ Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', pp.63-68.

⁸ PRATEC, *Climate Change In Andean Communities*, March 2009 <URL: <http://www.pratec.org/wpress/pdfs-pratec/climatechange.pdf>> [Accessed: 20 March 2023].

⁹ Grillo, 'Development Or Decolonisation In The Andes?', p.214.

¹⁰ *Ibid.*, p.212.

valuing their ability to function as a deterrent from continued wrongdoing.¹¹

Arguing his case first from a utilitarian, then from a rights-based Western ethical theory, Corlett suggests that further positive functions of reparations include clear communication of a standard of justice and fairness in a society, as well as offering an apology “without the presumption of forgiveness or mercy.”¹² Absence of reparations, on the other hand, is likely to result in an accrual of justified resentment.

The author then turns to the practicalities of delivering a programme of reparations, and points out that the conflation of reparations with affirmative action (which may be present in some utilitarian-based, forward-looking programmes) is based on a category mistake: the function of reparations is that of an apology, whereas the function of affirmative action is to allow talent to thrive. “Stolen goods are not to be rectified by way of a court-ordered system of victims working for the values of those goods stolen from them.”¹³

Corlett acknowledges, with regards to Indigenous populations, that redress for land theft and genocide must be included alongside redress for financial harm. He is emphatic that reparations, despite being a necessary condition of reconciliation, are by no means a sufficient one, since the choice must be left up to the victims.¹⁴

I find Corlett’s exploration of the topic helpful; however, I believe a number of additional issues would need to be considered before a mutually acceptable solution could be arrived at.

Firstly, Corlett’s article argues from within a Western conception of ethics, and is based

¹¹ J.A. Corlett, ‘Reparations’, in *The Oxford Handbook Of World Philosophy*, ed. by W. Edelglass and J.L. Garfield (New York: Oxford University Press, 2011), p.598. The question might legitimately be raised at this point of why, immediately after the introduction to this chapter stressed the importance of considering a range of factors besides money, reparations are now being given a prominent place in the chapter’s very first section. I would argue that this is nonetheless helpful for at least two reasons: firstly, as demonstrated – for example – by this very citation from *The Oxford Handbook Of World Philosophy* (and, for the moment, without judgement with regards to whether this is warranted or not), discussion of reparations does tend to occupy a prominent place in discussions of possible ways forward towards collaboration, so that failure to acknowledge this would mean that the chapter was incomplete. Secondly, as the introduction to this chapter has already begun to show, there are reasons why reparations cannot achieve everything that they would need to in order to pave a way towards mutually respectful collaboration on their own. Some of these reasons are inherent in the way reparations currently tend to be conceived, and in order to examine this, it is first going to be necessary to consider reparations.

¹² *Ibid.*, p.599.

¹³ *Ibid.*, p.606.

¹⁴ *Ibid.*, p.608.

on utilitarian and rights-based approaches. It has been shown above that Indigenous conceptions of ethics are based on localities and relationships and, as a result, philosophical conversations would have to be had before a mutually intelligible way forward could be sought.

Secondly, Corlett's article works on the assumption of a Western justice system, for example, when making reference to court orders. The Western justice system is "based upon assumptions about linear time, causality, objective reality, and the power of language to capture the world,"¹⁵ whereas Indigenous systems of justice tend to be, above all, concerned with "ensuring balance and harmony within the whole group,"¹⁶ and the way that this would be likely to be achieved would be, in the first instance, through conversations with the victims to explore criteria for a satisfactory form of balance in the future, and eventually through a talking circle involving the whole group to finalise the arrangements.¹⁷

Thirdly, although the approach of conducting conversations with the victims, and eventually resolving the matter in a talking circle, shows that Indigenous groups will tend to seek to walk the "Red Road" of kinship and balance first, Indigenous worldviews do include the possibility of having to choose the "Black Road" of conflict, as a last resort, when threatened.¹⁸ With regards to reparations, they may have no other choice: the Western court system, although largely built on an adversarial model closer to the Indigenous conception of the Black Road, may be the only one available in a nation state with a non-Indigenous majority. Where this is the case, ways of conceiving and of communicating knowledge may be profoundly incompatible, potentially rendering the court system incapable of understanding the issue, let alone of resolving the situation.¹⁹

Fourthly, even the financial implications of colonial plunder in the past – which are arguably going to be those most easily accessible to mutual understanding, as they are measurable by standards familiar to both groups alike – are largely hidden, or in any case were largely hidden at the time of publication of PRATEC's work. At a time when

¹⁵ Peat, *Blackfoot Physics*, p.47.

¹⁶ *Ibid.*, p.48.

¹⁷ *Ibid.*, p.49. Existing examples of successful transfer and application of talking circle methodologies across paradigms include Linda Tuhiwai Smith's discussion of healing circles in processes of reconciliation (Smith, *Decolonising Methodologies*, p.156), as well as Desmond Tutu's leadership of the South African Truth and Reconciliation Process referenced in **Part 2**.

¹⁸ For example, Burkhart, *Indigenizing Philosophy Through The Land*, pp.139-144.

¹⁹ Bell, 'Respecting The Land: Religion, Reconciliation, And Romance – An Australian Story', p.477.

conversations regarding the financial relationship between the Andes and the West largely revolved round Andean nation states' external debt, a 1991 study published by the College of Economists of Peru found

that Spain owes Peru \$647,075 million (thirty-two times more than the external debt of Peru) considering only three facts: (a) the ransom of the Inca Atahualpa: \$ 599,408 million; (b) the secret lowering of the Monetary Gift of the mintings effected in the House of Money in Lima during the time of Charles III: \$ 38,569 million; and (c) the debt contracted by the Spanish Crown with the Indigenous communities: \$ 9,098 million.²⁰

PRATEC have been clear about the fact that exploitation has not ended with the official end of colonialism, but continues in the form of unhelpful arrangements regarding development aid.²¹ This chimes with Vandana Shiva's work on what she refers to as "maldevelopment", which is the unwanted imposition of Western economic principles. Shiva points out that even before any unhelpful financial loan arrangements are considered, the present-day, Western justification of maldevelopment by calculation of individuals' and nations' productivity is flawed as it fails to include, for example, the cost of increased use of natural resources, while diverting resources away from survival, and disproportionately affecting the lives and livelihoods of women, in a new form of subjugation that is no longer dependent on any formal colonial arrangements while having a similar effect.²²

Finally, the purely material (and thus more easily measurable) side of colonial and continuing, present-day discrimination and exploitation is only one side of the coin. At least as importantly, profound emotional, cultural, and spiritual damage has been done, and is continuing to be done. Although Corlett's exploration of the issue of reparations mentions the need to compensate for land theft and genocide, it neither explores the issue of more-than-material damage more fully, nor is it likely that its exclusively Western approach is going to succeed in finding a path to resolution that resonates with the experience of reality of the Indigenous groups involved. A group whose own flesh has been cut by the creation of a mine on the land to which they belong is not going to be healed by financial compensation alone.²³ The same applies to the looting of Indigenous

²⁰ Grillo, 'Development Or Decolonisation In The Andes?', p.206.

²¹ Ibid., pp.213-214.

²² Shiva, 'Staying Alive', pp.5-6.

²³ McPherson and Rabb, p.87.

graves by archaeological and anthropological projects²⁴ in a locality where there is no separation between a person's past, present, and future manifestations.²⁵

7.b. Reparations in the context of balance and relationship

Cajete, in keeping with what was said above regarding Indigenous conceptions of justice focusing first and foremost on present and future balance being restored for the entire group concerned, begins his consideration of potential ways forward with requirements that present-day knowledge transfer would have to meet.²⁶ Having pointed out the need for knowledge transfer, and the difficulties currently posed by the still existing power imbalance, he first of all states that the issue of cultural appropriation must be resolved, as currently the prospect of sharing knowledge and then finding it patented by someone else frequently prevents disclosure. He then moves on to requirements for a respectful bridge-building process in the present. These consist of recognition by the West that other vantage points may have conceptions of science that are wider than the West's own, and that "the verb orientations and highly metaphorical nature of Indigenous languages may be better suited than European-based scientific language for expressing quantum reality."²⁷ He goes on to state that different ways of coming to know will need to be taken into account.²⁸ His reference to the ethical concerns involved in this is reminiscent of Norton-Smith's ethical exploration of the story of an Indian stealing knowledge of the frogs' song.²⁹

It is then, and only then, that Cajete moves on to the issue of restitution and restoration for past transgressions of Indigenous laws, especially of those regarding relationships with nature.³⁰

In a similar way to Cajete, Linda Tuhiwai Smith, too, devotes the lion's share of her book to the discussion of viable methodologies for useful Indigenous-led research, and to present-day requirements of mutual respect in relationships with any non-Indigenous

²⁴ A.Arkeketa, 'Repatriation: Religious Freedom, Equal Protection, And Institutional Racism', in *American Indian Thought: Philosophical Essays*, ed. by A.Waters (Oxford: Blackwell Publishing Ltd., 2004), pp.239-248.

²⁵ Burkhart, *Indigenizing Philosophy Through The Land*, p.196.

²⁶ Cajete, *Native Science*, pp.307-309.

²⁷ *Ibid.*, p.308.

²⁸ *Ibid.*, p.309.

²⁹ Norton-Smith, pp.58-59. The story involves a human learning *about* the frogs' song, both without the frogs' consent and without understanding that his learning failed to enter into any relationship of mutual empathy and responsiveness. Indigenous conceptions of performative knowledge processes are going to be discussed in more detail in **Part 2**.

³⁰ Cajete, *Native Science*, p.309.

colleagues involved.³¹ She deals with the question of restoration as part of her discussion of a number of Indigenous projects that she uses to exemplify good practice, and she conceives restoration as the “restoring of well-being – spiritually, emotionally, physically, and materially,”³² making particular reference to positive experiences with healing circles in this regard, as well as with alternative projects focusing on healing rather than on punishing.

Cajete, while acknowledging that it may not be feasible to exactly restore a past situation with regards to the land concerned in every case, is clear about his expectation that, irrespectively, *some* way of honouring Indigenous conceptions of the situation must be found in every case, and that, therefore, development of a mutually reciprocal relationship will require restitution of past and present transgressions as a matter of course.³³

The sequence of events is what appears to be the crucial point here: a respectful relationship must be established first, and then reparations will follow from that. It is not the case that reparations, on their own, would be seen to imply respect here.³⁴

7.c. Knowledge transfer and collaboration: epistemic injustice as a potential barrier to successful future cooperation

Some environmental problems remain local. Fly-tipping of old furniture by residents of rural Berkshire at a local nature reserve may rightly be frowned upon by Berkshire humans and non-humans alike,³⁵ but it is unlikely to be noticed by humans or non-humans in the Andes.

Pesticide use, on the other hand, does not work that way: pesticides have been found in locations where it would not have made sense for them to have been used, which means

³¹ Smith, *Decolonising Methodologies*.

³² *Ibid.*, p.156.

³³ Cajete, *Native Science*, p.309.

³⁴ This would require consideration even if it were solely a case of personal or collective preference. However, its significance goes beyond this: in **Part 2**, it is going to become clear that performative knowledge processes – which are, arguably, likely to be instrumental in finding shared ways forward – depend on the presence of mutual respect.

³⁵ BBC News, *Nature Reserves ‘Trashed’ After Lockdown Easing*, 5 June 2020 <URL: <https://www.bbc.co.uk/news/uk-england-52928561>> [Accessed: 20 March 2023].

that they must have travelled.³⁶ The climate emergency, too, falls into the latter category, affecting the world beyond any immediate location where it is being caused. This means that it is impossible for any group to protect their own locality from environmental damage without the cooperation of others, and cooperation requires conversation. Conversation, in turn, requires everyone to be heard.

Our currently existing nation states were created on land that Indigenous populations already belonged to. Indigenous populations did not ask for this, and are now forced to operate within the systems thus created. Ensuring minorities' capabilities is a matter of decency and, as Martha Nussbaum points out, it should be done for this reason alone.³⁷ Miranda Fricker's observations on the "epistemic breaking of bread" in the context of reciprocity shows that epistemic contribution is a capability without which a list of capabilities cannot be complete.³⁸

However, the experience of Indigenous minorities has not only historically been frustrating in this regard: it continues to be frustrating to this day with, for example, Linda Tuhiwai Smith describing exactly the same dynamics of Indigenous knowers being treated as informants (rather than as participants in interpretation)³⁹ that have also been criticised by Havi Carel with regards to patients' experience in a healthcare setting.⁴⁰

Besides being a violation of common decency, such prevention of universal epistemic contribution constitutes a form of domination, as well as corrupting the knowledge base by failing to include certain vantage points.⁴¹

This means that in addition to decency – which, on its own, is reason enough to ensure the capability of Indigenous contribution – there is vital learning at stake. The climate

³⁶ S.Corsolini et al., 'Occurrence of organochlorine pesticides (OCPs) and their enantiomeric signatures, and concentrations of polybrominated diphenyl ethers (PBDEs) in the Adélie penguin food web, Antarctica', *Environmental Pollution*, Vol.140(2), March 2006, pp.371-382, URL: <<https://www.sciencedirect.com/science/article/pii/S0269749105003805>> [Accessed: 20 March 2023].

³⁷ M.C.Nussbaum, *Frontiers Of Justice: Disability, Nationality, Species Membership* (Cambridge: Harvard University Press, 2007), pp.222-3.

³⁸ M.Fricker, 'Epistemic Contribution As A Central Human Capability', in *The Equal Society*, ed. by G.Hull (London: Lexington Books, 2015), pp.73-90. As stated at the beginning of this chapter, elimination of epistemic injustice is going to be as relevant to shared innovation as it was shown to be to the transfer of already existing knowledge in the early chapters of this thesis. **Part 2** is going to explore some of the dynamics at play in more detail.

³⁹ Smith, *Decolonising Methodologies*, p.10.

⁴⁰ H.Carel, and I.J.Kidd, 'Epistemic Injustice In Healthcare: A Philosophical Analysis', *Medicine, Healthcare And Philosophy* (2014:17), pp.529-540, DOI: 10.1007/s11019-014-9560-2 [Accessed: 20 March 2023].

⁴¹ Fricker, 'Epistemic Contribution As A Central Human Capability'.

emergency is but one example of the importance of Viola Cordova's observation cited at the very beginning of this thesis: "To find a way to live on the earth without wrecking it (...) we cannot afford to limit ourselves to only one way of thinking."⁴²

At the moment, in addition to the largely unresolved issue of historical damage to Indigenous minorities' standing in society, present-day epistemic injustice of all three types is continuing to stand in the way of unimpeded Indigenous epistemic contribution, and the nature of the difficulties discussed in the earlier parts of this thesis makes this likely to be as relevant to shared innovation as it was shown to be to the transfer of existing knowledge.⁴³

The previous section made reference to Cajete working on the assumption that knowledge transfer and shared innovation are desirable, and that they are also likely to be feasible, as long as certain criteria of mutually respectful collaboration are met.⁴⁴ However, in light of the continuing difficulties relating to epistemic injustice discussed, not everyone currently agrees, and these dissenting voices, too, will need to be heard if any form of new relationship is to be found.

Corlett observes that failure to deal with reparations may result in accrual of justified

⁴² Cordova, *How It Is*, p.2.

⁴³ It may be helpful to recapitulate some of the most pertinent examples to illustrate this point. The effects of dominant groups imposing their own styles of debate have been well documented, for example, in the context of discussions of deliberative forms of democracy (R.Garner, 'Animal Rights And The Deliberative Turn In Democratic Theory', *European Journal Of Political Theory*, Vol.18, issue 3, p.312, DOI: 10.1177/1474885116630937 [Accessed: 20 March 2023]). This difficulty alone already entails the continued presence of both types of epistemic injustice outlined by Fricker: Linda Tuhiwai Smith's assessment of the struggles experienced by Indigenous researchers provides ample evidence of this. (Smith, *Decolonising Methodologies*, p.40.) In addition, there remains the third type of epistemic injustice, the type implied by the impossibility of a complete phenomenological reduction, and referenced by Carel (who then goes on to propose a phenomenological toolkit as a remedy in a healthcare setting): some experiences may be impossible to communicate solely in the form of propositional knowledge, "and so are only shareable with persons with whom one shares a standpoint or a sense of solidarity." (Carel and Kidd, 'Epistemic Injustice In Healthcare: A Philosophical Analysis', p.530.) Outside healthcare, and in the context of attempted knowledge transfer between Indigenous and non-Indigenous groups, the experience has been described as simply "talking past each other." (Fienup-Riordan, 'A Guest On The Table: Ecology From The Yup'ik Eskimo Point Of View', in *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, ed. by J.Grim (Cambridge: Harvard University Press, 2001), pp.541-558.) It is going to become increasingly evident throughout the remainder of this thesis that the implications of Fienup-Riordan's "talking past each other" are bound to be wider than they appear at first glance: **Part 2**, aided by the stepping stone of Karen Barad's thinking provided in **Appendix B**, is going to explore in greater depth some of the dynamics involved in Indigenous conceptions of performative knowledge processes, and some of the dynamics by which the absence of mutual attunement may result not only in existing knowledge failing to be shared successfully, but also in processes of shared learning and creation failing to spark.

⁴⁴ Cajete, *Native Science*, pp.304-309.

resentment.⁴⁵ The figures cited by Grillo above illustrate that reparations can only, and only at best, be described as patchy to date.⁴⁶ This means that it would be no more than reasonable for accrued resentment to be the dominant factor in preventing collaboration. However, resentment does not appear to be the issue at the forefront of the minds of those who remain unconvinced with regards to collaboration with the West.

As discussed above, Indigenous conceptions of restorative justice tend to focus on balance and harmony of the group concerned going forward, as well as on methodologies of having conversations with all concerned, first and foremost with the victims, in order to ascertain how this might be achieved, before ultimately resolving the issue in a meeting of the entire group.⁴⁷ Cajete, above, also showed that it is above all the quality of the current relationship that is of importance, with restorative justice being a corollary of this, as opposed to vice versa.⁴⁸ Apffel-Marglin's observations on a community's way of dealing with painful colonial memories through comedy rather than through bitterness, while strengthening their own way of participating in the world, strikes a similar chord.⁴⁹ It does not primarily appear to be resentment regarding the absence of realistic reparation payments for past injustices that is driving current reticence where it exists, although the issue is clearly on Indigenous scholars' horizon as one which has not yet been resolved, and which should have been. It is primarily present-day epistemic injustice, of all three types, that is driving any reluctance to collaborate.

Dale Turner, for example, experiences the predominantly white majority that his Indigenous minority is embedded in as an epistemically hostile environment, and advocates against attempts at philosophical discourse between the two: the "word warriors" he hopes to educate are designed to operate exclusively within a legal and political context, as participation in legal and political discourse is seen as necessary for Indigenous survival.⁵⁰

PRATEC strike a tentatively more hopeful note than Turner. Their publication of their work in English is testament to the fact that communication with the West with regards to philosophical questions is being viewed as a desirable development: the graduates of

⁴⁵ Corlett, 'Reparations', p.599.

⁴⁶ Grillo, 'Development Or Decolonisation In The Andes?', p.206.

⁴⁷ Peat, *Blackfoot Physics*, p.49.

⁴⁸ Cajete, *Native Science*, pp.307-309.

⁴⁹ Apffel-Marglin, *Subversive Spiritualities*, p.156.

⁵⁰ D.Turner, 'Oral Traditions And The Politics Of (Mis)Recognition', in *American Indian Thought: Philosophical Essays*, ed. by A.Waters (Oxford: Blackwell Publishing Ltd., 2004), pp.229-238.

their local university that their project output was originally aimed at would have been more likely to speak Quechua or Spanish as their first language.⁵¹ However, despite PRATEC's openness to collaboration with the Western world also being evidenced by joint projects with Apffel-Marglin welcoming "study abroad" students from the United States,⁵² and despite their willingness to contribute, for example, to John Grim's "Indigenous Traditions and Ecology" project at Harvard,⁵³ the boundaries set by PRATEC are equally clear: "We Andeans do not concede any 'cognitive authority' to the West. It is an authority that the West gives itself,"⁵⁴ and, "We have never identified with these strange beings or with their activities. When we involve ourselves, we know that we are 'in their business'."⁵⁵

On his list of "operative features of the path for decolonisation", the author's first item is, then,

To show the radical difference between the Andean vision and the modern Western cosmology in order to highlight that 'to combine the best of the West with the best of the Andean culture' – with which some try to justify modernisation, that instrument of colonisation – is an eclectic and impossible stance.⁵⁶

While PRATEC's publication of their work in English, as well as their willingness to contribute to John Grim's project at Harvard, are clearly the actions of friendly neighbours keen to engage in friendly exchange, it is also clear that a fence has been erected to protect the Indigenous group from renewed, unwanted, Western epistemic domination. As with previous examples, their concern primarily relates to the prevention of renewed difficulties, with the question of reparations for past injustices being on the author's horizon, but not as his first concern.⁵⁷

Linda Tuhiwai Smith, too, while making clear her concerns with regards to the continued prevalence of epistemic injustice particularly in academic environments throughout her

⁵¹ Apffel-Marglin, 'Introduction: Knowledge And Life Revisited', p.6.

⁵² Apffel-Marglin, *Subversive Spiritualities*, p.198.

⁵³ J.Valladolid and F.Apffel-Marglin, 'Andean Cosmology And The Nurturing Of Biodiversity', in *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, ed. by J.Grim (Cambridge: Harvard University Press, 2001), pp.639-670.

⁵⁴ Grillo, 'Development Or Cultural Affirmation In The Andes?', p.125.

⁵⁵ *Ibid.*, p.140.

⁵⁶ Grillo, 'Development Or Decolonisation In The Andes?', p.236. I believe it to be useful to point out that the "eclectic and impossible stance" referred to by Grillo here is one that attempts to pick and mix from already existing ideas taken from both paradigms. What Grillo is not precluding is the possibility of embarking on processes of shared learning and creation: in light of his and his colleagues' discussions of PRATEC's work in this regard, he cannot be. (For example, Ishizawa, 'Community-Based Learning In The Peruvian Andes: Decolonising The Academic Disciplines'.)

⁵⁷ *Ibid.*, p.206.

work, strikes a tentatively collaborative note by acknowledging the value of joint projects, while setting a clear agenda for respectful conduct, as well as for forward planning to mitigate any anticipated potential sources of epistemic injustice that are already known.⁵⁸

David Peat, initially reluctant, relates being persuaded by a Native American friend to contribute to knowledge transfer: having seen Indigenous worldviews misunderstood and ridiculed, Peat's friend felt that the connections made between Western science and Indigenous worldviews during the Dialogues were likely to support wider understanding and, as a result, contribute to building acceptance and respect.⁵⁹

A group of James Bay Cree, in the context of their opposition to a planned hydroelectric project, has been able to report some success in their attempt at knowledge transfer to non-Indigenous stakeholders, with a decisive factor being the establishment of some initial, shared reference points, in this case through the use of metaphor. The identification and development of these shared reference points was driven by the Cree,⁶⁰ reflecting the fact that having experienced both cultures, they were more likely than their non-Indigenous counterparts to be able to accomplish this task, but also, probably, the fact that unequal power structures left them with no other choice if they wanted to be heard. Either way, and even after allowing for the caveat that contributors to John Grim's Harvard conference will, at least to some extent, have self-selected and thus be more likely to include those more optimistic regarding the feasibility of knowledge transfer, a ray of hope remains: no matter how many examples of negative experiences may have remained invisible at the conference for this reason, knowledge transfer did, still, occur in the case of the Cree's opposition to the hydroelectric project.

The Cree's choice to use metaphor, and thus meaning, rather than exclusively propositional knowledge in their attempt to create shared reference points between paradigms, is echoed by Parry's report from the Dialogues making particular reference to a "shared meaning space" created by Leroy Little Bear's facilitation introducing elements of methodologies learnt from Indigenous talking circles.⁶¹

Cordova, too, writes for a Western audience and does, therefore, believe in the feasibility

⁵⁸ Smith, *Decolonising Methodologies*, p.140.

⁵⁹ Peat, *Blackfoot Physics*, p.18.

⁶⁰ H.A.Feit, 'Hunting, Nature, And Metaphor: Political And Discursive Strategies In James Bay Cree Resistance And Autonomy', in *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, ed. by J.Grim (Cambridge: Harvard University Press, 2001), pp.411-452.

⁶¹ Parry, *Original Thinking*, p.264.

of at least some knowledge transfer, despite clearly being aware of the difficulties involved. Most important in this, also for Cordova, is the need for a wider conception of knowledge, beyond propositional knowledge alone. To support this, she draws parallels, similar to Peat's, between Indigenous worldviews and post-Newtonian developments in physics, exemplified by the Native American term of "matter-energy" (as opposed to "matter and energy"). Cordova uses the term as an illustration of the Indigenous conception of a sacred universe, where propositional knowledge is but one of many contributors to an attitude that may, if we remain alert and responsible, result in our participation in balance.⁶²

Burkhart, in the same vein, sees attitude, to a greater extent than knowledge, as the key factor in a regeneration of environmental ethics,⁶³ citing a respectful attitude arising from an experience of kinship as the key foundation of moral conduct.⁶⁴

Through the diverse voices of the authors cited, a piece of common ground is beginning to emerge, and it is that of McPherson and Rabb's above claim of Indigenous philosophies being transformative philosophies, where a "shift in styles of reasoning as well as ways of perception"⁶⁵ is required before some concepts can be understood.⁶⁶ McPherson and Rabb, too, are supportive not only of attempts at knowledge transfer, but also of the serious dialogue between the two philosophies that could form a basis for shared innovation.⁶⁷ However, their caveat could not be clearer: they not only state clearly that propositional knowledge alone will not help, and that this, rather than secrecy, may frequently be the reason for an Indigenous person's reluctance to explain.⁶⁸ They are also, then, as good as their word: in the latter half of their book, their suggestions for cultural affirmation and subsequent sharing with non-Natives are, without exception, art-based and experiential.

⁶² Cordova, *How It Is*, pp.230-232. The points made by the authors cited here are going to be revisited in the context of performative knowledge processes in **Part 2**.

⁶³ Burkhart, *Indigenizing Philosophy Through The Land*, p.303.

⁶⁴ *Ibid.*, p.306.

⁶⁵ McPherson and Rabb, p.161.

⁶⁶ Interpreted from within a representationalist paradigm alone, this could be understood "only" to mean, "where the ability to occupy a new phenomenological vantage point is required before knowledge transfer can succeed." However, once participationalist ideas are considered alongside this, our involvement in the ongoing creation of emerging reality becomes equally important – as already sketched in some examples above, and discussed in more detail in the context of performative knowledge processes in **Part 2**.

⁶⁷ McPherson and Rabb, p.139.

⁶⁸ *Ibid.*, p.159.

If this, at first glance, appears unusual to our Western mind-bodies after five centuries of predominantly relying on Newtonian and Cartesian conceptions of reason, we may find it helpful to remind ourselves that we may have access to some stepping stones across the divide. Our stunted ability to communicate, for example, with animals, is likely to be a learnt incompetence.⁶⁹ Louise Westling combines Merleau-Ponty's thinking with scientific discoveries made several decades after his death to conclude that we do, after all, share in the "flesh of the world".⁷⁰ The metaphorical, creative process cited by Cajete as a vital element of a science that engages physically, emotionally and spiritually with the world⁷¹ is echoed, for example, in Mary Midgley's account of Iris Murdoch's response to her encounter with a kestrel.⁷² Murdoch herself makes reference to the vital role of attitudes cultivated between encounters in shaping our moral responses to the world.⁷³ Even as part of a discussion conducted purely from a representationalist vantage point, without, as yet, including a dimension of shared learning and creation, Nussbaum shows the role of "othering" as a barrier to compassion.⁷⁴ Karen Milton's exploration of contemporary ethological studies stresses the importance of emotion in our learning and in the shaping of our resulting attitudes.⁷⁵ Mark Johnson, in the context of moral reasoning, argues that the presence of metaphor in this and in other processes of reasoning "calls into question any strict interpretation of the dichotomy between imagination and reason".⁷⁶

Millennia previously, and also in the West, Aristotle already made his case for virtue only being complete once it involves both our intellect and our emotions.⁷⁷

7.d. Beyond epistemology and ontology alone

7.d.i. A first sketch of some of the challenges of successful collaboration

⁶⁹ Kymlicka and Donaldson, 'Animals And The Frontiers Of Citizenship': the authors assert that children are socialised (rather than predisposed) to be unable to enter into mutually responsive relationships with animals. **Part 2** is going to make reference to similar findings with regards to toddlers' interaction with plants.

⁷⁰ Westling, p.27.

⁷¹ Cajete, *Native Science*, p.45.

⁷² Midgley, *Beast And Man*, p.346.

⁷³ I.Murdoch, *The Sovereignty Of Good* (Abingdon: Routledge, 1970), p.17.

⁷⁴ M.C.Nussbaum, 'Compassion: Human And Animal', in *Ethics And Humanity: Themes From The Philosophy Of Jonathan Glover*, ed. by N.A.Davis, R.Keshen, and J.McMahan (Oxford Scholarship Online: 2010), DOI: 10.1093/acprof:oso/9780195325195.001.0001 [Accessed: 20 March 2023].

⁷⁵ Milton, p.149.

⁷⁶ Johnson, 'Imagination In Moral Judgment', p.265.

⁷⁷ R.Kraut, 'Aristotle's Ethics', in *The Stanford Encyclopedia of Philosophy*, ed. by E.N.Zalta (Summer 2018 Edition), URL = <<https://plato.stanford.edu/archives/sum2018/entries/aristotle-ethics/>>. [Accessed: 20 March 2023].

One difficulty seen by several authors arises not solely from epistemic injustice but, due to the involvement of dissimilar processes of discernment of permissible conduct, resides in an area of overlap between ontology, epistemology, ethics, and politics. A nation state built on the Western model of universalism tends to legislate pre-emptively: for example, in the UK, everyone is in a position to know in advance whether or not it is going to be permissible for them to kill and eat a wild animal.⁷⁸ Any ethical concerns regarding the animal in question will have been dealt with by means of universalised precepts, arising from propositional knowledge (for example, relating to sentience) applied to all members of a particular category (for example, a species), and they will have been decided upon by humans alone. In an Indigenous society, on the other hand, it is relationship which tends to be central to discernment of acceptable conduct. This means that laws may exist in the form of guidelines arising from experience and custom,⁷⁹ but situational choices arise from relationship, with discernment potentially including ritual.⁸⁰ With regards to the example of killing and eating a wild animal, Cajete describes a localised, situational process of discernment that relates to the individual animal, which may or may not then give itself to the hunter.⁸¹ The animal is experienced as a conscious partner in a reciprocal transaction involving mutual respect. This applies before, during, and after the animal's death, with both hunter and hunted being "a part of a well-evolved web of spiritual relationships gained through the Indigenous participation with animal nature."⁸²

Our gut response to this, as Westerners, is likely to be, "But how do we legislate for this?" And in our question, we have made visible our Wittgensteinian riverbed of assuming that it is up to us as humans to legislate unilaterally and universally for our relationships with non-humans, and also that it is possible and desirable to legislate for spiritual relationships, if we are prepared to contemplate that such a thing may exist. We have made visible that we neither expect to be guided by ritual, nor to learn to enter into a non-ritualised, deliberative relationship with non-humans in the way suggested by Eva Meijer.⁸³

The above question regarding the killing and consumption of wild animals is not only an

⁷⁸ The British Association For Shooting And Conservation, *Quarry Species And Shooting Seasons* <<https://basc.org.uk/advice/quarry-species-shooting-seasons/>> [Accessed: 20 March 2023].

⁷⁹ Rengifo, 'The Ayllu', p.120.

⁸⁰ Burkhart, *Indigenizing Philosophy Through The Land*, p.201.

⁸¹ Cajete, *Native Science*, p.73.

⁸² *Ibid.*, p.161.

⁸³ Meijer, pp.228-232.

example of difficulties regarding knowledge transfer between different vantage points. It goes beyond the points made by McPherson and Rabb regarding transformative philosophies requiring a “Gestalt switch” before a new phenomenological vantage point can be attained and a new way of participating in the world can be explored: it is also a question of how additional knowledge that initially seems incompatible can then be woven into a neighbourly way of life.

7.d.ii. The tensions examined: is there a way out?

The question of collaboration is as vital as the question of knowledge transfer: we may not need to create a shared culture with every group we share the planet with, but we will, all of us, need to be open to finding a way of working alongside each other to effect change. Given the complexity of issues involved in the climate emergency alone, no group is going to be capable of saving the planet single-handedly, and successful collaboration is going to require us to create at least some common ground where currently, due to the different natures of the paradigms involved, we appear to be struggling.

Two things are certain, and they appear to be in tension: firstly, our recent, almost exclusive, Western reliance on a Newtonian, Cartesian conception of rationality, and the inclusion of an “othering” of non-human nature in this, does not necessarily go without saying even in the West. In Louise Westling’s exploration of the complex relationship between humans and non-humans, full of potential for shared meaning and yet never far from the possibility of causing each other’s deaths, it is two ancient *Western* myths that illustrate her point.⁸⁴ It is not inevitable, even in the West, that our way of life must be based on universalism, let alone on a universalism oblivious to our “othering” of nature – and of sections of humanity perceived to be outside the norm created by universalism – that we have allowed it to entail.

Secondly, universalism has been woven into the fabric of our nation states. We have, for example, been planning construction and operation of schools and hospitals based on the amount of tax revenue expected, and the forecasts employed have been available due to our universalist preference for pre-emptive legislation allowing us to know in advance, at least roughly, the amount of tax we are all going to pay, because we know that the same rules are going to be applied to everyone, and the rules have been established in advance.

⁸⁴ Westling, pp.49-60.

However, at the same time, the very Equality and Diversity legislation intended to ensure everyone's capabilities regardless of their personal characteristics⁸⁵ is based on the universalist assumption that the same capabilities are going to carry the same meanings for everyone. The fact that our nation states' legislation tends to be based on a pre-emptive model, and to be an expression of a universalist moral stance that applies the same rules to everyone in the same perceived category, means that it is going to be challenging to establish mutually acceptable conceptions of joint projects with a society based on, for example, the Indigenous moral precept explained by Burkhart that ethical conduct arises from the land, and that it is only possible to discern it locally and situationally.⁸⁶ The Western majority is likely to mistake Burkhart's locality for relativism (because, within a universalist, representationalist, Western paradigm, as opposed to an Indigenous, participationalist one, that is what different morals in different places would indeed imply). The Indigenous minority is then likely to be forced into a life of continuous moral injury,⁸⁷ with the nation state's pre-emptive, universalist legislation preventing moral action arising from locality being realised.

Even so, the nation state, including the universalist assumptions and the pre-emptive legislation that it is based on, is currently our only available method by which we know we are going to be able to achieve the predictable outcomes we have grown to value. If the nation state were abolished today, we would have no tried and tested way of making funds available to pay for tomorrow's scheduled NHS operations – or, in Siberia, for tomorrow's "mercy flights" airlifting Indigenous passengers to urban centres for urgent hospital treatment.⁸⁸

And yet, the very same assumptions underlying the nation states we have created are now contributing both to the failure of our relationship with non-human nature, and to our failure in collaboration with those humans in our midst who have been living according to a participationalist worldview. Apffel-Marglin paints a bleak picture:

(...) since all the institutions of modernity rest on the demise of Anima Mundi and on the new view of nature, intellectual breakthroughs, even those made in

⁸⁵ Equality and Human Rights Commission, *Equality Act Guidance*, <<https://www.equalityhumanrights.com/en/advice-and-guidance/equality-act-guidance>> [Accessed: 20 March 2023].

⁸⁶ Burkhart, *Indigenizing Philosophy Through The Land*.

⁸⁷ V. Williamson et al., Moral injury: the effect on mental health and implications for treatment, *The Lancet / Psychiatry*, Vol.8, June 2021, pp.453-455, <DOI:[https://doi.org/10.1016/S2215-0366\(21\)00113-9](https://doi.org/10.1016/S2215-0366(21)00113-9)> [Accessed: 20 March 2023].

⁸⁸ Vitebsky, p.238.

institutions dedicated to scientific pursuits such as universities, do not contain the necessary vital momentum to transform the various institutions of the nation state to ensure the survival of the world. (...) All the central institutions of the nation state (...), namely, the political, economic, educational, and financial institutions, rest upon the foundation of this new view of nature as pure materiality that is completely separate from the human mind.⁸⁹

Irrespective of whether or not there is a way forward (and Apffel-Marglin does later endeavour to propose a partial solution), the repercussions of this paradigm clash can currently be felt in a variety of contexts.

The International Whaling commission has declared Aboriginal subsistence whaling exempt from its moratorium on whaling. The exemption is justified by the importance of whaling in securing a balanced diet for the human populations concerned, and not by any relationship that may exist between human and cetacean members of a community in a particular locality. The exemption is subject to additional regulations such as catch limits.⁹⁰ Although undoubtedly created with the very best of intentions, and although probably easier to live with than an absence of any provision for Indigenous populations at all in this regard, the exemption, having been conceived from within the Western paradigm alone, leaves questions arising from within the Indigenous paradigm unaddressed.

Is it feasible, for example, within the currently existing regulations, for an Indigenous group, which would encompass not only the humans, but also the non-humans sharing the same space and time, including the whales, to make joint decisions, based on locality,

⁸⁹ Apffel-Marglin, 'Western Modernity And The Fate Of Anima Mundi', p.21. It is going to become evident in **Part 2** that Apffel-Marglin's remarks chime with a vicious cycle identified as potentially emerging in contexts of high standardisation alongside depersonalisation of a perceived "other".

⁹⁰ International Whaling Commission, *Conservation Management: Whaling*, <<https://iwc.int/whaling>> [Accessed: 20 March 2023].

with regards to whales being hunted?⁹¹ If, for instance, a ritual performance were to show in a particular locality that the catch limits for the year in question were inappropriate for that year, would there be any way of addressing this? – Fienup-Riordan’s work on contemporary Inuit relationships with local populations of geese shows that this is a valid question not only with regards to interaction between humans and whales, but also with regards to other species.⁹²

Conversely, how can the two paradigms find a mutually liveable way forward with regards to ritual performances such as that involving a dog in Black Elk’s community? During a Heyoka Ceremony, a dog – as far as we know, a healthy one – had a noose placed over its head, which was then pulled gently three times, and the fourth time was pulled hard, breaking the dog’s neck. Then, once deceased, the dog was singed, washed, cut up, and its body parts offered to the Thunder Beings.⁹³

Would the dog have communicated that it was giving itself to the humans concerned, and submitting to the ceremony, in the way that has been documented with regards to hunting?⁹⁴ – I would argue that, due to the fact that Cajete’s explanations relate to relationship as much as they do to hunting, this would appear likely.

However, and now concerning the relationship between the two paradigms involved, and thus between the two groups of humans involved in a neighbourly relationship – even in

⁹¹ Chie Sakakibara’s *Whale Snow* offers a possible starting point for discussion of some of these issues: C.Sakakibara, *Whale Snow: Iñupiat, Climate Change, And Multispecies Resilience In Arctic Alaska* (Tucson: University of Arizona Press, 2020). An example of the potential for miscommunication between the two paradigms involved arises from the fact that the Iñupiat worldview, on the one hand, not only experiences whales and humans as members of the same kinship group, but also experiences the sacred as being present within the material – whereas on the other hand, the contemporary Western worldview (which underlies the legislation that is currently being used to attempt to resolve the conflict with regards to whaling) deals with subsistence and spirituality as entirely separate issues. This means that there can be no exact overlap between Western categories (such as “subsistence whaling” or “religious freedom”) and the spiritual *and* physical Iñupiat experience of multi-species kinship described by Sakakibara as “cetaceousness” (Sakakibara, pp.6-17). Sakakibara’s sensitive and nuanced discussion concludes that potential for conflict resolution lies in the existence of shared aims between animal rights activists and Iñupiat whaling crews: both would argue that whales should be able to lead free and healthy lives, and that once this requirement has been met, it would then be acceptable for whales to die of old age or through natural predation. Disagreement exists, however, with regards to the question of whether (or in what circumstances) humans can be regarded as natural predators of whales. (Sakakibara, pp.98-99.) The latter difficulty appears to carry echoes of what was said at the beginning of this thesis with regards to whether humans perceive themselves to be an integral part of the natural world or whether they perceive themselves to be located outside it.

⁹² Fienup-Riordan, ‘A Guest On The Table’, pp.545-553.

⁹³ Neihardt, *Black Elk Speaks*, p.118. The Heyoka Ceremony, and the wider context of animal sacrifice, are going to be revisited in **Part 2**.

⁹⁴ For example, Cajete, *Native Science*, p.161.

a society that does not have any legislation preventing the killing of a healthy dog⁹⁵ – is this ritual a practice that non-Indigenous humans would typically find easy to accept?⁹⁶

Considering questions such as these, it appears that neither paradigm, in its current state, is likely to be capable of fostering successful collaboration with the other. I would argue that dilemmas such as those outlined are the reason why Uma Narayan and Sandra Harding state that new thinking cannot simply be added to an existing mainstream, but must be expected to transform it.⁹⁷ New solutions are going to be required, and it is unlikely that these are going to be able to be conceived from within either of the existing paradigms as they currently are.

The intricacy of the dilemmas involved in paradigm clashes can be further increased by issues of intersectionality. For example, how is a female member of a minority group to respond when subjected to sexism at home, and to negative comments regarding her association with Western feminists outside the home, when she values her membership of *both* groups?⁹⁸ Conversely, how is a female member of a minority group to respond when faced with the arrival of a Western development project assuming that gender equity is only conceivable within the Western paradigm, which she, however, experiences as the loss of her world, dissolving as it does her identity as part of her web of relationships including humans and non-humans alike, in which she is as much a part of the whole as she is an individual being?⁹⁹

Equally intractably, how is any member of a minority group – female or otherwise – to respond when the context around them changes from an exclusively Indigenous one to a multicultural one, and thus from a context where, for example, corporal punishment carried no implication of shame or loss of dignity (since, for example, deities were whipped with the same regularity as humans)¹⁰⁰ to one where it now carries both? How is

⁹⁵ United States Department of Agriculture, *USDA Animal Care: Animal Welfare Act And Animal Welfare Regulations*, July 2020, available at: <https://www.aphis.usda.gov/animal_welfare/downloads/AC_BlueBook_AWA_508_comp_version.pdf> [Accessed: 20 March 2023].

⁹⁶ The Heyoka ceremony, and wider questions relating to animal sacrifice, are going to be revisited in **Part 2**. Questions of acceptance and of morality in relation to non-humans and in relation to humans are going to be considered in the context of a contemporary example.

⁹⁷ Narayan and Harding, 'Introduction', p.vii.

⁹⁸ A.Hurtado, 'Chicanas Theorise Feminisms', in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.128-155.

⁹⁹ Apffel-Marglin, *Subversive Spiritualities*, pp.131-135.

¹⁰⁰ Rengifo, 'The Ayllu', p.117.

a community to respond when their context changes from an exclusively Indigenous one to a multicultural one, and thus to one where an existing forensic method of examining women's breasts, which carried no shame or embarrassment in its original context,¹⁰¹ now carries both?

How is the encapsulating society to respond? – It is clear from Apffel-Marglin's above report of the studies conducted by Loyda Sanchez,¹⁰² as well as from PRATEC's work,¹⁰³ that in a world where the individual is as much part of the whole as they are an individual being, and where agency is, above all, located in the relationship between entities, Kymlicka's notion of protecting the individual,¹⁰⁴ taken on its own, is not going to be enough. However, neither can it be enough to allow the newly materialised context to become the cause of living beings experiencing shame and embarrassment, let alone when no one had any intention of shaming them.

I have yet to come across anyone who has a ready solution to these dilemmas, and I am, therefore, considering them in the spirit of Polkinghorne's view of comparable situations in his field of physics: "There can be times when one just has to hold on to the strangeness of experience by the skin of one's intellectual teeth, knowing that progress will not come from a facile abandonment of any part of that experience."¹⁰⁵

Several of the authors included in Narayan and Harding's intersectional anthology offer partial solutions. Drucilla Barker, for example, points out the importance of not simply reversing any existing balance of power, as that merely reinforces the underlying Enlightenment dualism that is at the root of much of the problem. Instead, Barker calls for sympathetic reading of non-modern worldviews alongside Cartesianism, so that non-dominating ways of producing knowledge can be found.¹⁰⁶ Ann Ferguson stresses that this must include education of the dominant by the non-dominant,¹⁰⁷ while Andrea Nye

¹⁰¹ G.Jimenez Sardon, 'The Aymara Couple In The Community', in *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development*, ed. by F.Apffel-Marglin with PRATEC (London/New York: Zed Books, 1998), p.162.

¹⁰² Apffel-Marglin, *Subversive Spiritualities*, pp.133-135.

¹⁰³ For example, Rengifo, 'The Ayllu'.

¹⁰⁴ W.Kymlicka, *Multicultural Citizenship*, p.153.

¹⁰⁵ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.90.

¹⁰⁶ D.K.Barker, 'Dualisms, Discourse, And Development', in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.177-188.

¹⁰⁷ A.Ferguson, 'Resisting The Veil Of Privilege: Building Bridge Identities As An Ethico-Politics Of Global Feminisms', in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.189-207.

defines the essence of philosophy as “the reinvention of thought adequate to a changing world.”¹⁰⁸ This sentiment is echoed by Sandra Harding in the anthology’s final paper, whose conclusion is close to Apffel-Marglin’s thinking in the sense that she deplors the Western misperception of the Indigenous conception of locality, and therefore of a participationalist view of our role in the world, involving relativism. Harding, too, points out that a participationalist view implies that philosophy is going to be permanently unfinished, and in need of collective processes of respectful dialogues to keep it alive.¹⁰⁹

Apffel-Marglin herself looks to the intersection of science and spirituality for a possible way forward. Her disillusionment regarding the ability of organised religions to coexist peacefully¹¹⁰ has not led her to exclude the possibility of spirituality forming part of a viable form of collaboration altogether. In fact, she views this as one of its most vital components:

(...) one of the most crippling implications of the rejection of the reality of this living, sentient and numinous cosmos and our integrality with it is for finding our way out of the present global ecological and climate crisis that threatens the very survival of countless species, including our own, and of the planet as we know it.¹¹¹

Apffel-Marglin calls upon us to take seriously the participationalist paradigm, based on Karen Barad’s analysis of the findings of quantum theory, and on Merleau-Ponty’s findings in the field of philosophy – as well as, outside Western academic circles, on Indigenous science and philosophy. She also, in her most recent publication, reiterates the role of the numinous in this – not only by offering her own thoughts, but also by her inclusion of authors in her anthology contributing a range of perspectives on this: Ahmed, for example, refers to mysticism as “the great river flowing under all religions”.¹¹²

Apffel-Marglin herself then reminds us of contemporary research in the field of biochemistry – for example, Candace Pert’s – making visible the communication

¹⁰⁸ A.Nye, ‘It’s Not Philosophy’, in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.101-109 (p.104).

¹⁰⁹ S.Harding, ‘Gender, Development, And Post-Enlightenment Philosophies Of Science, in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp.240-261. Harding’s point here resonates with much of what is going to be said in relation to performative knowledge processes in **Part 2**. Relatedly, similarities are also apparent between Harding’s thinking with regards to knowledge processes in relation to philosophy on the one hand, and Karen Barad’s thinking with regards to knowledge processes in relation to science and beyond (as discussed in **Appendix B**) on the other.

¹¹⁰ Apffel-Marglin, ‘Western Modernity And The Fate Of Anima Mundi’, pp.25-26.

¹¹¹ Apffel-Marglin, ‘Introduction: Cosmic Dialogues’, p.13.

¹¹² Ahmed, p.53.

conducted by means of peptides and their receptors that takes place between our brains and all other systems of our bodies.¹¹³

It is, however, not primarily the fact of Apffel-Marglin referencing Pert's work itself that matters in this context: Wilshire cites Pert's work too, in a book that was published twenty years prior to Apffel-Marglin's anthology,¹¹⁴ and Pert's findings regarding the influence of our minds on our bodies are no longer new.

What matters in this context is what then follows: firstly, that the flow of information is bidirectional,¹¹⁵ and thus one more example of our Newtonian view of nature as a mere collection of billiard balls only being applicable to certain aspects of our experience, such as apples. Secondly, Pert subsequently ventured beyond the scope of her original study (which only involved biochemical pathways relating to individual beings), and in a collaborative study found evidence of more:

The psychosomatic network she and her colleagues have discovered and documented should be described as a system run by an intelligence not of the individual but one that is shared among all humanity and all life (...), demonstrating the existence of intelligence in mycelium, in trees and their root system (...). Humans are but nodal points in a vast, comprehensive, shared network made up not only of humans but of the nonhuman world as well.¹¹⁶

Although perhaps still unusual in the West, these findings are in essence a wider conception of something which had previously been known about certain fungi.¹¹⁷ Blurred boundaries between individuals and larger units have also been a known characteristic of lichens,¹¹⁸ and the possibility of there being a shared element to cognition is beginning to be discussed with regard to the animal world, too.¹¹⁹ It is once Apffel-Marglin synthesises Pert's above points – firstly, of there being a two-way exchange of information between the physical and the emotional within each individual and, secondly, of there being biochemical information exchange beyond the individual – that a surprising discovery emerges: we are looking at a biochemist who has, ironically,

¹¹³ Apffel-Marglin, 'Western Modernity And The Fate Of Anima Mundi', p.27.

¹¹⁴ Wilshire, *The Primal Roots Of American Philosophy*, p.59.

¹¹⁵ Apffel-Marglin, 'Western Modernity And The Fate Of Anima Mundi', p.29.

¹¹⁶ Ibid.

¹¹⁷ R.Wilson and M.Barker, 'Biological Individuals', in E.Zalta (ed.) *The Stanford Encyclopedia of Philosophy* (Fall 2019 Edition), URL = <<https://plato.stanford.edu/archives/fall2019/entries/biology-individual/>> [Accessed: 20 March 2023].

¹¹⁸ Kimmerer, *Braiding Sweetgrass*, pp.269-275.

¹¹⁹ M.Bekoff, 'The Evolution Of Animal Play, Emotions, And Social Morality: On Science, Theology, Spirituality, Personhood, And Love', in *Zygon*® 31(4), 2001, pp.615-655, URL: <https://www.wellbeingintlstudiesrepository.org/cgi/viewcontent.cgi?article=1026&context=acwp_sata> [Accessed: 20 March 2023], p.626.

rediscovered spirituality through her diligent application of the very laboratory techniques that originally sought to eradicate it.¹²⁰

Apffel-Marglin is emphatic that it is not the practice of any organised religion that she is advocating here. She takes care to make explicit the difference between *belief* in spirits on the one hand (which she primarily associates with conceptions of spirits as immaterial beings residing outside this world),¹²¹ and, on the other hand, *experience* of spirits, as part of this world (which, despite being something that we Western societies have not allowed ourselves to practise much in the last five hundred years, continues to remain a possibility).¹²² In keeping with what was said earlier regarding Karen Barad's conception of agential realism,¹²³ Apffel-Marglin then reminds us of the locality of the experience to be expected: "(...) this experience is, above all, a local one. Such spirits do not necessarily exist in the same way everywhere."¹²⁴ She then closes by reiterating the relevance of her thoughts to environmental ethics:

An integral ecological ethic and spirituality should be robust enough to lead us out of our modern Western anthropocentrism. To make such a massive undertaking possible, it must be translated into ways of life and daily practices that repeatedly and incessantly enact our integration with the nonhuman world, with the whole cosmos, with the sacred.¹²⁵

In other words, what Apffel-Marglin is proposing alongside Karen Barad's, Merleau-Ponty's, and Indigenous scholars' participationalist paradigm, is Cordova's¹²⁶ – and other Indigenous authors'¹²⁷ – admonition to leave awe in place in our dealings with the natural world, as this world is where sacredness is located.

We know that, despite our recent lack of practice in this regard, the option of renewing this form of engagement in the world is available to us Westerners too – not least because several fellow Westerners, amongst them Bohm and Peat,¹²⁸ as well as Bruce Wilshire,¹²⁹ have told us exactly the same thing.

¹²⁰ Apffel-Marglin, 'Western Modernity And The Fate Of Anima Mundi', pp.29-30.

¹²¹ Apffel-Marglin, *Subversive Spiritualities*, p.87.

¹²² Apffel-Marglin, 'Western Modernity And The Fate Of Anima Mundi', p.31.

¹²³ Apffel-Marglin, *Subversive Spiritualities*, p.62.

¹²⁴ Apffel-Marglin, 'Western Modernity And The Fate Of Anima Mundi', p.31.

¹²⁵ *Ibid.*, p.32.

¹²⁶ Cordova, *How It Is*, pp.106-112. It may be useful at this point to recapitulate that Cordova's work makes reference to a relationship of kinship between her own, Navajo worldview and some aspects of Spinoza's thinking. **Part 2** is going to explore this point in greater depth.

¹²⁷ For example, Gonzales and Nelson, pp.496-497.

¹²⁸ Bohm and Peat, *Science, Order, And Creativity*, p.xi.

¹²⁹ Wilshire, *The Primal Roots Of American Philosophy*, pp.164-166.

Chapter 8 – Interim conclusion. On the cusp of participation: Cordova’s ripples meet doughnut economics

It has been shown that some of the challenges involved in operating across paradigms can be understood to be generalised epistemological challenges and, therefore, are likely to be able to benefit from the learning provided by existing groups who have entered, and in a variety of ways transformed, what was previously conceived of as the mainstream. For this reason, existing feminist and intersectional thought is likely to prove a valuable resource in attempting to find a way forward in fostering mutual understanding and enabling collaboration between Indigenous and non-Indigenous groups. Important points to note in this regard are, for example, Miranda Fricker’s conceptions of two types of epistemic injustice resulting from discrimination, as well as a third type which, even in the (hypothetical) absence of discrimination, will result from the impossibility of a complete phenomenological reduction, and has been documented, for example, by Havi Carel in a healthcare context.¹ These and other existing insights are likely to be valuable sources of support also when attempting to operate across Western and Indigenous paradigms.

However, one striking difference between Indigenous and Western worldviews is the absence of universalism, and the presence of locality, in Indigenous worldviews. The conception of locality, and its interwovenness with a participationalist view of our role in the world in all its responsibility and humility, appears to dovetail with related findings in the field of quantum theory, as well as with Western conceptions of phenomenology and of monism. Newtonian physics is as “correct” as it was before the arrival of quantum theory a few decades ago, but the above, interwoven concepts unite to remind us that the Newtonian physics that our contemporary Western worldview is premised upon is incapable of telling the entire story of the world. There is “more”. With regards to our Western attempts to approach an Indigenous vantage point, this means that it would have been more than surprising if generalised, universalist application of some already existing learning, on its own, had been sufficient to accomplish this task.

Indigenous philosophies are understood to be transformative philosophies by those who live them. And while neither I nor the reader may have been sufficiently transformed to have attained an all-encompassing understanding of these at this early stage, one piece of

¹ Carel’s points were discussed in **section 7.c** .Similarly, Indigenous and non-Indigenous interlocutors frequently feel that they are “talking past each other”. (A.Fienup-Riordan, ‘A Guest On The Table: Ecology From The Yup’ik Eskimo Point Of View’.)

learning appears to have shone through all that has been said: the “More” that Wilshire is now no longer alone in talking about implies that we humans cannot expect to continue exclusively to make unilateral decisions about the world. We have not been particularly successful at it, nor can we expect to be: in a universe that we are involved in co-creating, our responsibility is to acknowledge complexity by understanding ourselves as participants, as opposed to expecting to be in sole charge.

The second part of this thesis is going to explore our role as participants in greater depth, as well as its potential inclusion of our interaction with the sacred in the material.

The thesis began with Viola Cordova’s statement that it is going to take more than one worldview to save the earth. This view is supported by both Leroy Little Bear, who reminds us that Western science is a land survey system (and not the land),² and by John Polkinghorne, who devotes an entire section of his book to the fact that while it is helpful for our Western thought processes to avail ourselves of models, we must necessarily expect reality to transcend these.³

If we do succeed in understanding each other, we may, one day, be able to find what Parry refers to as a “caring economics”,⁴ and way of life. The next chapters are going to show that until we have reached this stage – and my hope for this thesis is to contribute a small piece to our mosaic of reaching it – it is unlikely to be possible for us to understand the detail of what this is going to look like. In fact, it is going to be shown that we may want to revise our conception of what this understanding might entail.

While we are feeling our way in this direction, and based on these first explorations, I am going to think of this new way of operating in the world as an Indigenised doughnut economics.⁵ It is a doughnut economics which has been transformed by the hands of the late Viola Cordova, and which now involves more than one doughnut: it involves a web of doughnuts belonging to all of human and more-than-human nature, reminiscent of Cordova’s interacting ripples in a pond.

² Little Bear, p.ix.

³ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, pp.74-76.

⁴ Parry, *Original Thinking*, p.190.

⁵ Compassion In World Farming, *Is The Next Pandemic On Our Plate?*, May 2020, p.15, <URL: <https://www.ciwf.org.uk/research/covid-19/is-the-next-pandemic-on-our-plate>> [Accessed: 20 March 2023].

The crucial difference is that we would no longer be thinking of ourselves as being in charge.

Part 2. Towards participation.

Chapter 9 – On learning to listen when no shared spoken language is available

If we, as humans, no longer assume ourselves to be in sole charge as we participate, as outlined in *Part 1*, in weaving Merleau-Ponty's network that carries our existence,¹ it is evident that our role in this must involve some form of communication with those who are not human. It is likely that at least some of this communication will need to be conducted without the use of human language.

Humans, at least at the moment, appear to be the only species to use human language fluently, although successful attempts have been made to engage other species in learning basic elements of it.²

Our standard, Western response to this state of affairs appears to be to think of it in terms of a deficiency model, and simply to conclude that non-humans "cannot speak".³ Many of us, at least much of the time, show no more interest in learning about forms of communication beyond the reach of human language than we do in learning French before setting off for a holiday in France: for many of us, our likely response is simply to conclude that "they don't speak much English."

And yet, just as some of us develop an interest in learning the language of another human society, sometimes we are also prepared to give non-linguistic, human as well as non-human forms of communication the benefit of the doubt. David Abram – even when he meets Western convention halfway by beginning to make his case from within the currently accepted Western paradigm that places humans at the pinnacle of evolutionary development (and therefore uses human achievement as a yardstick for others') – already makes a convincing case for the sophistication of birdsong.⁴ When taking a wider perspective, and allowing for the fact that sole reliance on human capabilities as the norm cannot help but cause us to miss out on most of the non-human world, Abram makes an

¹ Merleau-Ponty, p.176.

² For example, Sue Savage-Rumbaugh's work with Kanzi, a bonobo who learnt to communicate with humans by using symbols on a keyboard (de Waal, pp.110-111).

³ For example, L.Daston and G.Mitman, 'Introduction', in *Thinking With Animals: New Perspectives On Anthropomorphism*, ed. by L.Daston and G.Mitman (New York/Chichester: Columbia University Press, 2005), pp.1-14, p.5.

⁴ Abram, pp.193-195.

equally convincing case for the insufficiency of human language alone as an explanation of the communication that takes place even between humans.⁵ He also provides examples across species boundaries.⁶ At first glance, this may appear unusual. At second glance, however, it will come as no surprise to us, having already considered in **Part 1** David Cockburn's Wittgensteinian approach to accounting for his development of empathy for a squid.⁷

Relatedly, in the context of their call for human language to be written "back into the land",⁸ McPherson and Rabb point out that both Indigenous philosophies and Maurice Merleau-Ponty understand our entire mind-bodies to be in dialogue with the world as we participate in its continuing creation.⁹

A picture is beginning to emerge of our sole acceptance of human language as a form of communication not only being unrealistic (clearly, there are others in use alongside it), but also of its being unnecessarily restrictive. If we solely rely on human language as a form of communication, even within the boundaries of our own species, then our appreciation of music, for example, is in danger of being reduced to that captured in David Suzuki's memorable Einstein quote on the futility of describing a Beethoven symphony as "a variation of wave pressure".¹⁰ Human language has been a valuable asset to us, but that is a different proposition from its being sufficient as a sole form of communication.

Applied across species boundaries, this means that alongside teaching Kanzi to use human-made symbols, we are likely to find it helpful to learn to understand Kanzi's own, non-human communication. Unless we do, all we can glean from Kanzi is restricted to the subset of the world captured by the symbols we have thought to supply him with. This means all we can glean from Kanzi is restricted to the subset of the world that we have already been able to relate to without his help. And this, in turn, means we are not going

⁵ Ibid., pp.166-169.

⁶ Ibid., pp.159-162.

⁷ D.Cockburn, 'Human Beings And Giant Squids', *Philosophy*, 69 (268) (1994), pp.135-150.

⁸ McPherson and Rabb, p.176.

⁹ McPherson and Rabb provide an example of a choral performance accompanied by non-human, visual as well as auditory elements supporting the human, musical and verbal rendition of a piece composed to bring Lake Superior to life for an audience – the artists' premise being that human language, on its own, would have been insufficient for this. (McPherson and Rabb, pp.177-179.)

¹⁰ D.Suzuki and P.Knudtson, *Wisdom Of The Elders: Sacred Native Stories Of Nature* (New York: Bantam, 1993), p.79.

to learn much that is genuinely new to us.

As outlined in the first chapters of this thesis, Western science is one tried and tested medium of communication between humans and the non-human world. Its usefulness for this purpose is accepted by Indigenous and Western scientists alike.¹¹ The difference between the two lies in our expectations regarding its exhaustiveness.

Robin Wall Kimmerer, for example, is a Western-educated botanist from an Indigenous background, with a career spanning several decades as well as a number of universities from Wisconsin to Kentucky to New York. Kimmerer's Western scientific credentials are impeccable – but this does not mean she would endorse their *sole* relevance. Kimmerer initially toyed with the idea of becoming both a scientist and a poet. When forced to choose between the two on her undergraduate application form, she chose botany, but her affinity to a poetic approach remained: in her interview, the reason she gave for choosing botany was that she “wanted to learn why asters and goldenrod looked so beautiful together.”¹²

Kimmerer remains strongly critical of an approach to science that attempts to reduce the world to the subset that lends itself to being examined in a laboratory: her aim is to offer an “intertwining of science, spirit, and story”,¹³ based on her perception that Western science, on its own, fails to do justice to the importance of metaphor.¹⁴ She is also emphatic that there is a difference between science on the one hand, and scientific reductionism on the other.¹⁵ Alongside the data that her formal training in Western science enables her to analyse, Kimmerer hears a message being communicated through the beauty of asters and goldenrod. Western science can explain the role of the cells involved in human colour perception, and why the combination of the complementary colours of purple and yellow is able to capture our undivided attention,¹⁶ but the deeper

¹¹ For example, Kimmerer, *Braiding Sweetgrass*, p.x.

¹² *Ibid.*, p.39.

¹³ *Ibid.*, p.x.

¹⁴ *Ibid.*, pp.39-47. Kimmerer uses metaphor as a starting point here, before venturing further and providing case studies where metaphor can no longer serve as an exhaustive explanation. These carry echoes of what was said in **Part 1** with regards to, for example, David Abram's work. The role of metaphor as a stepping stone to understanding, rather than as an exhaustive explanation of Indigenous worldviews, is also going to be explored through the relationship between Shay Welch's work and that of George Lakoff and Mark Johnson in the context of Indigenous conceptions of performative knowledge processes in the remainder of **Part 2**.

¹⁵ Kimmerer, *Braiding Sweetgrass*, pp.341-347.

¹⁶ *Ibid.*, p.45.

message Kimmerer hears is one of reciprocity.¹⁷

Glimpses of “the More” through the plants we encounter appear to communicate themselves irrespective of whether or not they are translated into propositions for those of us who are not poets. As an early-career academic, Kimmerer initially felt obligated only to teach her students “facts and figures” in order to deliver what those around her perceived to be value for money. She relates her experience of leading a field trip where this was a particular issue. On the way back, her students, after spending their field trip earnestly filling their notebooks with the information supplied by Kimmerer, broke into song. They sang “Amazing Grace”.¹⁸

Kimmerer is not alone, and it is worth noting here that metaphor is (for Kimmerer as well as for others) by no means the only interpretation placed on that which may not readily be captured by the Newtonian paradigm. David Abram’s conception of the metamorphic was an earlier example above. Another, perhaps not as easily accessible to our Western minds, is that of the idea of pregnancy and childbirth in the Australian Aboriginal conception of Dream Time encompassing two strands of explanation: one that is similar to a Western scientific one, and another – alongside the first, as opposed to taking its place – which is based on spiritual relationships between the humans involved and the land that they belong to.¹⁹ The example seems to carry echoes of what was said by Peat with regards to synchronicity in **Part 1**. Deloria and Wildcat reference William James in

¹⁷ Ibid., p.47. As Westerners attempting to approach understanding of an Indigenous worldview, we may be tempted at this point to fall back on our accustomed, contemporary Western paradigm that encourages use of binary dualisms: we may suspect that because Kimmerer is grounding her case for respectful interaction with the non-human world in beauty and in relationship rather than in principles of Western ethics such as those outlined at the beginning of **section 6.f**, she must be romanticising, and must therefore be failing to take a robust ethical stance on matters such as our treatment of farm animals. This, however, would miss the point made by Kimmerer here. A useful stepping stone to understanding what is meant may be found in a reminder of Gonzales and Nelson’s thinking regarding enduring relationships between humans and non-humans introduced in **section 5.e**, and also, perhaps even more so, in the first overview of its implications for Indigenous conceptions of environmental ethics provided in **section 6.f**. The latter culminated in the conclusion that an ethic grounded in enduring human relationships with non-humans who are heard and responded to is capable of making greater demands on humans than an ethic where humans – considerate or not, just or not – automatically have the last word. It is going to become increasingly apparent throughout **Part 2** that the views put forward by Kimmerer are to be understood in this context.

¹⁸ Kimmerer, *Braiding Sweetgrass*, pp.219-222.

¹⁹ D.Kinsley, *Ecology And Religion* (Upper Saddle River: Prentice Hall, 1995), p.25. The term “Dream Time” is here defined as a creative time when the land was shaped. However, it would be misleading to take this to mean that Dream Time was solely located in the past: the author stresses that Aboriginal groups also aim to live in the Dream Time now, in the sense of becoming fully awake to the sacred in life and land as they go about their lives in the present.

relation to there being a continuum of experience,²⁰ and point out that representation in ceremonies cannot be understood to be exclusively symbolic.²¹

Thus far, in our quest to find ways of learning to hear what the non-human world may want us to know, we have seen first glimpses of several methods besides the initial two of Western science at our familiar end of the spectrum, and Indigenous ritual at the other.

Firstly, through David Abram's work, and McPherson and Rabb's, both making reference to Maurice Merleau-Ponty's phenomenological approach, we have had a glimpse of the involvement of everyone's bodies in the world. Secondly, we may notice that Robin Wall Kimmerer's comments on the role of metaphor and of story appears to chime with Raimond Gaita's comments on meaning cited in **Part 1**. This importance of story and of meaning is going to be shown to be relevant also in those scenarios where metaphor appears insufficient as a sole explanation.

The aim of **Part 2** of this thesis is to explore the possibility of Western participation with non-human nature, and with the sacred in the material, even in the near-absence of any recent history of Western engagement with ritual.

Given that the worldviews which are being explored here tend to conceive ritual and labour as one, and that Spinoza was the Western philosopher cited alongside Indigenous thinkers in one of the very first PhD theses submitted on the subject of Indigenous philosophies, and given that David Peat learnt to develop his knowledge of quantum physics into an interest in Jung's and Pauli's work on acausal relationships while becoming attuned to an Indigenous environment, it would be very surprising indeed if no link were to be found between the picture of the material emerging from Western scientific findings on the one hand, and performative knowledge, meaning, story, and ritual on the other. It would also be very surprising indeed if this link were not to turn out

²⁰ Deloria and Wildcat, p.53.

²¹ Ibid., p.62. A more detailed discussion of symbolism and representation in an Indigenous context is offered by Deloria in his work on parallels between C.G.Jung's and Sioux thinking (V.Deloria; P.J.Deloria and J.S.Bernstein (eds.), *C.G.Jung And The Sioux Traditions* (Wheat Ridge: Fulcrum Publishing, 2022), pp.191-192.) **Part 1** of this thesis offered a potential Western stepping stone in the difference between a pictogram symbolising an athlete at the Olympics on the one hand (with everyone knowing that the pictogram is a mere symbol), and an athlete representing their nation at the Olympics (with everyone knowing that they are an actual member of the group represented) on the other. In light of the example of David Abram's learning to merge his own senses with those of a raven in **Part 1**, however, and in light of the discussion of performative knowledge processes in **Part 2** below, an additional dynamic of lived relationships participating in shaping events (first introduced in **chapter 3**) is going to become increasingly visible throughout the remainder of the thesis.

to be helpful to us Westerners in feeling our way towards a way of being that is more at ease with Indigenous conceptions of ritual than we currently tend to be.

Before these questions can be addressed in more detail, however, it is first necessary to explore another potential roadblock: when venturing beyond our currently existing comfort zone, we are bound to encounter ideas that currently sound not only confusing to us, but – at least initially – positively confused within themselves. John Polkinghorne's above-mentioned strangeness of experience is going to come calling, and it is going to be interesting to explore what may be involved in taking his advice to hang on by the skin of our intellectual teeth.²²

²² Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.90.

Chapter 10 – Vine Deloria, evolution, and the question of learning from each other when we disagree

Some aspects of Vine Deloria’s thinking may be understood to be a case in point.

Deloria, through his involvement in the Indigenous branch of the American Philosophical Association, acted as a mentor to many of the new generation of Indigenous philosophers in North America cited in this thesis.¹ At his memorial service in 2005, his passing was likened to the training wheels having been taken off: such was the respect felt by Indigenous thinkers and activists towards Vine Deloria’s leadership.²

Deloria, in addition to holding an undergraduate degree in science,³ maintained a keen interest in questions of science even as he went on to pursue a different career. His interest expressed itself, for example, in relation to the **Part 1** parallels explored at the Dialogues between the Navajo conception of *nilch’i* and the discoveries made by Western scientists in the field of quantum physics.⁴

It would be tempting for doubters to dismiss Deloria as a naïve amateur if he were ever to say anything controversial, and to accuse him of blithely skating over the complexities involved, as carelessly as our pedlars of snake oil in the form of quantum entanglement misappropriated as “proof” of telepathy in **Part 1** .

Such an accusation would be highly inappropriate: Deloria was well aware of the complexities. His recognition of a partially explanatory function of quantum theory in his treatment of *nilch’i* by no means amounts to a reduction of *nilch’i* to a quantum field, and his reason given for this is the quantifiability of the latter.⁵ Deloria was not a naïve amateur with regards to science; he was a highly educated one, and his treatment of *nilch’i* and quantum theory was based not only on this, but also on his exposure to the views of expert physicists such as Peat and Bohm.

And yet, Deloria was adamant in his denial of the merit of evolutionary theory.⁶ This – at

¹ Burkhart, *Indigenizing Philosophy Through The Land*, p.xiii.

² D.E.Wilkins, ‘Afterword’ in V.Deloria, *The Metaphysics Of Modern Existence* (Golden: Fulcrum Publishing, 2012), pp.2283-291 (p.285).

³ University of Colorado Boulder, *Vine Deloria Jr.*, <URL: <https://www.colorado.edu/law/vine-deloria-jr>> [Accessed: 20 March 2023].

⁴ Deloria and Wildcat, p.6.

⁵ *Ibid.*, p.140.

⁶ V.Deloria, *The Metaphysics Of Modern Existence* (Golden: Fulcrum Publishing, 2012), p.91.

least at first glance – appears to be at odds with his credentials, as well as with the continued respect of the new generation of Indigenous academics who flourished under his mentorship.

Evolutionary theory is, for some Indigenous thinkers, highly compatible with Indigenous thought. Robin Wall Kimmerer,⁷ for example, structures each chapter of her book to include elements of evolutionary theory with regards to the plant she is discussing, and relates these scientific findings to aspects of story, meaning, and occasionally ritual. Children eating wild strawberries and helping the strawberries' newly-grown runners take root are framed as a relationship containing evolutionary advantage for both, intertwined with a lesson on the merits of a gift economy and on the love conveyed in a creation story, to culminate in the conclusion that “The stories we choose to shape our behaviours have adaptive consequences.”⁸ Evolutionary theory, for Kimmerer, is not merely to be accepted as a form of scientific discovery about the material world, and placed alongside Indigenous storytelling as a separate entity: rather, the two are related.⁹

A variety of contemporary Western responses to Deloria's initially surprising stance on evolution could be seen to be reasonable.

At the exclusively Western scientific end of an imaginary scale of these, it might almost appear legitimate to discredit *all* of Deloria's thinking as a result: Western science has amply evidenced the correctness of evolutionary theory, and Quine's web of beliefs requires new beliefs to be discarded if these are incompatible with more central, already established ones.¹⁰ Deloria's denial of evolutionary theory appears incompatible with the established evidence of Western science. This would eliminate Deloria's denial of evolutionary theory from the web. Then, in a subsequent step, any further assertions made by Deloria might as a result be seen – or construed – to be related to his denial of evolutionary theory, and thus discarded as well. Alternatively, if we were reluctant to

⁷ Kimmerer, *Braiding Sweetgrass*.

⁸ *Ibid.*, p.30. Kimmerer's comments on gift economies are in agreement with Apffel-Marglin's in **Part 1**.

⁹ Kimmerer's thinking here is reminiscent of Cajete's stance in **Part 1** regarding the constitutive as well as dynamic role of story in our participation in the world (Cajete, *Native Science*, p.95). Kimmerer herself later provides a case study of a postgraduate student's interaction with the plant of sweetgrass intertwining with biochemistry and wisdom contained in an ancient evolutionary relationship between non-humans before the arrival of humans, which is going to be introduced in **chapter 16** below.

¹⁰ P.Hylton and G.Kemp, 'Willard Van Orman Quine', in *The Stanford Encyclopedia of Philosophy*, ed. by E.N. Zalta (Spring 2020 Edition), URL = <<https://plato.stanford.edu/archives/spr2020/entries/quine/>> [Accessed: 20 March 2023].

trouble ourselves with the detail of following the second of these steps, we might avail ourselves of the mechanism of epistemic injustice type 1 discussed by Miranda Fricker in **Part 1**,¹¹ and simply decree that because of who Vine Deloria had now become (someone with a history of having denied evolutionary theory), he no longer had any credibility no matter what else he might say.

Taking a more measured approach while still arguing from a largely Western point of view, we might take Robert Merton's advice given in his foreword to Jacques Ellul's *The Technological Society*,¹² and learn from someone we disagree with: we might entertain the possibility that Deloria could indeed be wrong about evolution, and that any other assertions made by him could nonetheless be correct.

We might also consider that even if we did believe Deloria to be wrong about evolution, his stance might be understandable, given our knowledge of the history of misappropriation of evolutionary theory to advance sinister ends. Dussel's "myth of modernity"¹³, cited in **Part 1** and arising from Western universalist thinking, dovetails seamlessly with the evolutionary idea (when taken out of context) of the development of life progressing towards increasing perfection. It thus carries a danger of yielding, unless reflected upon and duly curbed, the still prevalent conception of Europe as the norm. The work of PRATEC and of Frédérique Apffel-Marglin was cited in **Part 1** to show the negative influence of this on settler attitudes towards Indigenous populations, resulting in injustice to this day. In Europe itself, as shown by Dussel and developed in more detail in Richard Burkhardt's account of the careers of Konrad Lorenz and Niko Tinbergen, misappropriation of evolutionary theory was a contributing factor to the atrocities committed by Nazi Germany.¹⁴ If Deloria, having spent a lifetime on the receiving end of discrimination resulting from a universalism ideologically linked to the misappropriation of evolutionary theory, and having devoted his adult life to spearheading the resistance of his Indigenous intellectual community against this, was less than enthusiastic about evolutionary theory, then this would be more than reasonable from a sociological if not from a biological point of view.

¹¹ Fricker, 'Evolving Concepts Of Epistemic Injustice'.

¹² R.K.Merton, 'Foreword', in J.Ellul, *The Technological Society* (London: Jonathan Cape, 1965), p.12.

¹³ E.Dussel, 'Eurocentrism And Modernity (Introduction To The Frankfurt Lectures)', *boundary 2*, Autumn 1993, Vo.20, No.3, pp.65-76, <URL = www.jstor.com/stable/303341> [Accessed: 20 March 2023].

¹⁴ R.W.Burkhardt, *Patterns Of Behaviour: Konrad Lorenz, Niko Tinbergen, And The Founding Of Ethology* (Chicago/London: The University of Chicago Press, 2005), pp.253-258.

However, none of the approaches discussed so far is capable of benefiting from any wisdom that may be contained in Deloria's thought process. This is because they fail to consider the most interesting point, and that is the point made by Polkinghorne in the context of quantum physics and Christian theology above: "There can be times when one just has to hold on to the strangeness of experience by the skin of one's intellectual teeth, knowing that progress will not come from a facile abandonment of any part of that experience."¹⁵ To find Deloria's stance understandable in view of his personal history is not the same as to engage with its seemingly incompatible content: Polkinghorne's point chimes with Indigenous conceptions of disagreement as progress,¹⁶ and it is a similar point to that made by Peat in his nuanced approach to the – albeit almost certainly insufficiently developed – theory of Sheldrake's referenced above.¹⁷ Any theory is just that: a theory, and therefore only ever an attempt at a map of the world we are participating in, as opposed to the actual, living world itself.¹⁸ As such, it is inevitably going to be incomplete, and this means that two such incomplete maps may conceivably, between them, lead to the conception of a third that is still inevitably incomplete, but more complete than the first two. An emerging third map would be likely to uncover errors made in the production of first two, without thereby necessarily proving either of the first two entirely wrong. To illustrate this point, Suzuki uses the analogy of a group of blind people exploring an elephant and comparing notes.¹⁹ Spinoza, as will be shown in the next chapter, draws on the complexity of a web of relationships to make a similar point.

Applied to the question currently under consideration, this means that even though Western science has amply evidenced evolutionary theory, and even though Vine Deloria's rejection of evolutionary theory appears to be incompatible with this, it may be worth our while to hold the two in suspension for a moment or two, and to see if between them, they may not yield a more complete idea of our elephant than either on its own could hope to achieve.

¹⁵ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.90.

¹⁶ Burkhart, *Indigenizing Philosophy Through The Land*, p.263.

¹⁷ Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.165.

¹⁸ Cordova, *How It Is*, p.108.

¹⁹ Suzuki and Knudtson, p.13. I find it useful to note at this point, too, that the above elephant analogy exclusively argues from within a representationalist paradigm: the elephant is already manifest. Karen Barad's thinking, summarised in **Appendix B**, as well as Indigenous conceptions of performative knowledge processes discussed in the remainder of **Part 2**, both involve the additional dimension of our participation in the shared learning and creation of a dynamic world.

Evolutionary theory is going to be revisited in the section discussing Western scientific ways of communicating with non-human nature below. For now, selected aspects of it are relevant to our present question of how evolutionary ideas and Deloria's rejection of these may dovetail in previously unexpected ways.

Deloria and Wildcat summarise Deloria's idea of personality as "the substantive embodiment, the unique realisation, of all the relations and power we embody."²⁰ They point out that this is "fundamentally different from the popular science view that what and who we are can be reduced to genetics or biochemical mechanisms," and that the Western, reductionist model loses "the critical interaction between environment and personality."²¹

This has undoubtedly been the case in the past, and it is likely to have remained prevalent at least to some extent, as popular discussion of scientific discovery can be subject to a time lag. Burkhardt, for example, quotes Tinbergen as acknowledging in the 1960s that both his and Lorenz's earlier research had failed to take negative feedback into account.²² This implies that ethology's consideration of environmental and relational factors is a contemporary development, as opposed to its having been there from the beginning. In addition, research on neuroplasticity in adult humans (such as that cited in **Part 1**, involving cabbies and violinists) is sufficiently recent to have warranted its appearance in the news only a few years ago.²³ The exploration by Western science of the interplay between nature and nurture is fairly new, and it is conceivable that dissenting voices – perhaps including Deloria's – may have contributed to sparking contemporary evolutionists' interest in the matter.

Where the above-mentioned time lag exists between a contemporary version of a Western scientific theory on the one hand, and a theoretically superseded, but practically still prevalent older version in popular discourse on the other, it arguably remains legitimate to continue to criticise the theory until it has taken adequate steps to

²⁰ Deloria and Wildcat, p.145.

²¹ Ibid.

²² Burkhardt, *Patterns Of Behaviour*, p.431. The term "feedback" is here used for a response encountered by an organism as a result of their interaction with their world. In addition to the negative impact of this omission on Tinbergen's and Lorenz's earlier research, it is going to become apparent throughout the remainder of **Part 2** that at least some of the conditions which were conducive to its occurrence at the time are still prevalent to this day, and are likely to provide fertile ground for similar omissions to occur.

²³ BBC News, *Brain Changes Seen In Cabbies Who Take 'The Knowledge'*, 8 December 2011 <URL: <https://www.bbc.co.uk/news/health-16086233>> [Accessed: 20 March 2023].

disseminate its new developments and thus facilitate progression from popular misuse. This is all the more relevant when arguing from within an Indigenous paradigm, where science is understood as a trans-disciplinary endeavour which cannot be value-free.²⁴

Deloria is highly critical of the idea of the survival of the fittest, and more so when this is carried over into other areas of life beyond the discipline of evolutionary biology alone. Deloria's Indigenous worldview derives personality from acceptance of responsibility.²⁵ Predictably, and reasonably, he gives short shrift to those who deem a civilisation superior on the grounds of race which has yet to prove itself capable of organising water supplies in a manner that serves those reliant on them.²⁶

Deloria's criticism of the idea of the survival of the fittest, however, is not only understandable on the grounds of his personal history, and justified from the sociological and ethical points made here. It is also reflected by evolutionary theory itself, which acknowledges in a variety of ways that the situation is more nuanced than the term would initially appear to suggest.

Firstly, evolutionary theory acknowledges random variations, and this fact alone poses a difficulty for those wishing to misappropriate it to dispute the importance of diversity. Persistence through time is far from the only measure of value available.

Secondly, although it is true that in a subsequent step after random variation, evolutionary theory does assert survival of the fittest, survival of the fittest can by no means be equated with survival of the perpetrators of crude bullying practices. Serious engagement with evolutionary theory involves consideration of the role of cooperation in enabling survival, as – for example, but by no means exclusively – demonstrated in Marc

²⁴ Cajete, *Native Science*, p.67. It is going to become clear in the discussion of a cluster of case studies below that this relationship can be understood to be bi-directional: it is not only the case that Western science can have a tendency to absent itself from discussions of ethics by proposing a fact-value distinction; it is also going to be shown that to the extent that it aims to exclude questions of relationship from its remit from the beginning, ethical aspects become more difficult for it to see as its processes then unfold.

²⁵ Deloria and Wildcat, p.44.

²⁶ Deloria, *The Metaphysics Of Modern Existence*, pp.72-73 and p.179. As pointed out above, this is likely to have had particular poignance for Deloria not only due to his own experience of being in a minority group, but also due to timings: Deloria was 72 years old when he died in 2005, and must therefore have grown up in the shadow of the Second World War and its aftermath of – more than understandable – wariness of the very evolutionary theory that had just been oversimplified, and then misappropriated, to justify genocide. (Burkhardt, *Patterns Of Behaviour*, pp.348-349.)

Bekoff's work.²⁷

Thirdly, Deloria's charge of evolutionary theory missing the fact that life forms classified as different species may in fact share certain traits²⁸ does indeed apply to simplified understandings of evolutionary theory. However, not all understandings of evolutionary theory have been thus simplified. Frans de Waal, for example, explains with great clarity the difference between homology (i.e., traits deriving from one common ancestor) and analogy (i.e., traits evolving independently, from different ancestors, which are subsequently found to achieve similar outcomes).²⁹ The idea of such convergences being possible in similar functional contexts can be traced back to a new development in Tinbergen's and his students' research in the 1950s.³⁰

Now that it has been shown that evolutionary theory, at least in its uncorrupted forms, is able to cope with Deloria's criticisms cited, what remains to be addressed is the question of how I can then justify my above claim of Deloria's challenge containing wisdom nonetheless. There are two aspects to my rationale for this.

The first of these is easily accessible from a Western vantage point, and can be argued based on the findings of **Part 1**. The advent of quantum theory, and a few years later its application to Indigenous thought, as well as Jung's and Pauli's work on acausal relationships, demonstrated that while conventional, Western, Newtonian physics is as "correct" as it was before, it is also incapable of capturing the world in its entirety: there are complexities beyond its reach, which it is unable to account for. As shown in **Part 1**, explanations include experimental method and, relatedly, underlying conceptual frameworks. In particular, Newtonian physics was shown to struggle with those complexities that do not appear to follow a strictly causal, Cartesian, clockwork pattern.

Evolutionary theory is a scientific development that arose from the same underlying conceptual framework as Newtonian physics did. Paradigm has been shown to be a factor in preventing Newtonian physics from relating to more of the world than it does. It is

²⁷ M. Bekoff, *The Emotional Lives Of Animals* (Novato: New World Library, 2007), pp.102-103. Bekoff and his students are able to show evidence of play (which, by its very nature, involves cooperation) being capable of influencing coyotes' reproductive success. Bekoff's findings are going to be considered in greater depth in the section on Western ways of communicating with non-human nature below.

²⁸ Deloria, *The Metaphysics Of Modern Existence*, p.85.

²⁹ De Waal, pp.71-75.

³⁰ Burkhardt, *Patterns Of Behaviour*, p.420. This question, too, is going to be revisited in the section on Western forms of communication with non-humans below.

therefore reasonable to expect that paradigm will have had a similar effect on evolutionary theory. This means that even though evolutionary theory remains as “correct” as it was before, it is reasonable to expect that there are going to be aspects of the reality it aims to reflect which are simply beyond its reach. This is where Deloria’s criticism becomes helpful.

First and foremost, given our inexcusable 20th-century human record with regards to the application of essentialising conceptions of identity alone,³¹ Deloria’s criticism can be taken as welcome reminder not to essentialise. Deloria’s message of classification by genetic criteria being only “one of a variety of ways that the biological world can be understood”³² is a necessary one, and it is also a message that the dissemination of evolutionary theory does not yet reliably provide sufficient clarity on, regardless of its own, documented awareness of it. As cited above, the idea of neuroplasticity was sufficiently new to a sufficient number of visitors to the BBC News website only a few years ago to warrant its publication as a piece of news there.

This aspect of Deloria’s message can easily be understood by our Western minds, and accommodated within our accustomed, largely Newtonian paradigm, as evidenced by its having been shown already to be part of existing evolutionary theory above. The message is already there; it is in its dissemination and application that we have been falling short.

A second aspect of my rationale for Deloria’s message containing wisdom may initially be more difficult for us in the West to relate to. When Deloria speaks of classification by genetic criteria being far from the only way that the biological world can be understood, he is talking about more than the changes occurring in individuals’ brains once they have worked as London cabbies. He is also talking about the individual being more than an individual; he is talking about the individual, at the same time as being an individual, being part of the whole.³³ For Deloria, it is without question that the relationships implied by this extend across species, and that it is above all the patterns occurring in these relationships, as opposed to exclusively causal sequences of events, that shape them.³⁴ If

³¹ For example, J.Glover, *Humanity: A Moral History Of The Twentieth Century*. It is going to be relevant in the following chapters that disastrous human choices to adopt essentialising conceptions of identity were joined by other disastrous human choices in making the 20th century a time that we are unlikely to look back on with pride. With regards to the point made by Deloria here, however, it is the adoption of essentialising conceptions of identity that is particularly relevant.

³² Deloria, *The Metaphysics Of Modern Existence*, p.72.

³³ *Ibid.*, pp.114-122.

³⁴ *Ibid.*, p115.

this at first appears difficult for our Western mind-bodies to relate to, it may be helpful to use Antonio Damasio's research as a stepping stone: Damasio presents evidence that gut feeling, developed from an accumulation of experience of *felt* (as opposed to exclusively rationalised) outcomes of previously encountered situations, contributes more quickly to our response to current ones than reasoning could.³⁵

Some aspects of the points made by Deloria may be amended by those now building upon his work. As David Peat pointed out in **section 6.c**, not every detail of a theory necessarily stays in place as the theory matures, and such amendments do not necessarily imply that the theory contains no wisdom. Similarly, the "correctness", in their current form, of the ideas proposed by Deloria is not what is at stake here. What is at stake is whether there is wisdom contained in these that is likely to stand the test of time even as details of its expression may be amended in light of emerging research in a rapidly developing field. I am making a case that there is.

Deloria, from an early stage in his argument, stresses the importance of "intangible expressions of the human spirit" – such as art, music, and spirituality.³⁶ He not only supports the idea that an element individualising itself becomes retrograde;³⁷ he argues, in the same vein as Peat's work on synchronicity cited in **Part 1**, that the deeper layers of our psyche become increasingly collective.³⁸ Again with noticeable similarity to Peat's argument, Deloria then roots "the psyche in the structure of the universe".³⁹ In other words, the worldview underlying Deloria's critical view of evolutionary theory once again brings together the material and the immaterial, as well as the individual and the collective, and therein lies the heart of his contribution to the debate.

³⁵ A.Damasio, *Looking For Spinoza* (London: Vintage, 2004), pp.140-149.

³⁶ Deloria, *The Metaphysics Of Modern Existence*, p.74.

³⁷ Ibid., pp.86-87.

³⁸ Ibid., p.127. It is going to become clear in later chapters that there is more to Deloria's statement than those aspects of it likely to be spied by our Western eye at this early stage of **Part 2** of this thesis. A case study of a postgraduate student engaging in respectfully conceived scientific research, and finding herself growing into participation with ancient, evolutionary relationships in unexpected ways, is going to be discussed below to cast additional light on this.

³⁹ Deloria, *The Metaphysics Of Modern Existence*, p.128. The affinity between Deloria's thinking here and the thrust of Peat's argument in **chapter 6** of **Part 1** is further explored by Deloria in his *C.G.Jung And The Sioux Traditions*, published posthumously (V.Deloria; P.J.Deloria and J.S.Bernstein (eds.), *C.G.Jung And The Sioux Traditions* (Wheat Ridge: Fulcrum Publishing, 2022). Consistent with what has been said with regards to Indigenous thinkers' understanding of disagreement as progress, Deloria balances respect for Jung's work with his critical stance regarding certain aspects of it, and concludes that continued exchange between Sioux and Jungian ideas is likely to be "vital to a continuing exploration of our world." (Ibid., p.200.)

What Kimmerer first expressed in Western scientific language above, and then mirrored in poetic form – that the stories we live by have adaptive consequences, and that we are individuals at the same time as being embedded in, and creative members of, the whole – is here expressed in philosophical terms. The message that both are conveying, however, could never have been discerned from evolutionary theory in its current Western form alone.

It is, above all, Deloria's clarity on the relatedness of the non-binary natures of the following two sets of dualisms that is of interest to this thesis: Deloria does not treat the non-binary character of the dualism of our individuality and our embeddedness in the whole as a separate issue from the non-binary character of the dualism of the material and the immaterial. Rather, Deloria treats both as two sides of the same coin: citing research findings similar to Candace Pert's presented in Frédérique Apffel-Marglin's work in **Part 1**, Deloria points out that organisms exchange chemicals with their surroundings, to then discuss the relevance of these exchanges to emotions and relationships.⁴⁰ He leaves us in no doubt that the relationships he is referring to are enduring rather than casual ones.⁴¹

Deloria's rejection of any theory celebrating uncooperative behaviour in individuals (as cruder interpretations of evolutionary theory have been known to do, as shown in this chapter) is thus anything but solely based on the idea that our material selves are likely to fare better – as Bekoff's above coyotes demonstrably did – if we cooperate with each other. Deloria's rejection of such theories is rooted in a worldview based on the most intrinsic form of relatedness between the individual and the whole, and it is a form of relatedness that is spiritual at the same time as being material, because there is no dichotomy between the two.

In a world where this is the case, careless treatment of relationships cannot be anything other than deeply offensive, and it is this insight provided by Deloria that is going to matter for **Part 2** of this thesis.

It is also now obvious that in such a world, conceptions of wisdom will involve the weaving of the web that sustains us in such a way that the development of binary choices such as those faced by some Covid patients in **Part 1** can be headed off at the pass: in a

⁴⁰ Deloria, *The Metaphysics Of Modern Existence*, p.114.

⁴¹ *Ibid.*, p.115.

world where the individual and the whole are intrinsically related, and where this relatedness includes the sacred and the material alike because it is impossible to separate the two, wisdom will consist in working towards creating conditions allowing all of us to thrive.

Two points remain to be made at the end of these considerations.

Firstly, Polkinghorne's above advice to hold two seemingly incompatible pieces of evidence in suspension in order to learn from both appears to have served us well. As previously stated, it would have been impossible to glean the new insight provided by engagement with Deloria's thinking from evolutionary theory alone.

Relatedly, it is worth noting that it is not *despite* this initial incompatibility that new insight has been able to be developed, but *because* of it: the initially unpalatable elements of Deloria's thought did not need to be set aside tactfully in order to allow other aspects to be considered. Rather, they needed to be engaged with in order to pave the way for new insight to develop. I disagree with Deloria, as much as I did before, regarding his *denial* of evolutionary theory, for the reasons stated above. For different reasons also stated above, however, I am at least as grateful for the stepping stones to insight provided by his *criticism* of it.

As previously observed, Polkinghorne's above advice chimes with Indigenous conceptions of disagreement as progress, and of new knowledge tending to be added to an existing body of knowledge even in the face of initial appearances of incompatibility. This kinship of attitudes was also reflected in the natural affinity discovered between Bohmian dialogue and Indigenous talking circles in the context of the Dialogues.⁴²

Secondly, with his message of the intrinsic relatedness of the individual and the whole, and of this relatedness involving the material and the immaterial as one, Deloria has taken us directly to the relevance of Spinoza to the potential attunement of the West to Indigenous thought. And with this is going to come another opportunity to take Polkinghorne's advice.

⁴² Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue*, pp.45-60.

Chapter 11 – The relevance of Benedict de Spinoza

It was shown in **Part 1**, through Viola Cordova’s work, that parallels exist between Indigenous – in Cordova’s case, Navajo – thought and the ideas of Benedict de Spinoza. Cordova likens *nilch’i*, the wind suffusing the Navajo universe, to Spinoza’s “substance”, on the grounds that “whatever comprises the universe is only one thing which differentiates, or manifests, itself into many things,”¹ with sacredness being located within this, rather than transcending it.²

On closer examination, more parallels emerge. Genevieve Lloyd, for example, makes a case for Spinoza’s endorsement of a wider conception of rationality than that predominantly assumed in the West.³ The thrust of Lloyd’s argument is that the ideal of rationality rooted in our contemporary, Western consciousness is one that excludes the contributions of the body, of the sensuous, and of the emotional. As did Apffel-Marglin in **Part 1**, Lloyd traces this back to Cartesian dualism. Lloyd then asserts that a subsequent “separation of functions backed by a theory of mind” produced the “Man of Reason” as “a male character ideal”.⁴ In a thought process similar to Apffel-Marglin’s in **Part 1**, and reminiscent of Narayan and Harding’s **Part 1** call to transform rather than add to the mainstream, Lloyd goes on to show that rationality, as it is currently conceived by the Western mainstream, is at best incomplete. Although there was no incontrovertible reason to normalise one particular aspect of rationality while “othering” those aspects of our making sense of the world which are beyond its reach, this is what appears to have been done. As a result, those deemed “other” on the grounds of their non-conformity to the thus-defined norm have since been subject to discrimination. Again with similarities to Apffel-Marglin’s work cited in **Part 1**, Lloyd calls for our conception of rationality to be extended. The difference between Lloyd and Apffel-Marglin is that Lloyd specifically invokes Spinoza’s theories in order to offer a way forward, and this provides a further link between Indigenous worldviews and Spinoza’s: it is, as shown in earlier chapters of this thesis, not exclusively women who have been “othered” and discriminated against on the grounds of their so-called irrationality; it is also Indigenous thinkers. Viola Cordova alone relates memories of more incidents of having been labelled “primitive” than most of us

¹ Cordova, *The Concept Of Monism In Navajo Thought*, p.79.

² *Ibid.*, p.94.

³ G.Lloyd, ‘The Man Of Reason’, in *Metaphilosophy*, Vol.10, No.1 (January 1979), pp.18-37, URL: <<https://www.jstor.org/stable/24435599>> [Accessed: 20 March 2023].

⁴ *Ibid.*, p.25.

would care to forget in a lifetime.⁵ A Spinozistic conception of reason, allowing the embodied and the emotional to be grown into our rationality as valued components, as opposed to their being excluded from it as unwanted, atavistic intrusions, is bound to have been very welcome indeed.

Returning to Deloria's thinking as outlined in the previous chapter, the two aspects of Spinoza's philosophy discussed there – those of there being no relationships of binary dualism between the individual and the whole, nor between the sacred and the material – appear to be obvious points of contact with Indigenous thought, and the more these are considered, the more they seem to merge into one. Spinoza does not place the good of the whole in opposition to that of the individual at all, and he locates the sacred within the material, as opposed to conceiving it to be transcendent. Lloyd explains that the latter by no means constitutes a “downgrading” of the divine, but is rather to be understood as an “elevation of nature”.⁶ Since our mind-bodies are “inserted into the totality”,⁷ at the same time as being distinct, it then appears no more than logical for an Indigenous thinker to understand Spinoza to be in agreement with the Indigenous treatment of our participation in this world as sacred.

A further parallel becomes obvious once the work of the PRATEC project, extensively cited in **Part 1**, is considered alongside Cordova's: PRATEC's agricultural work in the Andes is, above all, a perpetual source of joy for those involved, nurturing and being nurtured, and loving the world as it is.⁸ Lloyd, in her introduction to Spinoza's *Ethics*, describes Spinoza's thought as “an ethic of joy”.⁹ She grounds this in Spinoza's conception of our ability to become active in and through the understanding of our passions: in particular, she cites a passage from Part IV of the *Ethics*, where Spinoza points out that it is our very striving to persevere in being (our *conatus*) that can be harnessed to become a source of joy, as active states and joy will enhance each other.¹⁰ Spinoza goes on to explain that this means reason demands nothing contrary to nature.¹¹

It is at this point that complexities arise again, and there are more to come, which are all,

⁵ For example, Cordova, *How It Is*, p.40.

⁶ G.Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics* (London: Routledge, 1996), p.14.

⁷ *Ibid.*, p.54.

⁸ For example, Rengifo, 'The Ayllu', p.92.

⁹ Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.83.

¹⁰ B. de Spinoza, *Ethics* (London: Penguin Classics, 1996), pp.124-125 (E4P18D).

¹¹ *Ibid.*, p.125 (E4P18S).

however, eventually going to prove fruitful.

At first glance, the passage from the *Ethics* just referenced could as easily have been a citation from PRATEC's work as from Spinoza's. We appear to be looking at the same worldview of our joyful participation in the world, flowing from the very nature of our being. It is what comes next in the *Ethics* which initially appears to be at odds with earlier insight regarding the Indigenous requirement that we exercise responsibility in our participation in the world: Spinoza goes on to say that "Since reason demands nothing contrary to Nature, it demands that everyone love himself, seek his own advantage (...)"¹²

Mary Midgley, for example, is understandably concerned about this: "The foundation of Spinoza's ethics is Egoism. For him, each of us seeks merely his own."¹³ Based on Indigenous conceptions of responsibility and of respect discussed in **Part 1**, it would have seemed entirely reasonable for Indigenous thinkers to take a similar view, and – at least at first glance – significantly less reasonable for them to claim any form of kinship between Spinoza's ideas and theirs.

Lloyd, however, takes a nuanced approach. Her starting point is the above intrinsic relatedness between the individual and the whole, and it is from this starting point that she is able to argue that "there is no dichotomy here between the thriving of individuals and that of the collectivities they form with others".¹⁴ To the extent that reason prevails, it is in seeking our own *conatus* that we most contribute to the good of the whole.¹⁵ Lloyd, too, understands *conatus* to be dynamic rather than static, which, in itself, is supportive of the possibility of reconciliation "between egoism and collaborative morality"¹⁶ through continuous mutual attunement.

Its corollary, however, is the effort of responsiveness in seeking dynamic balance, as opposed to the relative ease of exclusive reliance on static universals.¹⁷

Kimmerer, relatedly, illustrates the idea by drawing on the example of the Three Sisters (corn, beans, and squash), often planted together by Indigenous groups, and related through story and biochemistry alike.¹⁸ She concludes that "the beauty of the partnership

¹² Ibid.

¹³ Midgley, *Beast And Man*, p.339.

¹⁴ Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.89.

¹⁵ Ibid.

¹⁶ Ibid., p.79.

¹⁷ Ibid., p.77.

¹⁸ Kimmerer, *Braiding Sweetgrass*, pp.128-140.

is that each plant does what it does in order to increase its own growth. But as it happens, when the individuals flourish, so does the whole.”¹⁹

This must come with a caveat: there is a difference between corn, beans, and squash each meeting their own needs while supporting the collective, and (for example) the humans requiring Mabit’s care, as outlined in **Part 1** , after meeting what they presumably perceived to be their needs and injecting themselves with narcotics. By the time they reached Mabit’s rehabilitation centre, they were bound to have brought misery and upheaval not only to their own lives, but also to the lives of those around them, as amply evidenced by the existence of organisations such as Nar-Anon alone. The latter example of individuals meeting their needs can thus hardly be described as a contribution to the good of the whole.

And herein lies the crux of the matter: Mabit’s patients’ *conatus* would have been unable to have much say in what went on, because it would have been the disease of drug addiction that had taken control of their behaviour instead. This is demonstrably not what Spinoza had in mind:

A man cannot be said absolutely to act from virtue insofar as he is determined to do something because he has inadequate ideas, but only insofar as he is determined because he understands” .²⁰

Spinoza thus bases his argument on an individual acting from reason. He goes on repeatedly to stress the impossibility of this always being the case:²¹ while showing us the way to a form of rationalism which is richer than the narrower variety of reason conceived from within a Cartesian paradigm,²² and therefore capable of accommodating a non-binary conception of the dualism of the individual and the whole, he is also well aware of the necessity of our fallibility.

It would be difficult to argue that Spinoza’s giving “clear expression to models of good living while repudiating moral norms”²³ was *not* reminiscent of Burkhart’s locality as discussed in **Part 1** , and thus irreducible to mainstream Western patterns of

¹⁹ Ibid., p.134.

²⁰ Spinoza, p.127 (E4P23).

²¹ Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.89. A more detailed discussion of this point follows below in the context of a potentially anthropocentric interpretation of a passage of the *Ethics*.

²² Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.109.

²³ Ibid., p.133.

categorisation. Lloyd goes on to point out that Spinoza's "good" is what is "useful" to us.²⁴ We may find the term "useful" controversial here at first, sensing a connotation of manipulative behaviour to advance egoistic ends. However, against the background of the above thoughts regarding the Spinozistic individual's embeddedness and participation in a sacred whole, the balanced form of usefulness under discussion could hardly be further removed from the crude variety of usefulness sought as a result of inconsideration.

A knottier problem appears to be the issue of Spinoza's apparent anthropocentrism. While it is certainly true that Spinoza promotes egalitarian ideas, and values diversity in large parts of his work,²⁵ the *Ethics* also contains passages which cast doubt on whether his attitude towards non-human animals would have been compatible with Indigenous thought. There are references to "lower" animals,²⁶ and to increased power through seeking the company of one's own species (rather than that of others).²⁷ Relatedly, the *Ethics* also appears to give humans licence to destroy or adapt non-humans in whatever way may happen to suit us:

(...) whatever there is in Nature apart from men, the principle of seeking our own advantage does not demand that we preserve it. Instead, it teaches us to preserve or destroy it according to its use, or to adapt it to our use in any way whatever.²⁸

Considering this from an Indigenous point of view, it would appear difficult to reconcile this aspect of Spinoza's thinking with, for example, Burkhart's work on the importance of respectful interaction with other forms of life.²⁹ All that might be possible for the moment, at first glance, appears to be to fall back on the above, Indigenous conception of disagreement as progress, and to hope that any wisdom contained in the apparent contradiction will appear if only we manage to hold both ideas in suspension for a while.

And yet, there may, even now, be more to this tension than meets the eye. Louise Westling, for example, as shown in **Part 1**, makes reference to two ancient *Western* myths to exemplify the complexities involved in the relationships between human and non-human animals, carrying potential for shared meanings as well as the ever-present, accompanying

²⁴ Ibid.

²⁵ Ibid., p.24.

²⁶ For example, Spinoza, p.72 (E3P2S).

²⁷ Ibid., p.156 (E4A9).

²⁸ Ibid., p.158 (E4A26).

²⁹ Burkhart, *Indigenizing Philosophy Through The Land*, pp.286-287.

reality of our ability to cause each other's deaths.³⁰ Westling's choice demonstrates that awareness of this complex relationship was also part of *Western* philosophical heritage for millennia, before largely being cast aside in modern times. This makes it conceivable that it may not only have been construed by Indigenous academics, when referencing Spinoza, to have been part of Spinoza's underlying paradigm because it was part of theirs. Rather, it may also have been part of Spinoza's own.

It is particularly in light of Spinoza's conception of a non-binary relationship between the individual and the whole that this becomes a possibility. If an individual operating as a harmoniously integrated part of the whole were to cause the death of another individual, then this could, conceivably, be interpreted as being beneficial to the whole – and this is undoubtedly an assumption we make whenever we wash our hands with soap and water.³¹

When giving us licence to kill and to adapt non-humans for our own use, is Spinoza advocating disrespectful behaviour towards those who are different from us? Mary Midgley certainly believes that he is, and she is able to evidence this by citing a passage from the *Ethics* that appears to support her point:

(...) I do deny that we are therefore not permitted to (...) use them at our pleasure (...). For they do not agree in nature with us, and their affects are different in nature from human affects.³²

Midgley, in my view understandably, makes abundantly clear that she finds this appalling:

What would a world be like in which we only cared for others in proportion as they were like ourselves, (...) where we only admitted that they had any claim on us in proportion to their likeness?³³

Midgley's interpretation of Spinoza here is not that he is giving us licence to use soap and water to cause the death of the coronavirus because when acting from reason, we

³⁰ Westling, pp.49-60.

³¹ Intriguingly, even at a time when we as a society failed, abjectly, to support Covid patients to self-isolate, causing a disproportionate number of deaths among bus drivers (as discussed in **Part 1**), the government information issued in support of the "Hands. Face. Space" campaign contained the following passage linking the good of the individual and the good of the collective: "Following these simple steps could make a significant difference in reducing the transmission of COVID-19 and help protect you and your friends, colleagues and family from the virus." Department of Health and Social Care, *New Campaign To Prevent The Spread Of Coronavirus Indoors This Winter* (9 September 2020), <URL = <https://www.gov.uk/government/news/new-campaign-to-prevent-spread-of-coronavirus-indoors-this-winter>> [Accessed: 20 March 2023]. As well as containing the Spinozistic message of an individual pursuing their own *conatus*, if conceived through reason, being able to contribute to the good of the whole, the passage is clearly based on an underlying assumption of its being desirable to kill the virus for the good of the whole.

³² Spinoza, p.135 (E4P37S1). The wording of the translation used by Mary Midgley is slightly different from this (without change to its meaning).

³³ Midgley, *Beast And Man*, pp.339-340.

perceive this to be beneficial to ourselves and, by extension, to the whole. Rather, Midgley's interpretation of Spinoza is that he is giving us licence to cause the death of the coronavirus because the coronavirus is insufficiently like ourselves.

If this is what Spinoza meant, then there can be no doubt, in view of Burkhardt's work referenced above, and in view of everything that was said in relation to PRATEC's in **Part 1**, that the best Spinoza could have hoped for in a discussion of this passage by an Indigenous thinker would have been for his point of view to be held in suspension for a while.

However, can we be certain that it *is* what he meant?

Spinoza's underlying assumption, when issuing his licence to destroy and to adapt, is one of an actor acting from reason, and he is – as noted above – at the same time aware of our fallibility. Reason, however, is not the Cartesian form of rationality here: it is, as outlined at the beginning of this section, an emotional, intellectual, and spiritual awareness of our relatedness to the rest of nature. Lloyd explains the idea as follows:

To the extent that the Spinozistic self understands itself during life, its being is already bound up with that of the rest of nature, in a way that resists encapsulation into fixed borders.³⁴

At the same time, it follows from this that we have here encountered the point where our inherent fallibility must be rooted:

No self could achieve the impossible feat of thus making all its ideas adequate, while yet remaining an individual.³⁵ (...) the Spinozistic mind could transform all its inadequate ideas into adequate ideas only at the cost of ceasing to exist.³⁶

Two important points are contained in this.

Firstly, to the extent that an individual has attained the form of reason envisaged by Spinoza, they are no longer the same individual as they were before, and they are likely to engage in different behaviours from their previous ones. I would argue that this is likely to be what motivates Mabit when he supports people in overcoming their particular form of being determined by an external cause. However, I would also argue that there is a deeper meaning waiting to be appreciated here.

³⁴ Lloyd, *Routledge Philosophical Guidebook To Spinoza And The Ethics*, p.120.

³⁵ *Ibid.*, p.123.

³⁶ *Ibid.*, p.129.

The transformation of the self entailed by increasing attainment of the form of reason envisaged by Spinoza – intuitive knowledge, and harmonious integration into the whole – appears to share common ground with Arne Naess’s conception of the expansion of the self that lay at the heart of his dispute with Val Plumwood.³⁷ An expansion of that part of the self which is unintegrated, and out of balance with the world around them, will be likely to wreak egoistic havoc with whatever milieu it may descend upon and throw its weight around in, as Plumwood – in my view, reasonably – wanted to point out. However, I find it unlikely that this is what Naess had in mind. Naess explicitly states that “By identifying with greater wholes, we partake in the creation and maintenance of the whole.”³⁸ Considered in Spinoza’s terms, this appears closer to an idea of those parts of the self already transformed beginning to play their unique part in the whole than it does to those parts still on the loose and forging ahead to help themselves to the world. The difference is reminiscent of our earlier considerations regarding Cajete’s criticism of “pilgrims” to Mexico high on peyote on the one hand,³⁹ and Peat’s example of the “rainmaker” on the other, who would not have thought of himself as a rainmaker at all, but as someone whose role it was to restore balance to the whole that he understood himself to be an integral part of.⁴⁰

Spinoza, soon after issuing his above licence to destroy and to adapt non-humans, does advocate a measured approach, albeit in the new context of our relationship with money: “Those, however, who know the true use of money, and set bounds to their wealth according to need, live contentedly with little.”⁴¹

With regards to this first point, then, the two distinct strands of the argument – that Spinoza is talking about our integrated part’s interaction with the whole, and that he advocates moderation in another context, i.e. that of money – could thus, conceivably, be synthesised to yield the view that Spinoza, when issuing his licence to destroy and to adapt, may in fact be suggesting an approach similar to respectful, Indigenous conceptions of hunting referenced in earlier chapters of this thesis. Whether or not this is

³⁷ A.Naess, ‘Identification, Oneness, Wholeness And Self-Realisation’ in J.Benson (ed.), *Environmental Ethics* (London: Routledge, 2000), pp.243-251, and V.Plumwood, ‘Nature, Self, And Gender: Feminism, Environmental Philosophy, And The Critique Of Rationalism’ in J.Benson (ed.), *Environmental Ethics* (London:Routledge, 2000), pp.263-271.

³⁸ Naess, p.245.

³⁹ Cajete, *Native Science*, p.209.

⁴⁰ Peat, *Synchronicity: The Marriage Of Matter And Psyche*, pp.106-107.

⁴¹ Spinoza, p.159 (E4A29).

actually the case, or whether the initially apparent disagreement persists even in light of these considerations, is going to be difficult to assess across a distance of 400 years. Based on the above considerations, it appears as likely that there may only be potential for reconciliation here (without these points actually having been reconciled by Spinoza himself), as it does that Spinoza may in fact have reconciled these points himself, but without making this reconciliation sufficiently explicit in the *Ethics* in a way that we as contemporary Western thinkers would necessarily recognise.

Secondly, it is important in this context to consider that an individual's initial bias towards the familiar may not necessarily translate into a more permanent one. Since it is impossible to achieve adequate ideas everywhere, due to the sheer size and complexity of the web of relationships in the world, it is conceivable that individuals may begin their journey towards increased understanding with forays into the familiar, and with those relationships where understanding is expected to be relatively easily attained. It is then also conceivable that this may be entirely unrelated to whether or not the individuals concerned expect to *end* their journey there, or whether they intend to venture further afield as their understanding increases.

If the latter were to be the case, then the early stages of the journey – those involving relationships conducted on relatively familiar ground – could be viewed in a similar light as the early stages of Mary Midgley's very own method of enquiry as applied in this thesis, and outlined at its beginning. In both cases, the thought process is that in order to attain understanding of the unfamiliar, we may require some stepping stones first. In the case of Mary Midgley's method of enquiry as applied to an initially unfamiliar worldview in this thesis, these stepping stones may consist in comparisons with elements of a familiar worldview, provided that we ensure that our use of these stepping stones leads to increasingly informed enquiry, and to increasing attunement to the previously unfamiliar, as opposed to resulting in their misuse for validation.⁴² Similarly, and now considering the passage from the *Ethics* at hand, it is conceivable that an individual may begin their journey towards increased understanding of those around them by first seeking relationships with those who seem familiar. For example, a female refugee may initially feel more comfortable accessing a women's refugee group in order to acclimatise in an unfamiliar society. I would argue that such a choice, in itself, says nothing, either

⁴² This rationale is also going to be relevant to the discussion of the roles of anthropomorphism and of anthropocentrism in contemporary Western interaction with non-human nature below.

way, about her intention (or otherwise) to interact with other parts of society at a later date. There is, at this early stage, every possibility that her choice is a stepping stone to increased understanding of, and confidence in, her new surroundings before then proceeding to meet those who initially appear too unfamiliar to take her chances with. Similarly, a human taking Spinoza's advice and beginning their journey of understanding by first seeking the company of other humans may later gain confidence to seek the company of other species, too.

With regards to the question of what Spinoza intended, it is again going to be difficult to reach a definite conclusion. Is there only *potential* for the above reconciliation between Spinoza's and Midgley's arguments contained in the passage cited, without Spinoza actually having reconciled them himself, or did Spinoza reconcile them himself, but without articulating his reconciliation in a way that we, as contemporary Western readers, would necessarily recognise? – His use of the wording “God or Nature” with the Latin word *sive* (“or” signifying equivalence rather than alternative)⁴³, would tempt me to lean towards the latter.

It is conceivable, for this reason, that the initially apparent strict application of species boundaries – at least as an exclusive criterion of possible cooperation – may not at all have been what Spinoza intended in the passages cited, and that Indigenous thinkers may have comprehended this more readily than Midgley or I, as contemporary Western readers, did.

Irrespective of Spinoza's intentions at the time, however, Viola Cordova's, Karen Barad's, and Maurice Merleau-Ponty's thinking as outlined in **Part 1** involves our being co-creators of the web that sustains us all. The above, possible reconciliation of Spinoza's and Midgley's points of view may thus be useful to us in the above, integrated sense of the term.

A final point relates to the question of whether Spinoza intended his philosophy to be deterministic, as some have alleged,⁴⁴ and to the obvious difficulty that this would pose in a worldview that rests on our participation as co-creators. Here, the situation may be more clear-cut. Stuart Hampshire himself refers to Spinoza's “so-called” determinism,⁴⁵

⁴³ E. Curley, ‘Note On The Text’, in B. de Spinoza, *Ethics* (London: Penguin Classics, 1996), p.xix.

⁴⁴ S. Hampshire, ‘Introduction’, in B. de Spinoza, *Ethics* (London: Penguin Classics, 1996), pp.vii-xvi.

⁴⁵ *Ibid.*, p.xii.

and goes on to explain that “There is an absolute distinction in Spinoza’s philosophy between understanding some part of the intellectual order of things, which is knowledge of eternal truths, and the contrasting knowledge of things as they exist at a particular time (...)”.⁴⁶ As far as Hampshire is concerned, Spinoza would thus endorse the Newtonian idea of our above apple necessarily succumbing to gravity and falling to the ground in Europe and in the Andes alike, while acknowledging that events at a particular time occur within a web of relationships too complex for any individual to grasp.

This, on its own, might still leave open the option of a deterministic interpretation, although Hampshire’s use of the term “so-called” makes clear from the beginning that this is not Hampshire’s intention. Lloyd provides additional clarity here: besides referencing Merleau-Ponty’s participationalist conception of our involvement with the world,⁴⁷ Lloyd herself makes abundantly clear that Spinoza may only *seem* to deny all content to virtue, but is in fact constructing “an ethic of joy”.⁴⁸

The piece in our emerging jigsaw providing the most clarity in relation to Indigenous engagement with Spinoza’s thinking is Lloyd’s citation of a passage from Bertrand Russell’s ‘Philosophy Of Logical Atomism’: “(...) there is no reason to suppose that the mental and the physical exhaust the whole universe... You do not know enough about the world for that.”⁴⁹

It is through this passage that we can most easily connect Spinoza’s thinking to Indigenous worldviews in this regard. It was shown in the chapter on acausal relationships in **Part 1** that while certain events can easily be explained by causality, others cannot, and may more realistically be viewed as acausally related events. Quantum entanglement was one example of the latter; Bohm’s screens showing his fish tank were another. The two examples then formed a basis for the more complex considerations put forward by Peat with regards to the work of Jung and Pauli on synchronicity, showing kinship with Indigenous ideas previously considered, which also saw no reason to restrict themselves to a purely causal world featuring the dichotomy of matter and mind so integral to most Western thought.

Once this is taken further, by considering the idea of a milieu being created where certain

⁴⁶ Ibid.

⁴⁷ Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.53.

⁴⁸ Ibid., p.83.

⁴⁹ Ibid., p.38.

events may easily co-occur, and once this is considered in conjunction with the participationalist worldview put forward by Cordova, Barad, and Merleau-Ponty, it not only becomes clear that a dichotomy between determinism and free will is by no means a given.⁵⁰ The above example of our creation of structures leaving Covid patients insufficiently supported to self-isolate, and thus faced with a dilemma with regards to bus drivers that could, and should, have been headed off at the pass, demonstrated in a simple manner that the two may already be more intertwined than opposed in a situation that can largely be explained through matter alone.

Once a participationalist worldview has been added to the mix, and once this has been contextualised with an Indigenous conception of performative knowledge processes in the next chapter, involving the material and the non-material alike, it will become apparent that any dichotomy of determinism and non-determinism is highly unlikely to have been on Indigenous thinkers' minds at all when reading Spinoza.

For now, since performative knowledge has not yet been considered in detail, suffice it to say that Bessel van der Kolk, after decades of supporting humans who had become victims of trauma, calls for a change in individual and collective attitudes to address the issue. Our **Part 1** failure to create circumstances supporting individuals to protect bus drivers from Covid-19 would have been a case in point had it occurred before his book's publication: van der Kolk calls upon us to develop a society in which events may easily co-occur that allow people to thrive, and in which events may less easily co-occur that are likely to lead to experiences of trauma.⁵¹

Van der Kolk, being a psychiatrist, restricts himself to the discussion of humans. His work is, however, relevant to a discussion of Spinoza in this thesis for two reasons. Firstly, van der Kolk cites a wide range of case studies and contemporary research projects all pointing to the same conclusion: there is, at most, an extremely blurred boundary between the realms that we traditionally (at least in the West) conceive to be encompassed by the material and the non-material respectively.⁵²

⁵⁰ The relationship between Cordova's and Barad's thinking in this regard is considered in **section 4.a.** of **Part 1**. The overarching relevance of Karen Barad's work to both parts of this thesis, with particular focus on its implications and limitations with regards to our attempting to approach understanding of Indigenous conceptions of responsibility, is discussed in **Appendix B**.

⁵¹ B. van der Kolk, *The Body Keeps The Score* (London: Penguin Books, 2015), pp.417-431.

⁵² For example, New Yorkers, after suffering emotional trauma due to the events of 9/11, were offered psychoanalysis and cognitive behavioural therapy to alleviate the effects. A significant proportion chose massage or yoga to heal their mind-bodies instead. (Van der Kolk, pp.275-276.)

Secondly, van der Kolk's work contains powerful examples supporting Viola Cordova's, Karen Barad's, and Maurice Merleau-Ponty's claim that through our responsible, creative participation in the world, we are able to contribute to the creation of circumstances increasing the probability of future thriving.

When Spinoza asks us to develop our rationality, he can have a tendency to remain silent on the extent of the influence that he believes this is going to have on external circumstances. The effects of our development that he does talk about are largely those he expects it to have on our own peace of mind, for example: "The more the mind understands things by the second and third kind of knowledge, the less it is acted on by affects which are evil, and the less it fears death."⁵³ The fact that he also calls for development of liveable societies, however, can easily be interpreted to mean that he does see a role for our personal development in shaping external events.⁵⁴

When van der Kolk addresses this issue in his final chapter, he leaves us in no doubt regarding the influence of our state of mind on the state of the world around us and vice versa:

In today's world your ZIP code, even more than your genetic code, determines whether you will lead a safe and healthy life. (...) Poverty, unemployment, inferior schools, social isolation, widespread availability of guns, and substandard housing are all breeding grounds for trauma. Trauma breeds further trauma; hurt people hurt other people. (...) People can learn to control and change their behaviour, but only if they feel safe enough (...) the last things we should be cutting from school schedules are (...) forms of joyful engagement.⁵⁵

Apffel-Marglin, in **Part 1**, was cited regarding our capacity to participate in the creation of liveable worlds,⁵⁶ and this was contextualised with Cordova's and Barad's thinking on the responsibility implied by a participationalist understanding of our presence in the world.

In this chapter, both van der Kolk and Spinoza, each in their own way, have been shown to call for us to develop our reason – within which both include our embodied and emotional selves – in order to become attuned to the world, and in order to create liveable societies. Spinoza closes with the words, "But all things excellent are as difficult

⁵³ Spinoza, *Ethics*, p.177 (E5P38).

⁵⁴ Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.88.

⁵⁵ Van der Kolk, pp.418-419.

⁵⁶ Apffel-Marglin, *Subversive Spiritualities*, p.197.

as they are rare."⁵⁷

This is not what a philosopher would say if he believed us to be no more than passive elements in the mechanics of a clockwork universe.

⁵⁷ Spinoza, *Ethics*, p.181 (E5P42S).

Chapter 12 – Performative knowledge revisited

Burkhart's jazz analogy¹ and its shared ground with Spinoza's thinking in the previous chapter, Merleau-Ponty's assurance of our participation in the continued weaving of the network that carries our existence,² Vine Deloria's merging of the dualisms of individual and whole and of sacred and material into a single, non-binary one in **chapter 10**, as well as Viola Cordova's and Karen Barad's thinking discussed in **Part 1**, all point into the same direction: it is time to take a closer look at Indigenous conceptions of performative knowledge processes.

12.a. Why we cannot reduce performative knowledge to what we already know

On the one hand, an Indigenous conception of performative knowledge may partly be understood as being situated within the richer conception of rationality discussed in the previous chapter. On the other, it is going to be shown that due to the involvement of a participationalist paradigm, this, on its own, is bound to be insufficient.

Spinoza's rationality has been shown by Lloyd to be richer than the largely Cartesian model of reason currently prevalent in the West, due to Spinoza's insistence on the inclusion of our emotional and embodied selves, which are, in turn, imbued with the sacred through our embeddedness and participation in the whole.

It is important to note that neither Lloyd nor Spinoza is advocating lazy avoidance of appropriate use of our intellect here: neither Lloyd nor Spinoza works on the assumption of a dichotomy between our intellects and any remaining parts of our being that this would require. Rather, they stress that the richer rationality they are talking about "can only be reached through reason".³ The point made by both is that the fact of being accessible through reason is not the same as being capable of being reduced to it: Spinoza's "intuitive knowledge", once we have put in the work, enables us to begin to eschew repetition of laborious calculations and to apprehend a situation "in one glance".⁴

This appears reminiscent of Indigenous conceptions of a form of wisdom frequently attributed to Indigenous elders: Deloria, for example, speaks of the "accumulation of

¹ Burkhart, *Indigenizing Philosophy Through The Land*, p.292.

² Merleau-Ponty, p.176.

³ Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.109.

⁴ Spinoza, *Ethics*, p.57 (E2P40S2). The example provided by Spinoza involves basic numeracy; however, it is going to be shown below that a similar case can be made in other areas of life.

wisdom in the ancient tribal sense” in terms of “perceiving situations”, rather than “attempting to absorb the data intellectually. (...) We must perceive situations in a total experience in order to make sense of them.”⁵ Deloria and Wildcat are careful to point out that in and of itself, this awareness is not necessarily mysterious, but only appears unusual to those insisting “on a rational schematic or mechanistic model of what happens.”⁶ Their technical term for their elders’ way of perceiving is “synthetic attentiveness”.⁷

12.a.i. Why not just embodied cognition?

If involvement of our bodies in our awareness of the world were all that there was to it, however, this chapter on performative knowledge could be brief: we could simply avail ourselves of the *Stanford Encyclopedia Of Philosophy’s* entry on “Embodied Cognition”, which is displayed in response to a search for “Performative Knowledge”.⁸ Within a Western, largely representationalist paradigm, consideration of various forms of involvement of our bodies in our making sense of the world would be enough. Incidentally, this is also all that the above citations from Deloria’s work appear to have asked for, so far.

However, it has been shown that such a perception would be bound to be deceptive. Indigenous thought does not tend to restrict itself to a purely representationalist paradigm: earlier chapters explored the largely participationalist view at the heart of, for example, the balancing board, snowball, and ripple analogies offered by Viola Cordova, the relevance of the findings of Western quantum theory to this, and therefore the reality of what Karen Barad refers to as our agential cuts making their contributions to our participation in Merleau-Ponty’s conception of our weaving the web that sustains us.

It would, therefore, have been very surprising indeed if Deloria had omitted to take his thinking further along these lines and, predictably, this is anything but the case. Deloria left his mentees the legacy of his definition of truth as respectful success already considered in **Part 1**. In the context of Shay Welch’s discussion of Indigenous dance as a

⁵ Deloria, *The Metaphysics Of Modern Existence*, pp.149-150.

⁶ Deloria and Wildcat, p.149.

⁷ Ibid.

⁸ L.Shapiro and S.Spaulding, ‘Embodied Cognition’ in *The Stanford Encyclopedia of Philosophy*, ed. by E.N.Zalta (Winter 2021 Edition), URL = <<https://plato.stanford.edu/archives/win2021/entries/embodied-cognition/>> [Accessed: 20 March 2023].

performative knowledge system,⁹ this definition makes a reappearance, which is going to be explored in more detail below.

Considered from within our accustomed, contemporary Western paradigm, it initially appears unusual for truth – which would be likely to be understood as correspondence between a particular assertion and an already existing state of affairs in the world – to be equated with an emerging, *new* state of affairs, as implied by the term “respectful success”. Considered from within a participationalist paradigm, however, and bearing in mind what was said in the previous chapter regarding the interrelatedness of the individual and the whole, as well as regarding the inextricable involvement of the sacred in this, it is going to become difficult to imagine the definition being any other way. We are conceived as co-creators of ripples and of snowballs, and disrespectful actions would not ring true with our own *conatus* or with that of the whole. Sebastian Purcell’s example of Aztec conceptions of truth being “way-seeking, i.e., oriented towards action, more than proposition-verifying” may be a helpful stepping stone here.¹⁰

A second difficulty frequently encountered when this is considered from within our accustomed Western paradigm tends to be the above misunderstanding of Burkhardt’s locality as relativism, giving rise, as shown in **Part 1**, to several Indigenous authors devoting entire chapters to putting this right. “Respectful success”, here, is anything but our casual nod to being seen to be behaving ourselves while doing exactly whatever appears most convenient for us. “Respectful success”, here, is Peat’s above rainmaker offering his contribution to the creation and maintenance of balance, rather than conjuring up the rain that might happen to suit him on a whim. It is Spinoza’s individual *conatus* learning to play Burkhardt’s jazz with the *conatus* of the band.

Deloria and Wildcat are able to offer a Western stepping stone in the form of a comparison to a quest for an Aristotelian *summum bonum*,¹¹ but there are two crucial differences. Firstly, there is an Indigenous requirement not only to allow fellow humans to have their say in what this entails. “By excluding the many other-than-human persons

⁹ S.Welch, *The Phenomenology Of A Performative Knowledge System: Dancing With Native American Epistemology* (Cham: Palgrave Macmillan, 2019).

¹⁰ S.Purcell, ‘Truth, Rootedness, And The Good Life In Aztec Ethical Philosophy’ in *APA Newsletter On Native American And Indigenous Philosophy*, Vol.21, No.1 (Fall 2021), URL: <<https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/NativeAmericanV21n1.pdf>>, pp.4-11 [Accessed: 20 March 2023].

¹¹ Deloria and Wildcat, p.96.

of the natural world from active full participation in determination of the greatest good, ecological catastrophe seems guaranteed.”¹²

Secondly – as we have learnt from Cordova, Barad, and Merleau-Ponty in **Part 1** – the world in which we are participating is more dynamic than our accustomed Western paradigm tends to assume. The balance we are hoping to contribute to creating and maintaining is not a simple see-saw. It is Cordova’s balancing board, placed across a barrel, which is in turn not resting at all on its shifting sand, and the ripples in the pond created by our actions not only project outwards in neat, predictable circles, but interact with the ripples created by everyone else around, on and on, as we all go about participating in rolling Cordova’s snowball that is in the process of becoming Merleau-Ponty’s web that sustains us. Niels Bohr’s electrons are still in superposition as we feel our way; Karen Barad’s agential cut has not yet taken place, and once it does, it will only ever give rise to renewed motion in which we are again involved, on and on, as we participate in shifting Cordova’s sand under our jazz-playing feet.

This is what underlies the perception of our relationships in this world being sacred, and it is also what underlies the conception of truth as ever emerging rather than static. It is why Indigenous thought requires us to feel our way with sensitivity as opposed to forging ahead with our Cartesian assumption of control, and it is why Deloria asserts that it is in fact this very quest for human control that constitutes the original sin.¹³

Shay Welch, for this reason, treats “Truthing” as a verb, and spells it with a capital “T”.¹⁴

12.a.ii. Why not just knowing how? – The web ensuring the smooth running of things

It has been shown that embodied cognition is insufficient to explain Indigenous conceptions of performative knowledge processes because a world in motion entails the continuous emergence of new, shared learning and creation. Our mind-bodies not only learn about the world as it is, but participate in its ongoing, continually creative regeneration.

What remains to be addressed in more detail, however, is why it would also be insufficient to describe performative knowledge as an accumulative knowledge system

¹² Ibid.

¹³ Deloria, *The Metaphysics Of Modern Existence*, p.203.

¹⁴ Welch, *The Phenomenology Of A Performative Knowledge System*, p.23. Shay Welch’s thinking with regards to this point is going to be discussed in greater depth in **section 12.b.** .

comprised of “knowing how”: as we feel our way as proposed in the previous section, are we not simply becoming better and better at “knowing how”? Are we not simply assembling, besides propositional knowledge, an integrated web of non-propositional knowledge gained by our mind-bodies, regarding the one best way of developing the world?

In part, the answer has already been given by our recall of the participationalist paradigm above. Shay Welch makes clear the importance of creativity in participation from the very beginning of her book:

(...) an analysis of Native epistemology must extend beyond narrowly conceived analyses of procedural knowledge as consisting of mere know-how. It must account for the active participation and creativity in the doing that itself engenders knowing, coming to know, and sharing what one knows.¹⁵

A closer look – at more of Welch’s and Deloria’s work, and also at the work of some Western thinkers – will show that there is something else involved in answering the above question, and that this reveals a dark and dangerous pitfall, as well as allowing in a ray of hope.

Bruce Wilshire links John Dewey’s thinking to Indigenous ideas,¹⁶ and initially grounds his assertion of this kinship in Dewey’s recognition of our relationship with non-human nature.¹⁷ Once this has been established, however, Wilshire becomes more interested in Dewey’s thinking on art,¹⁸ and this interest of Wilshire’s is highly relevant to the question being considered in this section. Wilshire first makes reference to Dewey’s understanding of culture as being continuous with nature,¹⁹ to then explore the interwovenness of our interaction with the world and the continuous formation of the self over time, citing Dewey in support of this point: “Through habits formed in intercourse with the world, we also inhabit the world. It becomes a home, and the home is part of our every

¹⁵ Ibid., p.47. Welch might, here, at first glance, appear only to be making reference to processes of learning by doing, such as learning to ride a bicycle (and of then going on to help someone else to learn to ride one, too). However, over and above this, Welch is also already building towards a discussion of processes to be considered in the remainder of this chapter and beyond, through which ontology and epistemology may intertwine, and where – in her example, through dance – our mind-bodies may experience a pull on things past which then become relevant to our shared innovation (for example, *ibid.*, p.104.).

¹⁶ Wilshire, *The Primal Roots Of American Philosophy*, p.13.

¹⁷ *Ibid.*, p.91.

¹⁸ *Ibid.*, p.95.

¹⁹ *Ibid.*, p.93.

experience.”²⁰

On first impressions, it appears not to bode well for our Western civilisation if Indigenous thinking in relation to our creative participation in life in general is being discussed in relation only to Western participation in art. The fact that this is what appears to have happened here begs the question of whether the remaining aspects of our lives in the West may not simply have appeared artless to Indigenous observers.

Considering Dewey’s own delineation of what he does and does not mean by “art”, however, the situation no longer appears to be as dire as that. Dewey understands art to be continuous with everyday experience: for Dewey, it is the absorption of our mind-bodies in our interaction with the world that matters here, so that an interested mechanic can be seen to be artistically engaged; it is only a careless one who cannot.²¹ Crucially, Dewey stresses that the fault, in the latter case, is as likely to be located with circumstances as with the individual concerned.²² In particular, while stressing that he does not believe industrialisation *per se* to be responsible for this, Dewey asserts that the absence of participation commonly induced by it is often to blame for our lack of engagement.²³

The interaction that Dewey is interested in, then, involves first falling out of step with our surroundings, and then recovering unison, which is, however, to be understood as enrichment, and not simply as a return to a prior state.²⁴ This means that – as Wilshire already pointed out above – whenever we do succeed in interacting with the world with the openness and sincerity implied by this, we are thereby making a home and being made at home.²⁵ It also means that on completion of such a cycle of interaction, things may now turn out to have become “too smooth”,²⁶ resulting in renewed interaction. The rhythm of this interaction resonates with Karen Barad’s agential realism discussed in **Part 1** and **Appendix B**, and demonstrates why, despite Dewey’s above use of the term

²⁰ Ibid., p.95. It was shown in **Part 1** that PRATEC would be likely to prefer their conception of “custom” over the term “habit” used by Dewey in this context. However, viewed against the background of Dewey’s work as discussed in the remainder of this section, I would argue that the requirement of mutual attunement reflected in PRATEC’s preferred terminology is exactly what Dewey will have had in mind, too. My reasons for taking this view are going to become clear as Dewey’s ideas are considered in detail below.

²¹ J.Dewey, *Art As Experience* (New York: The Berkley Publishing Group, 2005), pp.2-4.

²² Ibid., p.4.

²³ Ibid., p.357.

²⁴ Ibid., pp.12-13.

²⁵ Ibid., p.165.

²⁶ Ibid.

“habit”, his thinking chimes with PRATEC’s conception of mutual attunement and responsiveness reflected in their preference for the term “custom”.²⁷

Dewey opposes mind-body dualism, embraces a form of rationality inclusive of our emotions, and is certain of our participation in the creative activity of the world,²⁸ which, at the same time, changes and develops us.²⁹

The question that remains to be addressed, however, is to what extent a contemporary, Western conception of “knowing how” can be conceived to have any resemblance to Dewey’s ideas at all.

Dewey stresses, above all, the fallacy of a conception of form and matter as being separate,³⁰ and asserts: “In all ranges of experience, externality of means defines the mechanical.”³¹ In a closing move reminiscent of Indigenous thinkers discussing the significance of Indigenous languages being largely verb- rather than noun-based, Dewey also questions the idea of stasis conveyed by our habitual use of the noun “art” to describe our dynamic engagement with the world, and states that it is adjectival in nature, in the sense of its being – with a nod to his interested mechanic above – “a quality of doing and of what is done.”³²

This final strand of Dewey’s thinking is particularly relevant to our question of the extent to which the contemporary Western manifestation of “knowing how” has become artless. As shown in earlier chapters of this thesis, one of the main difficulties understood by Indigenous thinkers to be resulting from the currently prevalent Western paradigm is its universalism, expressing itself in a Western assumption of there being one “correct” way of resolving all issues classified as belonging to a particular category, which “supposes a world capable of being disassembled, a machine-world made of essential and accessory parts.”³³ This could not be further from the conception of conversation in an atmosphere of mutual nurture, respect, and responsiveness lived and disseminated, for example, by

²⁷ Rengifo, ‘The Ayllu’, pp.118-120. Relatedly, Dewey points out that an accomplished singer will take liberties; it is only a beginner who will feel the need to take a formulaic approach to being exact (Dewey, p.170).

²⁸ Dewey, pp.20-35.

²⁹ Ibid., p.257.

³⁰ Ibid., p.136.

³¹ Ibid., p.206.

³² Ibid., p.222.

³³ Rengifo, ‘Education In The Modern West And In The Andean Culture’, p.189.

the PRATEC project discussed in **Part 1**.³⁴

This difference is bound to have consequences. Vine Deloria is candid with regards to what we are allowing the currently prevalent conception of “knowing how” to do to the world and to ourselves: “(...) man who transforms the world into a universal machine serving his purposes has to adapt himself to the laws of the machine.”³⁵ His and Wildcat’s recommendations for further reading, relatedly, include Jacques Ellul,³⁶ whose work is going to be considered extensively here.

Dewey was already aware – in the 1930s, when his *Art As Experience* was first published – of the difference in quality between our adjustment to machines on the one hand and artistic engagement on the other: he located this difference in the fact of artistic engagement allowing the whole and its parts to modify each other, whereas machines were only ever able to work to a pre-defined end.³⁷ This, alone, would already have been in stark contrast to PRATEC’s conversational approach discussed.

Jacques Ellul, writing in the 1960s,³⁸ and thus from a point of view of having witnessed three additional decades of Western societal change in this regard, describes further, qualitative change. The crucial difference, for Ellul, is located in the *multiplicity* of applications of research findings such as those arrived at by Frank Bunker Gilbreth. Originally, the search for “the one best way to work”³⁹ began as a search for the most efficient means to achieve one, singular, pre-defined end (mirroring Dewey’s above observations on the work of machines, and thus already representing an approach that would have been contrary to that lived by PRATEC).

A change in kind (as opposed to a mere change in degree) is then brought about by the fact that the efficiencies sought require related efficiencies to be introduced in order to function more efficiently, producing an ever-spreading network of an ever-increasing, interrelated number of efficiencies.⁴⁰ Ellul’s terminology of choice for such efficiencies is the word “technique”, defined by the author as “the totality of methods rationally arrived at and having absolute efficiency (for a given stage of development) in every field of

³⁴ For example, Valladolid, ‘Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra’.

³⁵ Deloria, *The Metaphysics Of Modern Existence*, p.205.

³⁶ Deloria and Wildcat, p.163.

³⁷ Dewey, pp.139-144.

³⁸ J.Ellul, *The Technological Society* (London: Jonathan Cape, 1965).

³⁹ Ibid., p.53.

⁴⁰ Ibid., pp.62-64.

human activity.”⁴¹ Ellul is neither talking about one machine, nor is he talking about one tried and tested way of performing a particular task. He is talking about the relentless expansion of the networking of these: Ellul takes care to make explicit that he is talking about “a sociological phenomenon”, as opposed to one of mechanical engineering.⁴²

The change in kind resulting from this sociological phenomenon is characterised by Ellul as a change from the end of a process being pre-defined to its means being pre-defined, without this in any way accommodating the possibility of an emergence of creative solutions: conflict between a technique and its end results in the *end* being modified to accommodate the technique.⁴³

This point is crucial. At first glance, there appears to be little difference between a process of conversation taking centre stage in PRATEC’s way of conducting agricultural activities, and the process of a particular workflow taking centre stage in an organisation observed by Ellul. However, nothing could be further from the truth. In PRATEC’s case, as, for example, outlined by Apffel-Marglin above,⁴⁴ agency is located in the relationship between the entities involved in a particular process, which means that the process, as well as its outcome, is open to change as a result of the dynamics of this relationship. In the case of Ellul’s web of techniques, there is no agency located anywhere. It is imperative for the process to run smoothly at any cost; compliance is unavoidable due to “commercial necessity”.⁴⁵

Ellul is careful to stress that it is not malevolence on anyone’s part that is driving this development.⁴⁶ He is equally emphatic that it is not any particular political persuasion which is at its root, much as his reference to commercial necessity would appear to suggest that capitalism plays a role. Ellul’s point, rather, is that it is *any* form of one-dimensional conception of “progress” that will set these wheels in motion.⁴⁷ Then, once the wheels have begun to be in motion, “(...) the sole criterion of action consists in knowing whether or not technique has been correctly used, and no political theory can tell us that.”⁴⁸ It is universalism which is at the heart of the problem described by Ellul,

⁴¹ Ibid., p.xxxiii.

⁴² Ibid.

⁴³ Ibid., p.141.

⁴⁴ Apffel-Marglin, *Subversive Spiritualities*, p.134.

⁴⁵ Ellul, p.189.

⁴⁶ Ibid., pp.193-194.

⁴⁷ Ibid., pp.190-191.

⁴⁸ Ibid., p.281.

and Ellul's stance chimes with Vitebsky's observations made during his time spent living with the Even in Siberia. Vitebsky found communism to be as capable as capitalism of wreaking havoc with previously successful, established methods of communication practised by a group of humans in interaction with their world:

The role of male herders was fatefully changed by their redefinition as industrial workers. (...) nothing in the changes imposed on reindeer herders was derived from their own relationship to their land. Their purposeful and responsive nomadism was dismissed as primitive rootlessness, while the factory metaphor transformed the skilful, self-sufficient hunter into a wilderness proletarian.⁴⁹

It would be easy next to assume, on the basis of the example provided by Vitebsky, that it is exclusively a misunderstanding between the Indigenous, Even, wider conception of personhood on the one hand, and the dominant majority's conviction that land is not someone to talk to, which is causing the difficulty here. This would pose a problem in collaboration, too, and the findings discussed in **Part 1** suggest that it does play a part. However, from personal experience, and from the fact that the remaining part of Ellul's work would have predicted every aspect of this personal experience, I am going to argue that there are additional factors involved. The problem described by Ellul easily arises in situations where everyone agrees that everyone involved are persons.

The personal experience I would like to cite took place in a healthcare setting, which I am not going to name because I was otherwise very happy volunteering there some years ago. This is the very point made by Ellul: no one is going out of their way to make things difficult for anyone. The trouble is process, not people, because process has become independent of people.

In the particular instance in question, a healthcare service user (unknown to me, but known to the person I was volunteering as a befriender with) became ineligible for his accustomed day centre care with the arrival of his 65th birthday. He was sociable, but had become isolated due to circumstances beyond his control, and was therefore now reliant on regular access to a particular day centre, which had become the only home he now knew. The decision to ask him to leave was communicated shortly before Christmas.

The problem was not that the service user was going to be without access to his home for a few days for the duration of one Christmas break. This happens to many of us, for a variety of reasons, and we cope. The problem was that the service user was going into the

⁴⁹ Vitebsky, pp.193-194.

Christmas period knowing that he had lost his home for good. Understandably, he stopped eating. As well as being heartbreaking, this also meant that due to the imminent Christmas break, any emergency arising from this was likely to remain unnoticed, and unlikely to be met with an adequate response.

The story so far could simply have been one of oversight: someone could have gasped, and then apologised; a solution could have been found; smiles and Christmas wishes could have been exchanged. However, this is not what happened. There was, for an agonising number of days, nothing that anyone could do, and the reason given for this was that due process had been followed, and that no other process was available that could now be followed instead. Eventually, a senior manager's personal intervention, which turned out not to be without professional cost to the senior manager concerned, was able to secure an alternative arrangement.

Ellul addresses such issues under the heading of "human techniques", which, due to their embeddedness in the overall web of efficiencies, leave no more freedom for either process or outcome to be adapted to arrive at a creative solution in relation to humans than they would in any of the rest of the web. This means that the role of these particular techniques becomes reduced simply to rendering "unnoticeable the disadvantages that other techniques have created".⁵⁰

Ellul would also have predicted the difficulty faced by the managers attempting to resolve the issue.⁵¹

Three further points are worth noting in the context of this thesis.

Firstly, spread of technique not only arises from universalism as outlined above, but in turn gives rise to further spread of universalism. Ellul is able to show that technique becomes self-perpetuating to an extent otherwise rarely considered: once its spread has progressed beyond its earliest stages, a web of dependencies forms between techniques, and the result is that we are no longer free to choose, but *can* only decide in favour of

⁵⁰ Ellul, p.413.

⁵¹ Ellul illustrates the mechanisms involved by giving the example of a politician supporting their constituents in their opposition to the operation of a particular technique. Almost inevitably, due to the interdependencies between the techniques in use, and irrespective of the fact that it may have been the constituents themselves who asked for the politician's support in suspending operation of one of these, the outcome is predicted to be discontent arising from the resulting disruption of the smooth running of things, and resulting loss of power for the politician. (Ellul, pp.209-10.)

the technique offering maximum efficiency. Frequently, this requires us to decide in favour of centralisation due to the efficiencies available through this. Ellul's perhaps most chilling illustration of this point comes at the very end of his book, when he makes reference to a survey of future predictions showing a correlation between the likelihood of their being actualised and their (albeit unintended) requirement of the presence of a worldwide dictatorship to facilitate this.⁵² We are, chillingly, reminded of a related point made by Dussel in *Part 1*.⁵³

Secondly, technique changes us. Performance of an intricate, yet repetitive, motor task on an assembly line may well share similarities with, for example, riding a bicycle, in the sense that we may know how to accomplish both without being able to state what we know in the form of propositional knowledge. It is only the assembly line, however, and not the bicycle, which undermines our ability to interact with the world.

Reading McPherson and Rabb, for example, on Indigenous philosophies being transformative philosophies,⁵⁴ it would be easy for me as a Westerner to form a tacit assumption that it is only Indigenous philosophies which are transformative. Ellul, however, illustrates with great clarity that this is far from the case: technique, now that it has arisen from a universalist paradigm, has spread sufficiently to form a web from which, for example, assembly lines would be difficult to remove without disruption to the smooth running of things. Assembly lines, however, shape us if we spend sufficient time working on one: Ellul cites research findings showing workers' increased reluctance to make decisions not only at work, but also away from work.⁵⁵ Whether this is a comment about neuroplasticity, or about Wittgensteinian riverbeds, or about both at the same time, is (at least for the moment) a secondary question. What matters, for the moment, is that knowing how, where it is allowed to turn into a web of predefined processes ensuring the smooth running of things, cuts us off from our ability to learn and to create in a responsive manner, as opposed to supporting it.

Thirdly, we humans are not the only ones to be changed by technique. Technique "destroys, eliminates, or subordinates the natural world."⁵⁶

(...) when the natural is integrated, it ceases to be natural. It becomes part of the

⁵² Ellul, pp.432-434.

⁵³ Dussel, 'Eurocentrism And Modernity (Introduction To The Frankfurt Lectures)', p.75.

⁵⁴ McPherson and Rabb, pp.158-160.

⁵⁵ Ellul, pp.395-396.

⁵⁶ Ibid., p.79.

technical ensemble. It is an element of the mechanism, an element which must play its role, and no more.⁵⁷

This would already appear to follow from what was said above with regards to its being imperative to continue to ensure the smooth running of things once a web of interdependencies has begun to spread, resulting in the end, rather than in any technique, being modified in the event of conflict arising between the two.⁵⁸ I believe it to be useful, however, to provide at least one example of how this may manifest in relation to the non-human world.

Marc Bekoff cites from the 2004 US federal register, illustrating but one instance of technique prevailing over life itself:

We are amending the Animal Welfare Act (AWA) regulations to reflect an amendment to the Act's definition of the term *animal* (...) to specifically exclude birds, rats of the genus *Rattus*, and mice of the genus *Mus*, bred for use in research.⁵⁹

Techniques in operation in animal research laboratories thus required animals no longer to be animals, in order for the smooth running of things not to be impeded by ethical considerations.

It was shown at the beginning of this section that technique, under the definition of the term supplied by Ellul, originated from a wish to “know how”, to find the “one best way to work”. It has been shown that even when exclusively arguing from within a contemporary Western paradigm, the ensuing web of near-inevitability of process could not be further from Dewey's conception of the entire live creature participating in a process⁶⁰ of doings and undergoings whereby the individual and the whole interact with and modify each other. In light of Ellul's work, it is now no wonder that Dewey conceived stereotyped convention, and not art, to be the antithesis of nature.⁶¹

With regards to the situation as a whole, Ellul's own assessment is one of “complete separation of thought and action effected by technique”, resulting in “the lack of spiritual efficacy of even the best ideas.”⁶² The web of efficiencies whose sole purpose it is to standardise processes to ensure the smooth running of things is then shown to

⁵⁷ Ibid., p.217.

⁵⁸ Ibid., p.141.

⁵⁹ Bekoff, *The Emotional Lives Of Animals*, p.139.

⁶⁰ Dewey, pp.51-52.

⁶¹ Ibid., p.158.

⁶² Ellul, p.425.

appropriate and immobilise even life-affirming pursuits such as youth-hostelling and jazz.

What began as innocently as knowing how to perform a task efficiently has been developed into a machinery no longer allowing us to move.

The difference, once again, appears to return us to PRATEC's distinction between custom and habit, and thus to the distinction between the absence and the presence of an assumption of universalism:

The *runas* do not interrogate nature in order thus to obtain an analytical explanation of its daily life. (...) customs renew themselves yet do not repeat themselves (...). Customs disappear when the homogenising institutionality converts customs into the repetitive habits of "rational people" that guarantee institutional continuity. (...) ceremonies associated with custom are not repetitive; instead they attune themselves to the particular situation and take different forms. (...) It helps to keep alive what has happened, but it does not indicate the precise manner of doing so. What is done accords with the conversation that takes place in the present circumstances.⁶³

PRATEC see nothing wrong with learning from our experience in the world, or with remembering what has been learnt for next time. They do, however, ask that we do so in continuing attunement to those around us.

This requires us to resist the assumption that as long as we can demonstrate that we have followed due process, no one has done anything wrong. It requires us to interact with life in the way Dewey conceived us to be interacting with art above: in an ever-evolving rhythm of doings and undergoings, as entire creatures alive to a world we participate in creating and being created by.

Dewey was cited above as stating that "externality of means defines the mechanical".⁶⁴ It has been shown in this section, through Ellul's work, that universalist cultures are more likely than others to fall into this trap. If art is engagement of the live creature⁶⁵, and if this is to be understood at group as well as at individual level,⁶⁶ then PRATEC's requirement of continuous attunement to the living world can be seen as a remedy for our artless mechanisation of our existence. Ellul's technique does not have the last word.

⁶³ Rengifo, 'The Ayllu', pp.118-119.

⁶⁴ Dewey, p.206.

⁶⁵ Ibid., p.32.

⁶⁶ Ibid., p.28.

12.b. Performative knowledge in a participationalist paradigm

Much of Shay Welch's work, which is going to be relevant in this regard, is devoted to showing areas of overlap and kinship between enactivism and the embodied, metaphorical language of (especially Indigenous, but to an extent also Western) dance, before then discussing some differences between the two.⁶⁷

This, on its own, would not be entirely new to the West: it was shown above that we are familiar with conceptions of knowledge beyond propositional knowledge alone. These are accepted by science and the humanities alike. Frans de Waal, for example, arguing from a biological point of view, cautions against the error of the assumption of there being one single learning mechanism for all behaviours.⁶⁸ With regards to the language required for the communication of knowledge, consideration was given above to David Abram's thoughts on human language being insufficient to be explanatory of the communication taking place even between humans and other humans.⁶⁹ This is echoed by Dewey's remarks regarding an entire lifetime being too short to express even one emotion in words.⁷⁰

Welch, in the context of dance, begins by providing insight into the function of mirror neurons and kinaesthetic empathy,⁷¹ and these topics are going to be revisited in the chapter on existing, Western scientific forms of communication between humans and non-humans below. For now, suffice it to say that they may, arguably, be understood as glimpses of pathways by which our Wittgensteinian "attitude towards a soul"⁷² may manifest. Welch, relatedly, asserts that "(...) enactive dancing metaphors appear to solve the problem of other people's minds."⁷³ She refers to mirror neurons as "immediate communication",⁷⁴ and then links mimetics to the Indigenous conception of *usen*.⁷⁵

⁶⁷ S. Welch, *The Phenomenology Of A Performative Knowledge System: Dancing With Native American Epistemology* (Cham: Palgrave Macmillan, 2019).

⁶⁸ De Waal, p.55.

⁶⁹ Abram, pp.166-169.

⁷⁰ Dewey, p.70.

⁷¹ Welch, *The Phenomenology Of A Performative Knowledge System*, p.131.

⁷² L. Wittgenstein, *Philosophical Investigations*, ed. by P.M.S.Hacker and J.Schulte (John Wiley & Sons, Incorporated, 2010), ProQuest Ebook Central, p. 399. Available at: <https://ebookcentral.proquest.com/lib/trinity/detail.action?docID=514408> [Accessed: 20 March 2023].

⁷³ Welch, *The Phenomenology Of A Performative Knowledge System*, p.172.

⁷⁴ *Ibid.*, p.131.

⁷⁵ *Ibid.*, p.148. *Usen* was shown in **Part 1** to be a similar concept to that referred to by Cordova (in a Navajo context) as *nilch'i*: for example, Cordova, *The Concept Of Monism In Navajo Thought*, pp.56-7.

It is at this point, from which Welch goes beyond our knowledge of an already existing state of affairs and enters the territory of Cordova's ripple analogy above, that Welch's thinking is going to be of particular interest to this thesis.

We have initially stayed, with these first thoughts in this new section, within the accustomed realm of knowledge about the world as we currently find it: we may have accepted, with Dewey and with Abram, that human language is only capable of conveying a subset of our experience. We have also, still within a representationalist paradigm, transcended the boundaries imposed by this subset, by taking first glances at mirror neurons, at Wittgenstein, and at Lakoff and Johnson's metaphors. What we have not yet done is to locate an entry point for our mind-bodies into the realm of Dewey's doings and undergoings, of Deloria's truth as respectful success, where metaphysics and epistemology intertwine to work to Cordova's, Barad's, and Merleau-Ponty's participationalist paradigm. What goes on, within us and between us and the rest of the world, as we go about our business of participating in weaving the network that sustains us?

George Lakoff and Mark Johnson, read closely, provide some first insight in this regard,⁷⁶ although this is not pursued with the same intensity as in Welch's work. Their observations on metaphor are interesting in the context of this chapter, albeit with limits to their shared ground with Welch's argument. The authors' thoughts on the dynamics of a war metaphor in the 1970s show the renewed pertinence of their ideas in light, for example, of developments in Ukraine while this thesis was being researched. A summary and discussion of their thinking in this regard is available in **Appendix E**.

Despite extensively referencing the work of Lakoff and Johnson and expressing her gratitude to the authors,⁷⁷ Welch makes clear that their work, taken on its own, is incapable of explaining Native American epistemology in several important ways, the first of these being the fact that it can be difficult for Western thinkers to see metaphor *beyond* language.⁷⁸

It was shown above that the interwovenness of metaphysics and epistemology inherent in a participationalist worldview requires us to understand, for example, Indigenous ritual

⁷⁶ G.Lakoff and M.Johnson, *Metaphors We Live By* (Chicago/London: The University of Chicago Press, 1981.

⁷⁷ Welch, *The Phenomenology Of A Performative Knowledge System*, pp.187-188.

⁷⁸ *Ibid.*, pp.70-71.

in a way that goes beyond the Western conception of metaphor as “understanding and experiencing one kind of thing in terms of another”.⁷⁹ David Abram, for example, spoke of a metamorphic relationship.⁸⁰ Brian Burkhardt went further, and insisted on a literal one;⁸¹ Bruce Wilshire pointed out that we may not reliably be capable of providing an answer to this question.⁸² This claim made by Wilshire is going to be revisited below, in a section exploring aspects of spirituality, in light of William James’s thinking.⁸³

Welch does see shared elements between a Western conception of embodied cognition on the one hand, and Indigenous conceptions of dreams, vision quests, and *usen*. She, too, links the latter to quantum theory without equating the two,⁸⁴ and cites Cajete on the role of the metaphoric mind in Native science.⁸⁵ Relatedly, she then portrays dance as a tool for (as opposed to a mere expression of) historical research, due to its pull on the unconscious.⁸⁶ Welch would, however, caution strongly against any adoption of an exclusively Western understanding of this, as this would “cannibalise” procedural knowledge by turning it into propositional knowledge.⁸⁷ Knowing-that, for Welch, is *internal* to knowing-how, and it is not something that knowing-how can be reduced to, or converted into.⁸⁸

What Welch is interested in is an articulation of “what it means and how it is for Truth to be constituted by the performance of an action rather than by content or nature of statements,”⁸⁹ as well as in showing in what way Indigenous dance can achieve this. She stresses the embeddedness of this in a participationalist paradigm: “Ultimately, the procedural understanding of narrative for Truth-telling and Truth-making results from our

⁷⁹ Lakoff and Johnson, p.5.

⁸⁰ Abram, p.314.

⁸¹ Burkhardt, *Indigenizing Philosophy Through The Land*, p.128.

⁸² Wilshire, *The Primal Roots Of American Philosophy*, p.56.

⁸³ W.James, *The Varieties Of Religious Experience* (London: Penguin Books Ltd., 1985).

⁸⁴ Welch, *The Phenomenology Of A Performative Knowledge System*, pp.63-65.

⁸⁵ *Ibid.*, p.75. Cajete uses the term “metaphoric mind” to denote our pre-linguistic, childhood engagement with the world, which is later in danger of being crowded out by categorisations imposed as a consequence of language use. His explanation of Native science being creative participation with nature, at least in part experienced through the metaphoric mind, can be understood to be linked to his above call for a wider conception of science than that currently predominantly practised in the West. (Cajete, *Native Science*, pp.28-31.)

⁸⁶ Welch, *The Phenomenology Of A Performative Knowledge System*, p.104.

⁸⁷ *Ibid.*, p.137.

⁸⁸ *Ibid.*, p.190. Welch’s understanding of the subordinate role of propositional knowledge in an Indigenous conception of performative knowledge processes may be partially accessible through the Western stepping stone of the Rio 2016 women’s eight’s training notes below.

⁸⁹ Welch, *The Phenomenology Of A Performative Knowledge System*, p.6.

abilities to engage in meaning-making and worldmaking.”⁹⁰ This is to be seen within a context of Indigenous dance being related to storytelling, and of storytelling being capable of generating ontological relationships (between humans and non-humans as well as between humans and other humans), partly (but not exclusively) due to both containing an aspect of gifting.⁹¹ Disrespect precludes the knowledge process.⁹²

It would be tempting simply to translate this last statement into existing Western theories of epistemic injustice,⁹³ and Welch makes clear that her conception of disrespect does include failure to take a knower’s already existing knowledge seriously. However, this cannot be understood to be explanatory on its own, as it would disregard the participationalist aspect of the question here.⁹⁴

In order for “Truth” to qualify to take a capital “T” in Welch’s work, it is required to meet criteria quite different from those of correspondence assumed by a representationalist paradigm: “The analytic component of Native epistemology is the theory of Truth as respectful, successful performance of some goal in action.”⁹⁵ Echoes of Deloria’s above definition of truth as respectful success are loud and clear. What is new, here, is the fact that Welch makes explicit her inclusion of storytelling (through language *or* through dance) in this definition: Welch could not be clearer regarding her conception of dance as becoming,⁹⁶ and on this being related to her conception of “knowledge and Truth” as “an amalgamation of interwoven experiences”.⁹⁷

The telling of a story, whether through language or through dance, cannot here be conceived in the same way as it tends to be conceived in the West. It is necessary to bear

⁹⁰ Ibid., p.85.

⁹¹ Ibid., p.140. Besides Cajete’s interaction between the development of story and community cited in the context of acausal relationships in **Part 1** and considered again below (Cajete, *Native Science*, p.95), further discussions of two-way relationships between Indigenous story-sharing (which includes non-linguistic story-sharing through, for example, music or dance) and world-making exist. They include those offered by Thomas Norton-Smith (Norton-Smith, *The Dance Of Person And Place*, p.101), by Robin Wall Kimmerer (R.W.Kimmerer, *Gathering Moss: A Natural And Cultural History Of Mosses* (London: Penguin Books, 2021), p.125), and by Chie Sakakibara (Sakakibara, *Whale Snow*, pp.154-155 and p.164).

⁹² Welch, *The Phenomenology Of A Performative Knowledge System*, p.45.

⁹³ For example, Miranda Fricker’s as cited in **Part 1**.

⁹⁴ Western theories of epistemic injustice are concerned with our treatment of knowledge that the knower already has. Welch, on the other hand, is concerned with knowledge emerging as part of a process of shared learning and creation, and with the fact that this process requires mutual respect in order to flourish. The nature of such processes is going to be considered in more detail, with the help of both Indigenous and Western examples, below.

⁹⁵ Welch, *The Phenomenology Of A Performative Knowledge System*, p.159.

⁹⁶ Ibid., p.160.

⁹⁷ Ibid., p.163.

in mind that Indigenous stories are understood to be dynamic, and embedded in a dynamic world, as Welch casts light on Cajete's initially unwieldy quote from **Part 1** :

(...) community itself becomes a story, a collection of individual stories that unfold through the lives of the people of that community. This large community of story becomes an animate entity vitalised through the special attention given it by its tellers and those who listen.⁹⁸

The story, then, is interaction, with Truthing of a performance – in the context of dance – consisting in the successful creation of kinaesthetic empathy. Crucially, this kinaesthetic empathy is conceived not solely as a function of the storyteller creating empathy with a pre-existing state. The performance must “connect to the reason for telling the story,”⁹⁹ and that reason is to guide the audience on their own path. Stories are not instructions; stories are guides. Welch's dancer is dancing *with* as well as *for* their audience. We are taken back to Scott Pratt's drums in **Part 1** .¹⁰⁰

With this, Welch has now also guided us all the way back to Burkhart's locality.¹⁰¹ There *is* right and wrong; there *are* requirements being placed upon our conduct, and respectful success involves continuously feeling our way towards dynamic balance as we participate in weaving the web that sustains us. The story being told or danced cannot tell us where to find our balance on Cordova's balancing board because the sand is forever shifting; it can only tell us how to look for it.

It may be difficult for our Western mind-bodies to appreciate fully what Welch is attempting to share here, although it appears to be beginning to be explored in the West.¹⁰² For now, I would argue that we may be able to approach it with the help of a

⁹⁸ Cajete, *Native Science*, p.95.

⁹⁹ Welch, *The Phenomenology Of A Performative Knowledge System*, p.170. It is going to become increasingly apparent throughout the remaining discussion of Indigenous conceptions of performative knowledge processes that the role of story as an aid for the listener in finding their own path (as opposed to its being understood as an instruction) is linked to the fact that the listener is going to be engaging in their own processes of shared learning and creation, which cannot fully be anticipated by the storyteller.

¹⁰⁰ S.Pratt, 'Persons In Place: The Agent Ontology Of Vine Deloria', *APA Newsletter On American Indians In Philosophy*, Vol.06, No.1 (Fall 2006), pp.4-9 (pp.6-7), URL: <https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/v06n1American_Indians.pdf> [Accessed: 20 March 2023]. Scott Pratt makes reference to the involvement of the audience (amongst other factors) in shaping the sound of some drums while drumming. This was previously considered in **Part 1** alongside Bruce Wilshire's thinking with regards to a theatre audience playing a role in shaping a performance. What is at stake here is the role of mutual responsiveness in feeling our way in what was first introduced in **section 6.f.iv** as Brian Burkhart's jazz analogy.

¹⁰¹ Burkhart, *Indigenizing Philosophy Through The Land*.

¹⁰² For example, van der Kolk's work makes reference to the role of communal rhythm: van der Kolk, pp.255-257.

Western stepping stone taken from the sport of rowing.

Part 1 of this thesis made reference to the journey of Team GB's women's eight in the run-up to the Rio Olympics. The eight had been rowing together for the early part of the 2016 season, and had been engaging in a shared learning process which had involved their attunement to each other and to their boat, and their shared, ongoing creation of the rhythm that was later to win them Silver. Frances Houghton does make reference to a common language being developed to describe what was being experienced,¹⁰³ but it is important to note that the actual learning and creation took place on the water, and was verbalised only in retrospect: "Training was when we built up a bank of good pieces and shared feelings that we all experienced together and which we could all refer *back to*."¹⁰⁴

It is equally important to note that the eight's shared learning and creation could not have been further from Ellul's above observations regarding one "correct" way of working being applied at any cost. Houghton's remarks are made under a section heading of "A Shared Creation". Learning from previous crews played a part, but "It wasn't about trying to copy previous successful crews that one or two people had been a part of – we created our own thing."¹⁰⁵ The creation was personal and situational: "It was the product of all our experiences, learnings and personalities."¹⁰⁶

What matters most in the context of Welch's work, however, is the fact that although elements of propositional knowledge were, demonstrably, extracted from the shared learning and creation which was taking place in the Rio 2016 women's eight, these were, at least on their own, incapable of bringing an outsider into the process. About halfway through the Olympic season, two rowers who were superior on paper to several members

¹⁰³ Houghton, p.58.

¹⁰⁴ *Ibid.*, p.57 (italics mine). It may be useful here to consider Houghton's statement in terms of the ideas put forward by Karen Barad in **Appendix B**, whereby the eight's training notes would represent an agential cut made between the athletes' continuing participation in their world and their momentary stepping away from this into a role of temporarily acting as its observers. It is clear from Houghton's description of the process that, as previously stated by Welch in the context of dance (Welch, *The Phenomenology Of A Performative Knowledge System*, p.190), the propositional knowledge which had sedimented out (in the women's eight's case, in the form of some training notes) can only be regarded as a small subset of the eight's overall process of shared learning and creation. This is consistent with Barad's assertion of an agential cut being incapable of representing reality in its entirety. (For example, K.Barad, 'Meeting The Universe Halfway: Realism And Social Constructivism Without Contradiction', in *Feminism, Science, And The Philosophy Of Science*, ed. by L.H.Nelson and J.Nelson (Boston: Kluwer Academic Publishing, 1996), pp.161-194, p.187.)

¹⁰⁵ Houghton, p.57.

¹⁰⁶ *Ibid.*

of the eight, but had been rowing in a different boat class during the early part of the season, challenged for seats in the eight. Seat racing was scheduled; learning outcomes attained with regards to the crew's technical focus were made available to the challengers in propositional form in order to create a level playing field.¹⁰⁷ However, both challengers were beaten, and the margins were sufficiently wide after the first few races for the planned second day of seat racing to be cancelled.¹⁰⁸

It made no difference on the day that the challengers had been told how the eight had rowed together on previous days. I would concede that in part, as previously stated, this is bound to have been an issue of human language only being capable of capturing a subset of an experience. At least as importantly, however, Cordova's shifting sand was at work: the addition of new rowers to the mix meant that new shared learning was going to be needed, a new creation made, shifting sand attuned to, new ripples rippling to meet other new ripples, a different snowball rolled, sections of Merleau-Ponty's web unravelled and woven anew.¹⁰⁹

Alternatively, with Spinoza, we could say that the challengers' *conatus* had not yet had time to find attunement to the *conatus* of the boat and vice versa.

In Welch's terms, then, of a story being guidance rather than instruction, and of its function being in supporting the audience to find *their* path, I would argue that it would have been realistic to expect the information that had been given to the challenging rowers to be a helpful first step towards working their way into the crew. However, this is to be understood as a process, involving new learning and new creative activity going forward, incorporating the new arrivals. If the challengers had become part of the crew in the longer term (for example, due to an injury sustained by an existing crew member, especially if more time had been available between the day of the challenge and the Olympics) – i.e., if they had had the opportunity to use the information obtained as a starting point for their own journey into the shared learning and shared web-weaving

¹⁰⁷ K.Grainger, *The Autobiography*, 2nd ed. (London: Andre Deutsch, 2016), p.303.

¹⁰⁸ *Ibid.*, p.304.

¹⁰⁹ It is perhaps also possible to understand the dynamics involved through an explanation given by Roger T. Ames of Peking University as part of a recent lecture on Sino-Hellenic environmental philosophy: using the term "process cosmology" rather than "participationalist worldview", Ames described a Chinese conception of our involvement in developing the world not as teleology, but as "getting the most out of ingredients", and as "optimising symbiosis". R.T.Ames, *The Implications Of Greek Ontology And Confucian "Zoetology" In Environmental Thinking* [Lecture] *Online Workshop Sino-Hellenic Environmental Philosophy* (Institute of Philosophy, University of Bern, 9 December 2021).

which was taking place, then there is every reason to suppose that their involvement would have been capable of contributing to making the crew faster.

Two interwoven points made by Welch are relevant here. Firstly, agency is at least to some extent located in the relationship. As pointed out by Peat with regards to acausal relationships in **Part 1**, it is no longer possible exclusively to regard individual agents as separate agents in every situation. Secondly, this entails the development of knowledge and reality hand in hand. The eight, with the challengers on board, would have been a different eight. In this different eight, rowing to the crew's maximum potential would have developed differently, generating a new reality and new knowledge about this reality at the same time. Respectful success would have taken a different shape.¹¹⁰ This is why knowledge about the existing eight's learning could only have served as a starting point for new shared learning, and new shared creative engagement, and why it was doomed to fail when used as its replacement.

It is also why every time we choose habit over custom, every time we choose Ellul's *technique* over attunement, we cut ourselves off from the possibility of developing participation in shared learning and creation with the world.

¹¹⁰ Again, as pointed out by Peat in the context of acausal relationships in **Part 1**, this is to be distinguished clearly from determinism: what is being discussed here is the range of potentialities going into the relationship, then to be shaped responsively and responsibly by those involved. Clear parallels also exist between what was said earlier regarding Dewey's conception of artistic engagement on the one hand, and Welch's above thinking (for example, Welch, *The Phenomenology Of A Performative Knowledge System*, p.190), in particular as it was shown to relate to the subordinate role of Barad's agential cuts (**Appendix B**) compared to the overall process of our participation exemplified by the journey of the Rio 2016 women's eight) on the other. The reciprocity of doings and undergoings between the individual and their surroundings results in their efforts manifesting as an embodiment of possibilities as the relationship develops. (Dewey, pp.275-279.) Within this, our connection with the world through these doings and undergoings is intrinsic, and any form of analysis is secondary to it. (Dewey, p.257.) Dewey's thinking may thus be helpful as a stepping stone to Welch's, although it is useful to bear in mind that Dewey's conception of knowledge is narrower than Welch's: for Dewey, art becomes "more" than knowledge as it is "merged with non-intellectual elements" (Dewey, p.302), whereas we have seen that an Indigenous conception of knowledge would tend not to categorise these elements as "non"-intellectual ones. However, both are clear that the elements intertwine. Dewey is also aware that not everyone would distinguish between art and life outside it: he explains that "art for art's sake" would, for example, not have been understood in ancient Athens. Although his use of the word "primitive" here cannot be termed anything other than ill-considered despite its use being commonplace in the 1930s, Dewey is aware that the same absence of a distinction between art and life outside it tends to apply to Indigenous societies, too. (Dewey, p.341.) Doings and undergoings in relationships create new realities and new knowledge – leading to these, and also about these – in all areas of life if we let them.

Chapter 13 – The sacred, Douglas Cardinal’s vision quest revisited, and why William James would rather ruffle feathers than allow himself to be dogmatic

The next four chapters are going to form the heart of **Part 2**’s reflections on the possibility of existing, contemporary Western relationships already containing any interaction with the sacred in the material, as such interaction was shown in **Part 1** to be an integral part of the Indigenous worldviews that the research question set out to learn from. Sketches of aspects of the sacred are going to be attempted, as well as case studies offered, in order to try and discern in what ways the contemporary West currently may, and may not, be engaging in such interaction. Subsequently, in the final chapters, the discussion is going to turn to potential future scenarios.

13.a. The term “sacred”

A recent publication by Anne Waters is unafraid to address explicitly the possibility of the presence of sacredness in the dynamics of responsive relationships. “Experience of relations becomes sacred knowledge (...),”¹ with sacredness being understood as the experience of maturing in relationship. She concludes: “To be human is to participate in and complete sacred metaphysical relations.”²

The author’s assertion of sacred *metaphysical* relations is highly relevant here: it is necessary to remind ourselves that, as stated in **Part 1**, Indigenous worldviews locate the sacred in this world, not in a different realm geographically or temporally outside it. It is therefore reasonable to assume that the word “sacred” – although used by both Indigenous and Western worldviews – is likely to carry different meanings in each.

A similar difficulty was observed in **Part 1** in relation to the Quechua terms “runa”, “huaca”, and “sallqa”, and their commonly used translations of “human”, “deity”, and “non-human being in nature”: it became clear from PRATEC’s work alone that these translations must be inadequate, although they are still capable of serving as starting points for exploration using Mary Midgley’s method. Due to the incommensurability of

¹ A.S.Waters, ‘Sacred Metaphysics And Core Philosophical Tenets Of Native American Thought: Identity (Place, Space), Shared History (Place, Time), And Personality (Sacred Emergence Of Relations)’ in *APA Newsletter On Native American And Indigenous Philosophy*, Vol.21, No.1 (Fall 2021), URL: <<https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/NativeAmericanV21n1.pdf>>, pp.11-15 (pp.13-14) [Accessed: 20 March 2023].

² Ibid.

the worldviews involved, no more realistic translations into English are available. The translations are useful starting points, but they are unlikely to suffice beyond the very first steps of our journey towards understanding.

Apffel-Marglin describes related difficulties with the terms “spirituality” and “ritual”:

It is in fact difficult to find appropriate words in modern English that capture these practices. Both the words “spirituality” and “ritual” in their current connotations somehow imply that such practices belong to a non-utilitarian, non-materially-
efficacious domain.³

When discussing a worldview where both spirituality and ritual relate to the material world rather than to something outside it, terms with these connotations are clearly going to fall short of conveying what is meant.

This may well turn out to be the case for the term “sacred”, too.

13.b. Towards the necessity of William James’s blind spot

Nonetheless, having considered some aspects of Spinoza’s thinking above, as well as Bruce Wilshire’s, John Dewey’s, and William James’s, there is reason to suppose that starting points for application of Mary Midgley’s method are, again, going to be available: the above contemporary Western thinkers have been shown to have made forays into approaching a vantage point that might have been more easily accessible to the West before Apffel-Marglin had cause to mourn the death of Anima Mundi.⁴

It is, however, likely that somewhere along this journey, we are going to have to relinquish the control we have trained ourselves to exercise through our scientific practices of aiming to create reproducible laboratory conditions and attempting to take the experimenter out of the equation. Deloria and Wildcat state that

³ Apffel-Marglin, *Subversive Spiritualities*, p.87.

⁴ F. Apffel-Marglin, ‘Western Modernity And The Fate Of Anima Mundi’, in *Contemporary Voices From Anima Mundi: A Reappraisal*, ed. by F. Apffel-Marglin and S. Varese (New York: Peter Lang, 2020), pp.17-44.

(...) there is knowledge contained in these cultural practices that modern science cannot acquire using a mechanistic and dissective approach (...). You experience places and learn, if attentive, about processes and relationships in those places.⁵

Difficult as this may sound, at least initially, to our Western ears, it appears to be a Western philosopher, William James, who may be able to offer a first stepping stone: in the context of spirituality, for James, “pretension (...) to be rigorously “scientific” or “exact” shows lack of understanding.”⁶ The part of life of which, according to James, “rationalism can give an account is relatively superficial.”⁷

Such statements can be prone to cause consternation in the West. James – as did Abram in **Part 1** when relating his experience with the raven, as well as McPherson and Rabb when discussing Douglas Cardinal’s vision quest – takes care to consider in detail the relationship between mental ill health and spiritual experience, and for good reason. To this day, a tendency remains in the West to take a predominantly negative view of spirituality in healthcare settings, even in light of evidence to the contrary.⁸

While (at least in the early lectures of the series published in his volume) leaning towards a view of the spiritual as a supernatural rather than as a natural phenomenon,⁹ James does acknowledge from the beginning that this may not be entirely captured in the widespread, largely Western view of there being one deity: “(...) there might conceivably also prove to be no one specific and essential kind of religious object, and no one specific and essential religious act.”¹⁰

How might this relate, for example, to Burkhart’s Indigenous definition of life as “the

⁵ Deloria and Wildcat, pp.35-36. A case study provided by Robin Wall Kimmerer, to be discussed in **chapter 16**, is going to illustrate this point: a postgraduate student of Kimmerer’s obtains scientific knowledge through her engagement with scientific processes, but it is through her relinquishment of unilateral control and embodiment of a richer conception of rationality that she finds attunement to the ancient evolutionary relationships involved and, as a corollary, learns more than she could have anticipated. The dynamics which are beginning to emerge here are also those discussed in relation to the difference remaining between Barad’s and Indigenous conceptions of responsibility in **section e.** of **Appendix B**.

⁶ James, p.39.

⁷ Ibid., p.73. I find it interesting to note, from this early stage, that James uses the term “rationalism” here, as opposed to “rationality”. In the work cited, James consistently advocates a richer conception of rationality than that predominantly practised by the contemporary Western mainstream. This is going to be discussed in later sections of this chapter, as well as in **Appendix F**.

⁸ For example, Marta Helena de Freitas’ call for changes to be made to the training of health professionals in this regard is supported by a range of recent studies. M.H. de Freitas, *Religious Experiences And Mental Health [Lecture] Interdisciplinary Approaches To The Study Of Religious And Spiritual Experiences* (Alister Hardy Religious Experience Research Centre, University of Wales, Trinity St. David, 10 July 2021).

⁹ James, p.27.

¹⁰ Ibid., p.28.

capacity for kinship”?¹¹ Would it be realistic to claim that the Rio 2016 women’s eight – or wider society attempting to learn and to create as it attempts to navigate the interdependencies between its humans, with or without a pandemic – or a world attempting to find a way to live without continuing to burn the planet – were succeeding in finding attunement to the sacred in their engagement in these worldly processes? And if so, in what way?

If Anne Waters’ idea cited at the beginning of this section were to be applied, then this would at least suggest the possibility: if experience of relations becomes sacred knowledge, and if sacredness can be understood as experience of maturing in relationship, then the possibility would appear to exist in all three cases.

Welch, for example, understands spirit as being about our relationships, and as “connection with the happenings of the world, and thus the external world manifests the creative force in the context of the knower.”¹² This is likely to sound unfamiliar to most of our Western ears, and Welch shows that she is aware of this: in order to illustrate what is meant, she introduces the Cree term *mamtowisowin* (which she contextualises with the terms *nilch’i* and *usen* introduced by Cordova earlier, and with a variety of related Indigenous terms from around the world): “our capacity to tap into our inner energy that comes from the universal energy in order to be creative, be in connection, or simply become.”¹³

It was shown above that Deloria, as well as a number of Indigenous and Western colleagues of Deloria’s in the context of the Dialogues, understood quantum theory to be helpful in relating Indigenous and Western thought in this regard.¹⁴

It was, however, also shown above that some of the ideas discussed at the Dialogues are not entirely new to the West: in a less mathematical form, they appear also to have been present in Spinoza’s thinking. Our interrelatedness, the conception of our individuality being inherently suffused with our doings and undergoings in relation to the whole, and the conception of the sacred being inherent in this web of relationships as opposed to residing outside it, was shown to be part of the reason for the affinity perceived, for

¹¹ Burkhart, *Indigenizing Philosophy Through The Land*, p.194.

¹² Welch, *The Phenomenology Of A Performative Knowledge System*, p.49.

¹³ *Ibid.*, p.63.

¹⁴ Deloria and Wildcat, p.140. It remains important to note that this stepping stone was not intended as a claim of equivalence: it is not the case that the authors are reducing the energy discussed to a phenomenon solely explicable by contemporary Western science.

example, by Cordova between Navajo thought and Spinoza's.¹⁵

It is therefore no wonder that William James's work has been turning out to be an additional source of stepping stones which I believe to be helpful in approaching understanding of an Indigenous point of view. I believe this to be the case especially in light of the fact that James's initial reliance on a conception of the spiritual as being supernatural, referenced above, does not appear to be immovable in later parts of his series of lectures. For example, involvement of our bodies in an overarching form of interaction which may include our spirituality is acknowledged from fairly early on, with an explicit link then being made between a higher power and nature, for example, in Lecture XI.¹⁶

James stresses the importance of there being an element of surrender in our spirituality.¹⁷ In our interaction with the spiritual, James thus sees the involvement of two different dynamics in tension: on the one hand, he sees an element of volition, similar to that assumed by Spinoza above, based on our recognition of a gap between our current incompleteness, and a version of ourselves in the world which we long to attain. On the other hand, the very same gap (also recognised by Spinoza in the above form of our inability to attain intuitive knowledge completely) constitutes the reason for our inability to know the exact nature of this longed-for state, or how to attain it. This, in turn, excludes the possibility of closing the gap through volition alone.¹⁸

Returning to the example of the Rio 2016 women's eight, the points made by Houghton above show that the crew were not in a position to articulate in advance what their

¹⁵ Cordova, *The Concept Of Monism In Navajo Thought*.

¹⁶ James, p.274.

¹⁷ James's point chimes, of course, with the discussion in the above chapter on Spinoza of the conception of all-encompassing intuitive knowledge being unattainable for the individual (due to the complexity of the web of relationships involved), and – as a corollary – with the necessity of our fallibility. It also chimes with Deloria's above assertion of our human quest for unilateral control constituting the original sin. However, since it is here introduced as a relinquishment of responsibility (James, p.110), it initially appears to jar with the Indigenous conception of responsibility being of paramount importance. For clarification, it is helpful to bear in mind in this context that in an Indigenous worldview defining truth as respectful success, responsibility cannot be understood as the responsibility of an individual to take control in order to actualise their unilateral choices. Responsibility is, rather, conceived as the responsibility to behave respectfully (Burkhart, *Indigenizing Philosophy Through The Land*, pp.286-287), and it has been shown, not least through PRATEC's work, that this, above all, involves ongoing dialogue with everyone involved (for example, Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', p.78). It is also clear from the remaining pages of James's volume that relinquishment of such a respectful, responsive attitude of enquiry cannot have been what James had in mind.

¹⁸ James, pp.205-210.

optimum way of racing was going to be: they had to feel their way until they arrived at it, and it was only then that they were able to articulate it, for a moment – only for it to be subject to further change in the following day’s training session.¹⁹

Waters’ above understanding of sacredness as maturing in relationship now appears to be coming into view: if the sacred can be understood to be in the material, if the individual can simultaneously be understood to be part of the whole, and if the sweet spot of the chiming of the conatus of the two is by necessity also our blind spot that can never be attained, and never sustained, through volition alone, then it becomes intelligible also to our Western ears that it may be possible to conceive sacredness as maturing in relationship.

13.c. Douglas Cardinal’s vision quest in the context of William James’s thinking

Consistent with his above rationale for volition alone being unable to effect spiritual change, James locates a common denominator in a human undergoing spiritual change tending to have relinquished control: “Redemption (...) must be a free gift or nothing.”²⁰ In this instance, he relates his thoughts to a Christian context, while in other cases acknowledging the possibility of religious experience occurring elsewhere.²¹ In particular, he places it into a context of being “at one with creation”²² and, relatedly, makes his

¹⁹ It is worth recapitulating here that the *dynamic* phases of the process – those when shared learning and creation was taking place, as opposed to those when temporarily completed elements of the process sedimented out and became capable of being verbalised – were those when volition was replaced by the eight’s feeling their way towards that which was eventually to become what volition would be able to aim for, if only ever as a starting point for the following dynamic phase. These – by necessity at least partially uncontrollable – dynamics in the times between agential cuts constitute an additional reason for the remaining difference between Barad’s and Indigenous conceptions of responsibility discussed in **section e.** of **Appendix B**. There are also clear echoes of Dewey’s above conception of artistic engagement in Houghton’s description of the eight’s journey of shared learning and creation: in particular, the fact of their collaboration returning to being in motion soon after each verbalised result had manifested appears to chime with Dewey’s idea of an artist’s cycles of engagement cited earlier (Dewey, p.165). The two strands of this argument (of the at least partially uncontrollable nature of the dynamic phase on the one hand, and of the process tending to re-embark on another dynamic phase after a moment of stasis) can now be contextualised with both Dewey’s and James’s thoughts regarding the importance of our remaining responsive to our surroundings as we interact with them, providing a helpful stepping stone to increased understanding of the similar points earlier made by PRATEC. Both James and Dewey choose examples from the field of ethics to illustrate their views on this. Although the detail of their rationale is not immediately required for the remaining discussion of James’s stepping stone to the sacred here, it can be found in **Appendix F**, as it contains material which is also going to be useful background in relation to a possible way forward discussed near the end of this thesis.

²⁰ James, p.244.

²¹ For example, *ibid.*, p.401.

²² *Ibid.*, p.247.

subsequent links between a higher power and nature.²³

The picture painted by James – of relinquishment of control, followed by an experience of being at one with nature, which is experienced as powerful and as willing to allow the individual to share in this power – appears to share common ground with McPherson and Rabb’s account of Douglas Cardinal’s vision quest in **Part 1**. It is now time, in the context of James’s thinking, to consider some of its detail.

As noted in **Part 1**, Cardinal’s experience of a vision quest involved significant physical and emotional hardship. In response to an introductory question asked by his interviewer, Cardinal explains that “You’re pushed to a point where you sense you’re a spiritual being, you see the life force in yourself and other people.”²⁴

In a more detailed account of the third day of his experience, which he describes as being “like losing consciousness”, Cardinal relates being advised by some elders to ask all the living beings for strength and advice, with the result that

I got strength from the tree. Then the grass gave me strength, the clouds quenched my thirst, the sun gave me strength, the earth gave me strength.²⁵

When asked by the interviewer about the meaning of his experience, Cardinal’s response is:

That attitude of being in harmony with every living creature. (...) We have to be in communion with everyone. We’re part of the life chain, we’re not in dominion over it. (...) You be in dominion over everything and you end up with the mess we’re in with the planet.²⁶

We are thus, again, guided back to a conception of the sacred being present in the material, and of the individual being part of the whole at the same time as being an individual. In a world where the sacred is present in the material, and where an individual is simultaneously part of the whole, the idea of a vision quest must be to seek connection

²³ Ibid., p.274.

²⁴ McPherson and Rabb, p.70.

²⁵ Ibid., p.73.

²⁶ Ibid., p.80.

with the world, not to retreat from it.²⁷

There is one crucial difference between the account of the vision quest cited on the one hand, and James's thinking on the other: the unity with non-human nature experienced during the vision quest is a unity that expects to learn from non-humans, because these are already partaking of a wisdom as yet inaccessible to the human concerned. This is, for example, repeatedly expressed through the advice received by Cardinal that "You have to come to terms with yourself. You're too arrogant, you're just a human being."²⁸

James, on the other hand, while clearly being appreciative of non-human nature,²⁹ and while openly advocating charity in our relationships with animals,³⁰ makes no reference to any wisdom being contained in non-human nature, nor to any need for humans to learn from non-humans. James's work can thus constitute a stepping stone on our Westerners' journey towards increased understanding of the wisdom contained in Indigenous worldviews, but it cannot be understood to be explanatory of it.

13.d. James's doorway to "the More": whatever it may be, it cannot be control

With regards to where the expanded scope of our rationality may come from, where we may find the learning that may enable us to close the above-mentioned gap, James states that this is where the psychology and religion of his time appear to diverge. While both agree "that there are forces seemingly outside of the conscious individual",³¹ psychology's location of these in the individual's own subconscious "diverges from Christian theology, which insists that they are direct supernatural operations of the Deity."³² For James himself, the jury is still out at this point: he defers detailed discussion of this question until later on in his series of lectures, once mysticism has been explored. So far, he has only made clear that the involvement of aspects of a person's self which usually lie beyond their consciousness *need not* involve anything other than psychology

²⁷ Deloria and Wildcat, p.147. As previously stated in the context of James's thinking, relinquishment of control (here during a vision quest) as a necessary ingredient of the experience of integration, cannot at all be understood as relinquishment of accountability for one's individual choices, but should rather be seen as relinquishment of any illusion of our ability unilaterally to preconceive the development of a process of shared learning and creation. Accountability for our actions remains: for example, Douglas Cardinal points out in his account of the vision quest that "You're entirely 110 percent responsible for what you do," (McPherson and Rabb, p.78) and, relatedly, "The reason we suffer so much is because our integrity's out." (Ibid., p.77.)

²⁸ McPherson and Rabb, p.74.

²⁹ For example, James, p.33.

³⁰ James, p.281.

³¹ Ibid., p.211.

³² Ibid.

at all.³³ He is, however, equally clear that “the notion of a subconscious self certainly ought not at this point of our enquiry to be held to exclude all notion of a higher penetration.”³⁴

It has been shown that while demonstrably being appreciative of nature, as well as being benevolent towards it, James makes no mention of any expectation of non-human nature entering into the type of conversational, collaborative relationship with humans that was described, for example, by PRATEC above. He cannot, thus, be expecting his enquiry to lead to a form of community of *runa*, *huaca*, and *sallqa* similar to that encountered in PRATEC’s work.

Vice versa, however, James is open to locating an origin of change in our religious beliefs in our interaction with our surroundings.³⁵ He is emphatic that our fallibility should not be allowed to become a detractor from this, and he is unafraid to be controversial:

(...) to admit one’s liability to correction is one thing, and to embark upon a sea of wanton doubt is another. (...) He who acknowledges the imperfectness of his instrument, and makes allowance for it in discussing his observations, is in a much better position for gaining truth than if he claimed his instrument to be infallible. (...) dogmatism will doubtless continue to condemn us for this confession. (...) But the safe thing is surely to recognise that all the insights of creatures of a day like ourselves must be provisional. (...) The fact of diverse judgments about religious phenomena is therefore entirely unescapable, whatever may be one’s own desire to attain the irreversible.³⁶

In light of Spinoza’s above thoughts regarding our inherent inability ever to apprehend the entire web of relationships pertaining to God *sive* nature, I would argue, in the same vein as James in his volume, that the very point to note about the sacred is that there must be more of it than one human or group of humans is likely to be able to exercise control over by pinning it down in the form of a finite set of propositions to which it must

³³ Ibid., p.237. I find it of interest to note at this point that James’s developing conception of our capacity to reach beyond the boundaries of our individual, conscious interaction with the world, even when he has not yet committed himself regarding the potential involvement of anything beyond our own, individual unconscious, appears not only to chime with Spinoza’s conception of intuitive knowledge discussed near the beginning of *Part 2*. It also appears to chime with an earlier citation of Cajete’s thinking in the context of Welch’s work with regards to performative knowledge processes: Cajete described Native science as a form of creative participation with nature, which was at least in part experienced through what he referred to as the metaphoric mind, and defined as a pre-linguistic, childhood form of engagement with the world, which was later in danger of being displaced by the categorisations imposed through our language use (Cajete, *Native Science*, pp.28-31).

³⁴ James, p.243.

³⁵ Ibid., p.328.

³⁶ Ibid., pp.332-333.

henceforth be reduced.

In this context, James also makes his claim that different temperaments need different religions.³⁷ Viewed against the background of the passage just cited, it is evident that James is not advocating a free-for-all here in which we are at liberty simply to invent whatever form of sacredness we happen to find easiest. What he does appear to be saying is that owing to our particular location in the overall web of relationships, there are particular aspects of the sacred that we are going to be likely to be able to relate to, while others, at least for the moment, are going to be beyond our reach.³⁸

James appears acutely aware of the fact that he may be ruffling feathers, but he insists that this is necessary in order to progress with his enquiry:

I am well aware of how anarchic much of what I say may sound. (...) I am no lover of disorder and doubt as such. Rather do I fear to lose truth by this pretension to possess it already wholly.³⁹

James, as did Wilshire with his refusal to let embarrassment deter him from thinking⁴⁰ in **Part 1**, is thus asking us to do what Polkinghorne also requires: he is asking us to cling on with our intellectual teeth and take all phenomena into account,⁴¹ as opposed to considering only those that already fit with our currently existing model of the world. The Indigenous authors cited would have been unlikely to find anything amiss in the first place, and instead found themselves intrigued at the prospect of progress inherent in any apparent disagreement.⁴²

When James moves on to the topic of mysticism, he is careful to point out that he is not talking about “thought-transference” or “spirit-return”, but rather – amongst a handful of other criteria – about “truths unplumbed by the discursive intellect”.⁴³ It is thus apparent, once again, that the **Part 1** question of opening up a space between scientism at one end of the spectrum and snake oil at the other is a concern that clearly predates the advent of quantum physics and entanglement.

James’s exploration of mysticism makes similar points to Ahmed’s in **Part 1**. What

³⁷ Ibid., p.333.

³⁸ Ibid., p.467.

³⁹ Ibid., p.334.

⁴⁰ Wilshire, *The Primal Roots Of American Philosophy*, p.232.

⁴¹ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.90.

⁴² For example, Burkhardt, *Indigenizing Philosophy Through The Land*, p.263.

⁴³ James, p.380.

matters most for this current part of the thesis is the clarity with which James discusses its incapability of being entirely captured in words. Beginning with the analogy of sleep being a state which has to be experienced in order to be grasped,⁴⁴ he then progresses to liken mystical scriptures to compositions, in the sense of their being “ontological messages which non-musical criticism is unable to contradict.”⁴⁵ This cannot help but feel reminiscent of the above discussion of McPherson and Rabb’s final chapters – the chapters relating to possible approaches to making the transformative nature of Indigenous worldviews accessible to those without prior exposure to them – almost entirely relying on experiential learning. What matters, for James, is also the idea of mysticism having a quality of cosmic consciousness, with the universe being alive, and with love as the foundation of the world.⁴⁶

James ventures an attempt near the end of his book to shore up some generalisations about religious experience that everyone may agree on, but this is done against a background of, once again, having stressed that philosophical and theological formulas are secondary products,⁴⁷ and thus subordinate to experience in a similar way to the science of optics only being able to exist after someone was first able to see.⁴⁸

He then appears to be making a similar point to that made by Apffel-Marglin regarding the inadequacy of the term “spirit” above:⁴⁹ referencing Frederic W.H. Myers, he asserts that it may well be immaterial who we pray to, as we have insufficient knowledge to understand much beyond our being in the presence of grace in any case.⁵⁰

The humility contained in this statement appears to chime with the humility induced by the vision quest in McPherson and Rabb’s work above, and James goes on to reiterate the importance of the diversity of religions, again on the grounds that it takes more than one person to access the multitude of meanings involved.⁵¹ Relatedly, in a move similar to PRATEC’s distinction between custom and habit, James is opposed to any formulaic expression of religious dogma.⁵² It is the use of a religion to the individual, and the use of

⁴⁴ Ibid., p.405.

⁴⁵ Ibid., p.420.

⁴⁶ Ibid., pp.398-399.

⁴⁷ Ibid., p.431.

⁴⁸ Ibid., p.456.

⁴⁹ Apffel-Marglin, *Subversive Spiritualities*, p.87.

⁵⁰ James, pp.466-467.

⁵¹ Ibid., p.487.

⁵² Ibid., p.448.

this individual to the world – in other words, a religion’s ability to support the attunement of an individual’s *conatus* to that of the whole – which James accepts as evidence of its truth,⁵³ thus sharing common ground with Deloria’s conception of truth as respectful success.

However, once again, and despite by now having conceded a universe that is alive and imbued with love,⁵⁴ James makes no mention of any relevance of non-human contribution in this context. James thus remains in stark contrast with the Indigenous thinkers cited on this point, even in his final lecture of the series.

It is James’s return to his earlier question regarding the apparent disagreement between psychology and religion that is of particular interest to this part of the thesis, and to its question of whether, and if so in what way, our contemporary Western interactions in this world may involve interaction with the sacred.

James hypothesises, again citing Myers, that the self manifesting through the organism at every point leaves some parts unmanifested, and that “whatever it may be on the farther side, the “more” with which in religious experience we feel ourselves connected is on its hither side the subconscious continuation of our conscious life.”⁵⁵

With this, I believe that James has allowed us a Western glimpse of what may be being expressed by PRATEC when they describe the ongoing conversation between *runa*, *huaca* and *sallqa* that is being conducted through the unity of ritual and labour as one, constituting the nurturing and being nurtured taking place on the *chacra*.⁵⁶ As previously stated, James does not share PRATEC’s understanding of members of non-human nature as equal partners in this. The other elements of PRATEC’s thinking, however, appear to be present in James’s ideas.⁵⁷

If relinquishment of unilateral control, and engagement of our subconscious with the world around us, bears the possibility of our attunement to the sacred, and if the sacred

⁵³ Ibid., p.458.

⁵⁴ Ibid., pp.398-399.

⁵⁵ Ibid., p.512.

⁵⁶ For example, Valladolid, ‘Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra’, p.78.

⁵⁷ It could also be argued that James has here made a point related to that made in Cajete’s initially unwieldy quote regarding the bi-directional interaction between story and community, which was first cited in **section 6.c.** in the context of Peat’s (and Jung’s and Pauli’s) thinking on the interaction between individual and collective unconscious. (Cajete, *Native Science*, p.95.) Their shared ground lies in their location of our contact with the meaningful in the part of ourselves as yet untamed by our conscious categorisations, although they would, as would James and PRATEC, almost certainly disagree regarding the role of non-humans in the community.

is present in the material, then any labour conducted in an attitude of openness and engagement – say, that of Dewey’s interested mechanic above, who was therefore artistically engaged – any labour conducted in an attitude of expecting our doings and undergoings, our participation in the world, to weave a web whose shape emerges as we engage in the great, cosmic process of shared learning and creation – any labour conducted in this attitude will arguably be capable of being understood to be attunement to the sacred, and capable of being included in Waters’ definition of experience of relations becoming sacred knowledge, and of sacredness being the experience of maturing in relationship.⁵⁸

Deloria already said as much, when he referred to the human quest for unilateral control as the original sin,⁵⁹ and recommended Ellul for further reading. We may have been granted a glimpse of what Leroy Little Bear meant, in **Part 1**, when he spoke of the manifesting in the same breath as he did about the spiritual.⁶⁰

⁵⁸ Waters, ‘Sacred Metaphysics And Core Philosophical Tenets Of Native American Thought: Identity (Place, Space), Shared History (Place, Time), And Personality (Sacred Emergence Of Relations)’, pp.13-14.

⁵⁹ Deloria, *The Metaphysics Of Modern Existence*, p.203.

⁶⁰ Little Bear, p.x.

Chapter 14 – The question of contemporary Western interaction with the sacred in the material reappraised: a family resemblance and some earlier case studies involving humans

Where does this leave us in terms of our earlier questions regarding the Rio 2016 women’s eight, and of a society attempting to learn and to create as it attempts to navigate the interdependencies between its humans, with or without a pandemic, and of a world attempting to find a way to live without continuing to burn the planet?

It is going to be useful to attempt a sketch of a family resemblance of the sacred based on what has been said by both Indigenous and Western authors up to this point, and to explore how the above, so far exclusively human, case studies fare when held up to this yardstick. This may then yield some insight with regards to potential Western ways of re-engaging with the sacred in the material in our relationships with non-human nature, too, even in light of the near-extinction of Western ritual in the last 500 years discussed in *Part 1*.¹

14.a. Shoring up the learning from James’s stepping stone, and from others’, into a sketch of a family resemblance of the sacred

If we take James’s “the More” seriously – in the sense of assuming, with James, that it is *more* than we can grasp or control, that there is, by necessity, always a blind spot preventing our attunement through volition alone, and that it is always going to take *more* than one person or group to approach any form of comprehensive view – then it is almost inevitable that any precise definition of the term “sacred” is going to remain beyond our reach. It may be possible, however, despite these limitations, to find some aspects of a family resemblance based on the work of the Indigenous and Western

¹ It may be useful here to include a reminder that – as first discussed in the notes on terminology in *section 1.a.*, and revisited especially in the contexts of *chapter 5* in *Part 1*, as well as throughout *Part 2* – the conception of ritual that this thought process relates to is one of embodied, responsive relationship with a material world which we are part of, and which we participate in continually creating, where the sacred is understood to be part of this material world. It is based on Leroy Little Bear’s elements of unity in diversity between Indigenous worldviews first introduced in *section 4.d.*, and illustrated – for example – by PRATEC’s reflections discussed in *section 5.e.* The point being made here is thus not that the contemporary West no longer engages in any use of ritual at all: reference has, after all, been made, for example, to the practice of Holy Communion in the Catholic Church in *section 5.f.vii*. The point being made here is, rather, that developments in the West since the Enlightenment, which were discussed, for example, in *section 5.b.*, have meant that contrary to pre-Enlightenment practice, ritual in the West now no longer tends to be conducted in the expectation of our being able to relate to the sacred in the material in this way.

authors cited.

It has been shown that Cordova's balancing board analogy, as well as her analogy of our actions being interacting ripples in a pond, may at least partially be approached through a Western form of understanding offered by Spinoza, which was also in part alluded to in elements of James's and Dewey's thinking in the previous chapter: an understanding of the world being in motion, and suffused with energy; an understanding of our role as individuals as one of finding a way of balancing our actions to be in tune with the actions of those around us, of our *conatus* being in harmony with that of the greater units we are part of, of our wisdom maturing through our participation as entire creatures in the whole, of our approaching intuitive knowledge while knowing all too well that it can never completely be attained. With the sacred understood by Spinoza to be present in the material, a possible family resemblance may then be found in our attunement: to the extent that our interactions within the whole are mutually attuned, perhaps as Burkhart's **Part 1** jazz musician's would be when playing in a band,² we could then think of ourselves as becoming attuned to the sacred in the material.

PRATEC's work has been shown to make a similar point:

The whole *Pacha* is a community of interconnected living beings, in which man and water are as important and alive as are the *huacas* and the wind in terms of the regeneration of life.³

Non-humans, including *huacas*, are understood to be communicating as much as humans, with each instance of non-human communication being an invitation to give an answer, to become attuned, to allow life to flow.⁴ In a worldview where the sacred is intertwined with the material, as outlined by Leroy Little Bear in his elements of unity in diversity between Indigenous worldviews first introduced in **section 4.d.**, and as exemplified by PRATEC's work here, ritual is understood to be as natural a part of this as is labour, and the two are conceived as one.⁵ Rengifo, for example, issues a stark warning against unilateral attempts to seize control of a situation:

(...) if the listeners are not alert and the conversation becomes a monologue, it does not flow – it is interrupted, producing obstructions, anger, restrictions,

² Burkhart, *Indigenizing Philosophy Through The Land*, p.292.

³ Rengifo, 'The Ayllu', p.97.

⁴ *Ibid.*, p.106.

⁵ Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', p.61.

accumulations, which prevent and make difficult the regeneration of life.⁶

The author stresses the importance of the ritual aspect of this for its ability to amplify our senses in search of the attunement to be found. With language being understood to be inclusive of all our senses, as opposed to its being reduced to those involved in the use of alphabetic script alone, “The common senses are amplified in rituals; the person who participates in them sees ‘more’.”⁷

Rengifo concludes by reiterating the importance of understanding conversation as “an attitude, a mode of being in unison with life (...) in which each one is enriched by the life of the others (...)”.⁸

Again, life flows, and the sacred is party to our conversation, to the extent that we are able to sustain mutual attunement.

And again, in a world that is inherently in motion, we are seeing the importance of our participation in shared learning and creation to this sacred and material flowing of life. The intertwining of ritual and labour is never understood to be static; attunement is forever ongoing, which is expressed in PRATEC’s preference of the term “custom” over “habit”.⁹ Dewey’s above entire creature must be alive and continuously engaged in its doings and undergoings. Mechanical execution of predefined processes is not what is meant.

It was shown that Welch, too, understands the spiritual to be located in our relationships in the world, in the form of “connection with the happenings of the world, and thus the external world manifests the creative force in the context of the knower.”¹⁰ In particular, Welch sees dance as a way of “establishing and embodying ethical relations of reciprocity between persons and the land.”¹¹ While acknowledging the importance of the ability of dance to reach into our existing, embodied memory, it is above all its ability to create new realities through relationships of storytelling and gifting that Welch is interested in.¹² In order for these new realities created to meet the criteria for Truth with a capital “T”, Welch requires Deloria’s “respectful success” criterion to be met.¹³ In addition, and at

⁶ Rengifo, ‘The Ayllu’, pp.106-107.

⁷ Ibid., p.107.

⁸ Ibid.

⁹ Ibid., pp.118-120.

¹⁰ Welch, *The Phenomenology Of A Performative Knowledge System*, p.49.

¹¹ Ibid., p.96.

¹² Ibid., pp.95-96.

¹³ Ibid., p.39.

first glance extending the idea beyond Deloria's, Welch also requires a dance performance to succeed in guiding the audience on *their* right path.¹⁴ Arguably, however, this additional criterion could be interpreted to be part of the requirement of respect: if everything, with Burkhart, has all the value there is,¹⁵ then the uniqueness of its attunement and mutually responsive participation as a member of the great jazz band of the whole will be understood to be a corollary of its inherent dignity.

Crucially, in Welch's thinking, too, the ceremonial and the sacred are part of this world,¹⁶ and this world is in motion as we participate in its continuous creation – with dance being one aspect of this process of becoming,¹⁷ and knowledge and Truth conceived as “an amalgamation of interwoven experiences.”¹⁸

In Welch's thinking, too, our interactions thus succeed in being in tune with the sacred to the extent that we engage in respectful, responsive relationships allowing our individual *conatus* and that of the whole to enhance each other.

The picture of a family resemblance that appears to be emerging from this exploration of aspects of the sacred, then, might in one way be considered surprising: it is one of the sacred perhaps being – at least for our Western sensibilities – almost uncomfortably close to what we would ordinarily refer to as “meaningful”. Raimond Gaita, for example, makes no particular reference to the sacred when he asserts that

To piss the spider along the channel of the urinal to the hole leading to the sewer is worse than just casually washing it down the hole, but not because it is worse for the spider.¹⁹

While the sacred tends to be directly included in Indigenous discussions of similar decision processes,²⁰ Gaita initially makes his case in a similar way to Nagel's, cited above, regarding our inability to imagine a bat's experience fully (nor now, in Gaita's own case, the spider's experience). It then becomes clear from the overall message of his book that it is, above all, meaning that Gaita is interested in. In an earlier chapter, for example, Gaita relates an incident involving questions of how to respond to a suspected terminal

¹⁴ Ibid., p.160.

¹⁵ Burkhart, Burkhart, *Indigenizing Philosophy Through The Land*, p.200.

¹⁶ Welch, *The Phenomenology Of A Performative Knowledge System*, p.95.

¹⁷ Ibid., p.160.

¹⁸ Ibid., p.163.

¹⁹ Gaita, *The Philosopher's Dog*, p.100.

²⁰ For example, Cajete, *Native Science*, p.73.

injury in a cat,²¹ and his concern is mainly with finding a way forward that honours the cat as a being in relationship. In the part of the book explicitly concerned with meaning, Gaita references Iris Murdoch to make the point that to see the reality of another person is “a work of love, justice, and pity”,²² with love being conceived as a form of understanding, as opposed to being excluded from the realm of rationality.

Once again, no explicit mention of the sacred is made in this context (although Gaita does make reference to it in other parts of his work).²³ It is *meaning* that Gaita is concerned with, and our mainstream Western placement of the sacred outside this world can cause us to stop short of allowing for the possibility of its being contained in the meaningful that we share in as we engage with the material.

And yet, might it not be the case that on the assumption of a world in which the sacred is present in the material, in which there is no requirement for our spirits to leave our bodies behind before gaining admittance to the sacred realm, and in which the balance we are feeling our way towards is that of our individual *conatus* learning and creating in tune with the perpetually-mobile jazz band of the greater whole – might it not be the case that in such a world, there is nothing sacrilegious implied by our equating the sacred with the loving, emotionally rational, enquiring, embodied, conversational mode of relating that allows us to participate in the shared learning and creation of the meaningful?

If so, then it becomes conceivable that our Western mind-bodies may just have caught a glimpse of Anne Waters’ definition of experience of relations becoming sacred knowledge, and of sacredness being the experience of maturing in relationship.²⁴

As a corollary, however, the very control that we began to exercise a few hundred years ago, as shown in **Part 1**, in an attempt to attain security as we tried to make sense of the world, would then have turned out to have achieved the opposite: its relinquishment would have shown itself to be a necessary ingredient without which we cannot, in fact, share in the world in any way that makes sense.

The best we may be able to do, initially, may be to enjoy the amusing side of such a

²¹ Gaita, *The Philosopher’s Dog*, pp.26-27.

²² *Ibid.*, p.79.

²³ For example, *ibid.*, pp.116-131.

²⁴ Waters, ‘Sacred Metaphysics And Core Philosophical Tenets Of Native American Thought: Identity (Place, Space), Shared History (Place, Time), And Personality (Sacred Emergence Of Relations)’, pp.13-14.

turnout. Then, in a sobering next step, we may remember from **Part 1** that two developments have been shown to have unfolded since our insecurity first led us to seek unilateral control, and that these are likely to make unilateral control difficult for us to relinquish. Firstly, control paved the way for the spread of inconsiderate behaviour and greed deplored by Apffel-Marglin in **Part 1**, and these were shown now to be woven into the very fabric of at least some aspects of our societies. Secondly, **Part 2** saw the birth and progression of Ellul's technique into its now self-perpetuating spread without which we can no longer rely on the smooth running of things.

We may do well to brace ourselves: it may turn out that a Western approach to the relinquishment of control that appears to be a necessary ingredient of our regenerating our capacity for engagement with the sacred in the material will, at least in some situations, include some encounters with stumbling blocks along the way.

14.b. Applying the family resemblance, part 1: the Rio 2016 women's eight

In order to explore to what extent contemporary Western relationships may already include interaction with the sacred in the material, it is now time to apply the above family resemblance to the case studies previously considered in this thesis, which have, so far, focused on interaction between contemporary Western humans.

In light of the family resemblance sketched, it would appear that for the Olympic journey of the Rio 2016 women's eight, an argument for their experience involving attunement to the sacred may be able to be made. It cannot be an argument without caveats, however, for the simple reason that I am an outsider: I was, at best, walking in the woods on the far side of the Caversham training lake, listening to the shafts of their blades as they clunked in their gates in unison, feathering and squaring between strokes.

It was shown above, mainly through Frances Houghton's work, that the eight engaged in a process of shared learning and creation, becoming attuned to each other, and that in doing so, they developed a way of rowing together which had, in this form, never previously existed, and which was underpinned yet far from defined by each crew member's previous experience gained elsewhere.

Alongside the silver medal in Rio, Houghton makes clear that it was, and perhaps even to a greater extent, this shared process that gave meaning to the endeavour. In an attempt during the run-up to the Olympics to define what success meant to her at that time, she

ventured, “To stand on the Olympic podium with my arms around my teammates sharing what we had created together – and feel joy, not relief.”²⁵ Regarding her experience of being on the podium, she later relates:

(...) it was what lay behind the medal that meant the most: the people I stood there with and the people who had been there along the way, the experiences we had had, the relationships we’d built, and what we had created together.²⁶

It thus appears that Cordova’s balancing board analogy, and her ripple analogy, were both actualised in the women’s eight, in the sense of individuals’ *conatus* being in harmony with that of the greater unit they were part of, and of their wisdom maturing as they participated as entire creatures in the whole. Inherent in this, as previously stated, was the necessity of William James’s blind spot in the understanding of those involved: attunement could neither come, nor continuing attunement be sustained, through volition alone.

With regards to PRATEC’s contribution to the above family resemblance, the situation initially appears equally clear: it was shown above that the language used by the crew was above all the language of all their senses, only to be narrowed to the use of human language and alphabetic script alone once particular aspects of their learning had sedimented out, and thus become capable of being verbalised. This verbalisation was shown only to have been effective where it was supported by the background of the entire experience, as opposed to being capable of standing alone: those who had been part of the training journey were able to relate to what was meant; those who had not, were not.²⁷

What is less clear, on the other hand, is whether the more noticeably ritual aspects of PRATEC’s ideas were actualised and, if so, in what way. It was shown above that PRATEC’s involvement of the senses does not entirely reduce to the involvement of the senses as it is understood in the West: PRATEC, as cited above, speak of the common senses being amplified in rituals, and of this enabling a person to sense more. It may be the case that the intense, shared experiences of seat racing, and of racing itself, share sufficient similarities with the amplification by ritual cited by PRATEC. However, I would argue that

²⁵ Houghton, p.93.

²⁶ Ibid., p.95.

²⁷ Havi Carel reports similar findings from a healthcare context: some experiences may be impossible to communicate propositionally, and thus “only shareable with persons with whom one shares a standpoint or a sense of solidarity.” (H. Carel and Kidd, ‘Epistemic Injustice In Healthcare: A Philosophical Analysis’, p.530.)

it is equally possible that the scenarios are less related than they appear at first glance, not least due to the differences in conceptions of time involved. When Houghton refers to crew members' prior experience being useful to the crew's present learning and creation, this reference is made against a background of a Western conception of linear time, and of these prior experiences, having taken place in collaboration with former crewmates now retired, remaining firmly in the past. When PRATEC refer to ancestors being conversed with ritually, there is every expectation of the ancestors being there in the present as well as in the past, as the conversation takes place against a background of an at least partially cyclical conception of time.²⁸

Arguably, and in view of what PRATEC say next, this may, however, not constitute a barrier to the women's eight's experience being understood to involve the crew's attunement to the sacred: the conversation that they advocate in this context is, as we have seen, "an attitude, a mode of being in unison with life (...) in which each one is enriched by the life of the others (...)." ²⁹ This may well have been achieved in the absence of any conception of cyclical time. Attunement, in the forever ongoing sense of custom taking precedence over habit due to Dewey's entire creatures being alive and engaged in their doings and undergoings, was demonstrably achieved by the eight either way.

It is with regards to Welch's, and Deloria's, respectful success, and Welch's related question regarding everyone's own right path, that I believe it would be as unwise for me as an outsider to attempt to comment as it would be futile. It would be naïve to suppose that a selection process, let alone a selection process when the stakes were as high as they were halfway through the Olympic season leading up to Rio 2016, could run its course without friction. Some of the frictions involved in this particular process have been documented by at least two of the individuals concerned.³⁰ Whether, and to what extent, each and every individual, and with these the whole, can claim to have been respectful in their success, and therefore in attunement with Welch's Truth with a capital "T" at all times, is only for those involved to know.

I would argue, however, that our fallibility as humans is likely to mean that Truth with a capital "T" cannot be ours entirely anyway, any more than our Spinozistic intuitive knowledge can ever be complete. It has been shown that shared creation is a process of

²⁸ Rengifo, 'The Ayllu', p.96.

²⁹ Ibid., p.107.

³⁰ Houghton, p.16, and Grainger, p.302.

continuous shared learning, and learning necessarily entails acceptance of imperfection along the way. It appears, in any case, that fences were able to be mended, and relationships regenerated, enabling shared celebrations to be enjoyed when the time came.³¹

I would therefore conclude that against the background of the family resemblance sketched above, it is possible to view the Rio 2016 women's eight's experience as an experience involving attunement to the sacred, as it appears to have met the criteria of Cordova's analogies and related Indigenous and Western thinking sketched in the above family resemblance to the extent that we fallible humans can hope to.

14.c. Applying the family resemblance, part 2: contemporary Western society's attempts to navigate interdependencies between those we unanimously acknowledge to be persons

A case study of interaction between a small group of contemporary Western humans has been considered. However, how do we fare when the context is wider society?

Ellul's perception, committed to paper in excess of 50 years ago and discussed above, was that the progressive spread of a web of interdependent, pre-defined ways of working (referred to, by Ellul, as "technique" wherever they appeared, within or away from a technical context) was in the process of removing our freedom to choose any option other than the most efficient.³²

Ellul expects this to affect our relationship with the spiritual: "(...) the development of economic techniques does not formally destroy the spiritual, but rather subordinates it to the realisation of the Great Design."³³ Examples of reduction of potentially meaningful modes of interaction to mere "human techniques" were shown above to illustrate his point.³⁴

Ellul's web of techniques has had several more decades to extend its reach since Ellul wrote these words.

³¹ Grainger, pp.333-334.

³² Ellul, pp.209-10. Ellul, relatedly, then makes clear that once this removal of freedom has reduced our being to an existence as part of the machine, our inclination to object is also removed. (Ellul, p.226.) This chimes with the research cited by Ellul regarding assembly line workers above. (Ellul, pp.395-396.)

³³ Ellul, p.226.

³⁴ For example, *ibid.*, p.401.

Two exclusively human examples of our interaction within wider, contemporary, Western society were considered above, and these are the examples I am now going to return to. Can these be said to meet the criteria suggested by the above family resemblance for an attunement to the sacred that may be seen to be inherent in the shared learning and creation of performative knowledge processes? Ellul's above statement does not bode well, but until the case studies have been held up to the yardstick of our family resemblance, the jury must be out.

Firstly, in my example from personal experience outlined in the section on Ellul's work above, a healthcare service user was excluded from the day centre which had become his home, on the grounds that the arrival of his 65th birthday placed him outside the centre's remit. The decision was communicated shortly before Christmas. The service user (understandably, given that his emotional home was not wherever the council had made provision for him to have a roof over his head, but rather at his day centre) promptly stopped eating. Despite the dangers inherent in this, nothing could be done: due process had been followed, and no other process was now available to be followed instead. After much disruption, a senior manager was able to secure a temporary solution, but this intervention did not come without professional cost to the senior manager.

Secondly, as outlined in an example to illustrate Cordova's snowball analogy in **Part 1**, a significant proportion of Covid-19 self-isolation payment claims failed to result in payments being made.³⁵ ONS data then showed disproportionate numbers of Covid-19 deaths among bus drivers,³⁶ as some passengers were unable to stop travelling to work while infectious.

The examples have a common denominator: the fact that even once the problem became apparent, nothing could be done, and the reason why nothing could be done was that due process had to be followed even once this had been shown to be

³⁵ Booth, 'English councils refuse six in 10 requests for Covid self-isolation pay'.

³⁶ Office for National Statistics, *Coronavirus (COVID-19) related deaths by occupation, England and Wales: deaths registered between 9 March and 28 December 2020*, <URL: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand28december2020>>[Accessed: 20 March 2023].

counterproductive.³⁷ Due process was not only followed: due process was all there was.

In a scenario where due process is all there is, Cordova's balancing board cannot but do what it did at the time that the process was defined. There is no scope for it to respond to the shifting of the sand underneath the barrel it has been placed across. Cordova's ripples in a pond are given no scope to interact with other ripples they encounter; they have no option but to harden and to cast into their predefined mould whatever they come into contact with. Our jazz musician's *conatus* is given no scope to find its attunement with the *conatus* of the band, because the metronome of due process is all there is.

Both examples are illustrations of PRATEC's distinction between custom and habit.³⁸

Rooted in tradition to the same extent as habit is, custom expects to be responsive to circumstance, leading those observing it not "into reiterative activities but into re-creative ones."³⁹ Relatedly,

A normalised people lives in society that is resistant to diversity and to complication because the unusual disturbs the mechanisms of its functioning; a people of custom re-creates heterogeneity and is prepared for the new and even the uncertain.⁴⁰

PRATEC would thus argue, with Ellul, that the very universalism enshrining everyone's right to self-isolation support was now also ensuring that nothing could be done when the support failed to materialise. There is likely to have been an illusion of control when the process was first conceived. Reduction of the options available just to the process, however, not only introduced a static rather than dynamic quality into the interaction: it also handed over control to the process, eliminating any form of scope for human participation.

The most obvious discrepancy between the two examples on the one hand and PRATEC's contribution to the above family resemblance on the other is the absence of conversation in the examples. Conversation as it is understood by PRATEC – as communication involving all the senses, conducted with an intention to listen with alertness, and with an

³⁷ In the first example, this state of affairs was openly acknowledged. In the second example, it would, in theory, be possible to argue that nobody knew: in order for anyone to know that the payments were failing to materialise, the payments had to fail to materialise first. This may well be the case. However, the payments did not *all* have to fail to materialise first. As soon as *some* payments were failing to materialise, *someone* knew that some payments were failing to materialise. This neither led to their eligibility criteria being adapted to ensure future claimants received support, nor did it lead to those who were infectious (but without support) being able to access any other form of help that would have enabled them to afford to stop travelling to work.

³⁸ Rengifo, 'The Ayllu', pp.118-120.

³⁹ *Ibid.*, p.119.

⁴⁰ *Ibid.*, p.120.

attitude of “being in unison with life (...) in which each one is enriched by the life of the others (...)”⁴¹ – can clearly not be said to be taking place in a scenario where a healthcare service user has stopped eating in an embodied manifestation of his emotional distress, and nothing can be done because due process has been followed.

Finally, concerning Welch’s and Deloria’s requirement of respectful success, I would argue that this criterion has also not been met in either of the two examples. It would, theoretically, be conceivable to argue that success may be defined as something along the lines of healthcare and benefit systems being delivered efficiently, and thus at a low cost to those paying tax and National Insurance into the system. This would, however, underestimate the nuance of the meaning of the term “respect” in the context from which the requirement is taken. It has been shown that in an Indigenous context, a binary choice between prioritisation of the whole over the individual or vice versa can at best be understood as a question, and as a starting point for enquiry and for conversation, but never as an answer. “Respect” is not only due to the whole constituted by those paying tax and National Insurance. “Respect” is also due to an onion.⁴² Enquiry and conversation are expected to continue until respect can be given to both.

This final consideration returns us to the question of Gaita’s spider, and of meaning. Chillingly, there has turned out to be no room for any. Due process is all there is. Due process, having been elevated to a position of being allowed to be all that there is, leaves no option of allowing space for meaning to enter the equation. Due process ensured that even the senior manager who finally did manage to help the distressed healthcare service user was only able to do so at a professional cost. Due process ensured that infectious passengers remained unable to afford to stay off the buses even at a time when the problem must have been known.

Considered in light of our above family resemblance, which was conceived against a background assumption of a world in which the sacred is present in the material, and in which there may be nothing sacrilegious about equating the sacred with the loving, emotionally rational, enquiring, embodied, conversational mode of relating that allows us to participate in the shared learning and creation of the meaningful – considered in this light, there is nothing whatever of the sacred in either of the two examples taken from

⁴¹ Ibid., p.107.

⁴² Cordova, *How It Is*, p.173. Cordova was taught by her father to appreciate an onion as a living being even as she ate it.

the contemporary human society that we have made. Meaning has been eradicated, because due process has spread and has hardened everything in its wake, casting what could have been life into its ever expanding, ever hardening mould.

14.d. Learning from the difference between the two

The difference between the case studies deserves another look, as it may be considered another stepping stone on our journey towards an increased ability to approach, and thus learn from, an Indigenous way of relating meaningfully to the world. If it is possible to identify ways of relating amongst humans which are conducive to meaningful interaction, and to distinguish these from those which are not, then this understanding is likely also to be relevant to our interactions with non-human nature, not least because it was shown above that in an Indigenous worldview, all are members of the same community.

A possible answer, in light of the previous chapter discussing performative knowledge, appears to be that the women's eight were engaging in a process which can be understood through this term. It has been shown that both their performance and also the knowledge inherent in it were simultaneously process and outcome of a shared journey of learning and creation undertaken by those involved. No static blueprint existed. We now know, from the necessity of William James's blind spot above, that it could not, and that this excluded the possibility of successful unilateral control. Previous experience was considered and honoured, while never being understood as a pre-defined way of working now cast in stone. "We would share our learnings from previous crews, but for the performance we were creating we all needed to know what it felt like in this crew."⁴³

The eight's journey involved more than the mainstream Western understanding of "knowledge how", in the sense of existing knowledge simply never being expected to remain static. It also involved more than the mainstream Western understanding of embodied cognition, which would allow for the extensive bodily involvement of our senses in knowing, but at the same time remain reliant on a representationalist paradigm.

The eight's journey involved learning and creation at the same time. In the language of Karen Barad's agential cuts explored in the context of a participationalist paradigm in the early chapters of this thesis, the women's eight's journey may be understood to have

⁴³ Houghton, p.57.

involved learning and creating largely non-linguistically, in their boat, in between agential cuts. Then, as elements of their shared learning and creation began to crystallise, agential cuts were enacted by verbalising what had been learnt and created. As Barad's model shows, however, and as Cordova's balancing board analogy illustrates, these agential cuts did not mean that the process had now been rendered static: the cuts were part of the journey, and were never expected to constitute its end.⁴⁴ This is why verbalisation of one day's learning was insufficient, on its own, to carry the next.⁴⁵ The process can, thus, similarly be understood through Dewey's above remarks on the ongoing nature of artistic engagement.⁴⁶

The two examples of due process reigning supreme, on the other hand, contained no element of shared learning and creation: due process was already there at their beginning, and when it was found wanting, no scope was available for learning and creation to take place. Ellul's technique, as evidenced by the many examples in his work cited and additionally, for the purposes of this thesis, illustrated by the case studies in the previous section, effects a narrowing of the options available down to one. This unilateral control, enacted by due process, is the very opposite of the exploratory nature of performative knowledge processes.⁴⁷

I would therefore argue that the encouragement, or otherwise, of the shared learning and creation of performative knowledge processes is relevant to the thriving, or otherwise, of an environment likely to foster meaningful interaction and vice versa.

One aspect of this may easily be overlooked in the West, and I believe it is worth making

⁴⁴ The relevance of Barad's thinking to both parts of this thesis is summarised in **Appendix B**. While Barad stops short of making explicit reference to the ongoing nature of processes of shared learning and creation to the extent that Indigenous authors and Dewey do, and while her treatment of time stops short of engaging with the possibility of its containing cyclical features to the extent that, for example, PRATEC do, Barad does assert an "open-ended becoming of the world" (K.Barad, 'Nature's Queer Performativity', *Kvinder, Køn & Forskning*, 1-2, 2012, pp.25-53, p.40, DOI: 10.7146/kkf.v0i1-2.28067 [Accessed: 20 March 2023]), and she provides an example of iterative interaction between present and past (*ibid.*, pp.43-44 and p.48).

⁴⁵ Grainger, pp.303-304.

⁴⁶ Dewey, p.165.

⁴⁷ At first glance, there appears to be an inconsistency here: the very fact that the phenomenon referred to as "technique" by Ellul above has been shown to be capable of spreading, and does spread, would suggest that some form of learning and creation *must* be taking place. However, the change entailed by the spread does not involve any learning or creation; it is merely alignment with a standard that is already in place. It was shown above that Ellul's "technique" is an outgrowth of the conception of "the one best way to work"⁴⁷ of Gilbreth's day, with the spread of technique being caused by the ever-increasing need for adjacent processes to become standardised in order to align with existing, already standardised ones.

this explicit here, especially as it may also serve as a stepping stone helpful on our path to deepened understanding of PRATEC's conversation.

"The one best way to work" is conceived as "the one best way to work" regardless of who happens to be working. Having demonstrated the spread of technique to all other areas of life as a corollary of its initial spread throughout the realm of work, Ellul, in his chapter on human technique cited above, concludes that this stage of the spread then leads to the replacement of community by mass, with a person no longer being "a man in a group, but an element of the group."⁴⁸ This comes as no surprise, as Ellul has by this stage already shown that whatever technique touches, human or otherwise, is incorporated as "an element of the mechanism, an element which must play its role, and no more."⁴⁹

David Peat, conversely, might have reminded us of the Indigenous practice of leaving an opening in the circle for the Trickster to enter.⁵⁰ The shared learning and creation of performative knowledge processes involves this openness. The Indigenous conception of the Trickster, then, has its own intricacies, and these appear to be relevant to the thriving of an environment fostering meaningful interaction.

Burkhart's work, for example, was shown above to present the Trickster as being inextricably linked to his conception of locality, and thus to the land and to the humans and non-humans who share in it.⁵¹ Specifically with regards to the land, Burkhart's work opens up layers of meaning associated with the relationships involved which may, at least initially, be difficult for our Western mind-bodies to relate to.⁵² We are more attuned to that part of Spinoza's web of relationships where our day-to-day interactions take place and, in the West, that part tends to be predominantly human.

One point made by Burkhart in this context, however, is readily accessible to us in the West for the simple reason that it is a point borrowed from a Western philosopher to help us: it is Burkhart's point made about Martin Buber in **Part 1**, and about the difference between *I-thou* and *I-it* relationships.⁵³ This point is going to prove highly

⁴⁸ Ellul, p.335.

⁴⁹ Ibid., p.217.

⁵⁰ Peat, *Blackfoot Physics*, p.177.

⁵¹ Burkhart, *Indigenizing Philosophy Through The Land*, pp.xvi-xvii.

⁵² A glimpse of what is meant may be found in the unfolding of Kimmerer's postgraduate student's relationship with the plant of sweetgrass, and through this with ancient evolutionary relationships of biochemistry and story alike, in **chapter 16** below.

⁵³ Burkhart, *Indigenizing Philosophy Through The Land*, p.108.

relevant to the question of counteracting the replacement of community by mass.

Buber shares with Barad and Cordova a participationalist understanding of our relationships in the world, stating that objects are located in the past, whereas “true beings are lived in the present.”⁵⁴ An *I-it* relationship is one of experiencing; an *I-thou* relationship is one of meeting and of reciprocity: “All real living is meeting.”⁵⁵ His conception is one of our relating as living beings. In Buber’s thinking, we are not reduced to being elements of a mechanism, only there to perform a role.

With intriguing similarities to the relationship explored earlier between Newtonian physics and recent findings expanding on it, as well as with Barad’s conception of the dynamics before an agential cut and the manifestation of momentary stasis captured by one,⁵⁶ Buber acknowledges the parts played by *both* attitudes. It is unlikely that Buber would take issue with the mere existence of due process in our examples:

The world of It is set in the context of space and time. The world of Thou is not set in the context of either of these. The particular Thou, after the relational event has run its course, is bound to become an It. The particular It, by entering the relational event, may become a Thou.⁵⁷

Buber does, however, ensure that we are under no illusion with regards to which part is essentially constitutive to our humanity: “(...) without It, man cannot live. But he who lives with It alone is not a man.”⁵⁸ We might venture that he who lives with It alone has been incorporated by the spread of Ellul’s technique, and has been freeze-dried. In the case studies considered, the trouble was not that due process existed, but that due process was all there was.

To the extent that we remain alive to *I-thou*, however – to the extent that we dare to relinquish unilateral control and to enter into a living relationship – we are given a promise that appears to chime with everything we have learnt from PRATEC: “Spirit is not in the I, but between the I and Thou.”⁵⁹

Such relationality between living beings was shown to be absent from the examples taken from contemporary, Western, human society and explored in the previous section, where

⁵⁴ M.Buber, *I And Thou* (London: Bloomsbury Academic, 2013), p.10.

⁵⁵ *Ibid.*, p.9.

⁵⁶ The relevance of Karen Barad’s thinking to both parts of this thesis, also in relation to Martin Buber’s, is summarised in **Appendix B**.

⁵⁷ Buber, *I And Thou*, p.23.

⁵⁸ *Ibid.*, p.24.

⁵⁹ *Ibid.*, p.28.

due process was all there was. The journey of the women's eight prior to that, conversely, appears to have been intensely relational. Houghton relates that in her "best" teams (of which, as we know by now, the Rio 2016 women's eight is one of her prime examples), "I was curious about my crew mates rather than frustrated that we were different."⁶⁰ In particular, the eight's cox is portrayed as having played a vital role in fostering this relationality by seeing "the unit of people and their personalities as a massive part of the experience and actually producing the speed."⁶¹ This could not be further from Ellul's technique's incorporation of everyone and everything as "an element of the mechanism, an element which must play its role, and no more."⁶²

The shared learning and creation of performative knowledge processes, then, was intensely personal and relational in this example, whereas no personal or relational elements were to be found in the examples where creation of performative knowledge was absent, and standardisation had taken its place. Leaving an opening in the circle for the Trickster to enter entails being alive to the other lives we encounter. It entails taking Cordova's advice to allow our ripples in the pond to interact with all the other ripples. It entails allowing space for conversation and attunement to take place in the sense outlined by PRATEC, so that life flows.⁶³

I would argue that this is a lesson worth carrying forward into the upcoming exploration of our currently available Western methods of interaction with non-human nature in the next chapter. Examples of both Western and Indigenous authors valuing the potential role of contemporary Western science in this interaction have already been cited.⁶⁴ With regards to our attitudes, however, as we practise science, I believe it is going to be of interest to note from the very beginning that it is not exclusively PRATEC, and not exclusively Indigenous authors more generally, who advocate leaving an opening in the circle for the Trickster to enter in the form of *I-thou* relationships, and who then envisage our enjoyment of such relationships with members of non-human nature too. It is also Martin Buber.⁶⁵

⁶⁰ Houghton, p.23.

⁶¹ Ibid.

⁶² Ellul, p.217.

⁶³ Rengifo, 'The Ayllu', p.106.

⁶⁴ For example, Kimmerer and Peat.

⁶⁵ Buber, p.70.

Chapter 15 – Some trials and tribulations of contemporary Western interaction between humans and non-humans

15.a. Western science as a mode of interaction with non-human nature

It was shown above that the use of contemporary Western science as a mode of interaction with non-human nature can be highly compatible with Indigenous worldviews. Robin Wall Kimmerer's example of the Three Sisters,¹ cited in the context of the relationship between the individual and the whole in Indigenous thinking, not only serves as an example of plants being related through story and biochemistry alike. It also serves as a metaphor, in two ways which are going to be relevant to the questions to be explored in this section.

Firstly, the passage serves to illustrate Kimmerer's conviction regarding the above Indigenous conception of the individual's well-being as a contributing factor to the thriving of the whole and vice versa, rather than the two being in a relationship of binary dualism.

Individuality is cherished and nurtured (...) being among the sisters provides a visible manifestation of what a community can become when its members understand and share their gifts.²

Secondly, the passage serves as

(...) a new metaphor for an emerging relationship between Indigenous knowledge and Western science, both of which are rooted in the earth. I think of the corn as traditional ecological knowledge, the physical and spiritual framework that can guide the curious bean of science, which twines like a double helix. The squash creates the ethical habitat for coexistence and mutual flourishing. I envision a time when the intellectual monoculture of science will be replaced with a polyculture of complementary knowledges.³

It is evident that Kimmerer is anything but opposed to the practice of Western science. However, it is also evident that her thinking chimes with Cajete's **Part 1** caveat regarding the application of Western science in isolation leading to a "freeze-dried" conception of the natural world.⁴ As Deloria's and Wildcat's non-humans in general,⁵ Kimmerer's plants are teachers, and partners in conversation at the same time as being biological,

¹ Kimmerer, *Braiding Sweetgrass*, pp.128-140.

² *Ibid.*, p.134.

³ *Ibid.*, p.139.

⁴ Cajete, *Native Science*, p.306.

⁵ Deloria and Wildcat, p.59.

biochemical, and evolutionary phenomena.⁶ In a statement mirroring Kymlicka and Donaldson's work regarding our learnt, human incompetence in relation to communication with animals,⁷ Kimmerer reminds us that toddlers see plants, too, as animate beings until taught not to. She concludes: "There are intelligences other than our own; teachers all around us."⁸ Western science, applied from within an exclusively Western worldview, can be at risk of overlooking this.⁹

Kimmerer's above metaphor of the Three Sisters as a possible, emerging relationship between Western and Indigenous approaches to our human interaction with the non-human world, then, appears to show parallels with Buber's thinking cited above. The *I-it* relationship inherent in a Western scientific approach may be understood to be helpful, as opposed to its being destructive in and of itself. However, this can only be the case against a background of the possibility of *I-thou* relationships emerging from within it. Where science is allowed to turn into scientific reductionism, learning and creation through relationship are excluded.

Louise Westling was cited earlier as synthesising Merleau-Ponty's thinking with scientific discoveries in the field of ethology made several decades after his death, and concluding that we humans share in the "flesh of the world".¹⁰ This begs the question of why it took the involvement of an author from outside the field of ethology to come to this conclusion. If ethology itself were succeeding in creating an understanding of the world in which we humans engaged in a mutually supportive and instructive relationship with the non-human world we participated in, Louise Westling, at least in this regard, would have been left without much work to do.

15.a.i. The early days of ethology

It is going to be useful to consider Western science's own contribution to the discussion, then, in order to explore its relationship with the non-human lives it investigates. In particular, it is going to be useful to consider the work of those who were at the forefront of the emerging science of ethology when it first began to establish its own identity as a discipline, and any patterns of thought and action which may have been passed on to

⁶ Kimmerer, *Braiding Sweetgrass*, pp.ix-x.

⁷ W.Kymlicka and S.Donaldson, 'Animals And The Frontiers Of Citizenship'.

⁸ Kimmerer, *Braiding Sweetgrass*, p.57.

⁹ *Ibid.*, p.346.

¹⁰ Westling, p.27.

those following in the footsteps of its founding fathers.

Richard Burkhardt's *Patterns of Behaviour* offers a thorough account and analysis of the beginnings of ethology,¹¹ focusing on the research and careers of Konrad Lorenz and Niko Tinbergen from their postgraduate student days shortly before the Second World War to their deaths in the late 1980s. Despite the author's obvious respect for both scientists' accomplishments and dedication, the work does not shy away from an honest appraisal of Lorenz's failure to distance himself from the political developments of his time: an exact date of Lorenz's application is given to support Burkhardt's claim of Lorenz's willingness to join the National Socialist party, and examples are cited of excerpts from Lorenz's work evidencing his commitment to racist ideas.¹² Although Lorenz, once the war was over, became eager to distance himself from his Nazi past,¹³ it is left open to what extent this may have been driven by opportunism rather than by better judgement. The author does not offer an opinion on the question of whether Lorenz's continuing, lifelong interest in "innate" behaviour¹⁴ was related to his earlier interpretation of National Socialism as "politically applied biology".¹⁵ The author does, however, provide us with clear evidence of the fact that even near the end of his career, Lorenz continued to fail to denounce eugenics on ethical grounds, choosing to give exclusively practical reasons for his advice against its practice instead.¹⁶ Burkhardt leaves it up to us to draw our own conclusions from this.

Tinbergen, on the other hand, was opposed to such ideas both politically and scientifically, and understood the term "innate" to refer to processes "ready for use", rather than to an individual's character.¹⁷

Ethological questions considered in Burkhardt's account include, for example, the debate with regards to the existence of a dichotomy between learnt and unlearnt behaviours,¹⁸ and to what extent the two should be seen to be interacting – a discussion which has, as

¹¹ R.W.Burkhardt, *Patterns Of Behaviour: Konrad Lorenz, Niko Tinbergen, And The Founding Of Ethology* (Chicago/London: The University of Chicago Press, 2005).

¹² *Ibid.*, pp.241-242.

¹³ *Ibid.*, p.259.

¹⁴ *Ibid.*, pp.428-431.

¹⁵ *Ibid.*, p.255.

¹⁶ *Ibid.*, pp.455-456.

¹⁷ *Ibid.*, pp.428-431.

¹⁸ *Ibid.*, pp.375-396.

shown in **Part 1** , since been overtaken by events involving cabbies and violinists.¹⁹

Of particular relevance to this section of the thesis is the question of the two founding fathers' of ethology's interactions with their subjects, and whether these could realistically be characterised as involving an *I-thou* , thus allowing the necessary relinquishment of unilateral control entailed by our remaining alive to the unfolding of performative knowledge processes, or whether they are more likely to have been restricted to the scientific reductionism of an exclusive *I-it* . The relevance of this is not grounded exclusively in the importance of the two scientists' own research, but also in the fact that attitudes, behaviours, and methods established by the founders of the discipline are likely to have been carried forward, or at the very least interacted with, by their successors.

At first glance, it would appear that Lorenz's interaction with the animals he studied must have involved an element of relationship, for the simple reason that it included the imprinting of goslings.²⁰ Imprinting *is* relationship. However, Buber's requirement of an *I-thou* relationship goes beyond the mere presence of an element of relationship: Buber requires the relationship to be mutual, and he clarifies that

I can take out from him the colour of his hair, or of his speech, or of his goodness. I must continually do this. But each time I do it, he ceases to be *Thou*. (...) I do not experience the man to whom I say *Thou*. But I take my stand in relation to him.²¹

I would argue that Lorenz's performance at the Bronx Zoo in 1955, after more than 20 years of interaction with non-humans, can be said to cast doubt on whether anything of the sort took place in Lorenz's case: Lorenz appeared on the front page of the *New York Herald Tribune* after imprinting ducklings for the entertainment of an audience.²² The performance of imprinting for the entertainment of an audience arguably suggests that

¹⁹ Holder, 'James And The Neuroscience Of Buddhist Meditation'.

²⁰ Burkhardt, p.1.

²¹ Buber, p.7. Two additional points are worth noting here. Firstly, Buber uses the example of a tree (i.e., of a non-human) to illustrate the type of relationship discussed. (Buber, p.6.) Buber later qualifies this by excluding plants from some forms of relationship, but he makes clear that he is aware of this at least in part being due to mainstream attitudes discouraging some forms of interaction. (Buber, p.89.) Secondly, at first glance, the mere presence of *I-it* could here be seen to meet Apffel-Marglin's description of knowing as estrangement in **Part 1** . (Apffel-Marglin, *Subversive Spiritualities*, p.4.) This could then be interpreted as a denial of the wisdom of any attempt at propositional knowledge. However, it was shown above that in Buber's thinking, the interplay between the elements of *I-thou* and *I-it* in a relationship changes the nature of the *I-it* relationship once an *I-thou* relationship has existed: the *I-it* relationship is transformed as a result. (Buber, p.23.)

²² Burkhardt, p.402.

any relationship involved – despite imprinting, *per se*, involving a relationship – is likely to have been far from *I-thou*.

What is revealed about Tinbergen's professional development is at least as multi-faceted and interesting. Initially, the author's comments on Tinbergen appear to paint a picture of an almost stereotypical Western scientist, prone to hard work and forward planning,²³ and eager to establish ethology as a "science". This, for Tinbergen, required the rejection of an Oxford colleague's transdisciplinary ambitions of working towards a synthesis of science and religion.²⁴ The colleague was Alister Hardy,²⁵ and the ensuing collaboration between Tinbergen and Hardy on the biological side of the perceived divide appears to have been successful nonetheless.²⁶

Tinbergen's later development is then portrayed as a journey involving a move away from an exclusively objectivistic view of science. He is shown to have become open, for example, to the idea of acausal relationships existing alongside causal ones,²⁷ as well as to the importance of systems,²⁸ and he acknowledged that both his and Lorenz's early research had failed to take feedback into account.²⁹ He was also now prepared to acknowledge the possibility of an animal having their own subjective experience, although he continued to locate this question outside the scope of ethology.³⁰ Crucially, he now openly acknowledged Western science to be "only one way of meeting nature,"³¹ and became concerned that scientific knowledge was providing humans with "the power to manipulate (...) events and bully them into subservience,"³² as opposed to promoting understanding.

The respectful attitude implied by this, as well as the acknowledgement of the possibility of non-human nature harbouring wisdom deserving of understanding and of space to unfold, may well suggest the presence of *I-thou* elements in Tinbergen's relationships

²³ Ibid., p.206.

²⁴ Ibid., p.333.

²⁵ The existence and thriving of the Alister Hardy Religious Experience Research Centre at the Lampeter campus of the university where this thesis is being researched is testament to the fact that Hardy's transdisciplinary work, begun at Oxford, is being continued to this day:
<https://www.uwtsd.ac.uk/library/alister-hardy-religious-experience-research-centre/> .

²⁶ Burkhardt, pp.333-334.

²⁷ Ibid., pp.408-446.

²⁸ Ibid., p.438.

²⁹ Ibid., p.431. The term "feedback" is used (as outlined in the above chapter on Deloria and evolutionary theory) for a response encountered by an organism as a result of their interaction with their world.

³⁰ Burkhardt, p.435.

³¹ Ibid.

³² Ibid., p.444.

with the non-humans he worked with, at least during the final years of his career.

Tinbergen formulated a much-referenced cluster of four questions to be considered in relation to any animal behaviour encountered:

(1) What is its physiological causation? (2) What is its function or survival value? (3) How has it evolved over time? (4) How has it developed in the individual?³³

The questions were formulated near the end of his career, but not *at* its end.³⁴ I would therefore argue that although they appear to continue to show a preoccupation with an exclusively Western scientific approach, it is highly unlikely that, in Tinbergen's case, this is all there was. Given the author's remarks on Tinbergen's journey of development cited, it appears legitimate at least to consider the possibility that Tinbergen might, nearer the end of this journey, have agreed to an addition of two questions with regards to meaning which seem glaringly absent from his set of four: (5) What does it mean with regards to the way we can respectfully relate to this individual? (6) What does it mean with regards to the way we can respectfully participate in the whole?

However, it is important to point out that besides being mere speculation, this fictional amendment is not what is likely to have been carried forward by those who came after Tinbergen. As previously stated, the much-referenced cluster of Tinbergen's questions to consider in relation to any animal behaviour encountered is the original cluster of four, cited above.

Related back to Kimmerer's work cited at the beginning of this section, the much-referenced cluster of four questions bequeathed by the founding fathers of ethology to those who were to follow in their footsteps can thus be understood as an example of Western scientists being

(...) particularly good at learning *about* the lives of other species. The stories they could tell convey the intrinsic values of the lives of other beings, lives every bit as interesting, maybe more so, as those of Homo Sapiens. But while scientists are among those who are privy to these other intelligences, many seem to believe that the intelligence they access is only their own. (...) it takes humility to learn *from* other species.³⁵

With regards to learning *with* non-humans, we have already learnt from Shay Welch that

³³ Ibid., p.427.

³⁴ Ibid., p.426.

³⁵ Kimmerer, *Braiding Sweetgrass*, p.346 (italics mine). Kimmerer's understanding chimes with Apffel-Marglin's **Part 1** comments regarding the contemporary West's treatment of non-human nature as agency-less objects.

disrespect precludes the knowledge process.³⁶ If we lack the humility to learn from someone, we are unlikely to engage successfully in a process of shared learning and creation with them.

It is important, too, however, to note that the mere fact of something having been bequeathed to those who were to follow does not necessarily mean that this is now all there is. New generations of Western scientists may have engaged in their own riverbed-making, and this question is going to be explored in the following section.

15.a.ii. Western communication with non-human animals today

Frans de Waal is an example of a contemporary Western scientist who appears well aware of the limitations of Western science: he begins a book on the subject of animal intelligence by quoting the quantum physicist Werner Heisenberg,³⁷ stating that our scientific observations show nature when exposed to our method of questioning, and that this is different from showing nature itself.³⁸

De Waal thus exposes the human-controlled, largely laboratory-based methodologies employed by behaviourist researchers as reductionist ones, and extensively references Tinbergen's work to demonstrate the importance of studying animals in their natural environment.³⁹ Referencing examples taken from Japanese studies in the field of primatology, de Waal stresses the importance of empathy (and thus subjectivity) in order to understand an animal's behaviour, and points out that this is "quite different from the misguided notion of critical distance, which has given us excessive worries about anthropomorphism."⁴⁰ It also appears to be quite different from, for example, a view put forward by a contemporary zoologist interviewed by Lucy Cooke, on the importance of "purity" in research, which the interviewee conceives as being in opposition to human participation.⁴¹ De Waal, conversely, exposes the irony of researchers initially frowning upon the idea of naming any animals involved in their research for being unscientific, only to find dolphins' own use of signature calls fulfilling a similar function.⁴²

³⁶ Welch, *The Phenomenology Of A Performative Knowledge System*, p.45.

³⁷ Werner Heisenberg featured in **Part 1** of this thesis in the context of the relationship between uncertainty and indeterminacy in relation to the impossibility of knowing the exact location and the exact momentum of a particle at the same time.

³⁸ De Waal, p.7.

³⁹ Ibid., pp.29-39.

⁴⁰ Ibid., p.61.

⁴¹ L.Cooke, *The Unexpected Truth About Animals*, pp.386-390.

⁴² De Waal, pp.260-264.

As outlined in the above section discussing Vine Deloria and evolution, de Waal is sensitive to there potentially being more than one evolutionary pathway which may have led to the same outcome: the example he cites is of the physiological process for facial recognition being similar in humans, corvids, and sheep, while wasps' achievement of the same outcome is based on a different physiological process.⁴³

Relatedly, de Waal is, for example, critical of the mirror test as a measure of an individual's ability to form a concept of self, arguing that a mirror simply happens to be the preferred method employed by humans to distinguish their own image from that of others, whereas other species have been shown to achieve the same outcome in other ways.⁴⁴

De Waal is not alone in this: Marc Bekoff, for example, and for the same reason, is open to the possibility of morality in animals being beyond the ability of humans' existing scientific methods to measure.⁴⁵

De Waal is a zoologist but will, I suspect, nonetheless be delighted with contemporary research in the field of botany reporting plants showing additional growth to escape another plant's shade on one side, but not their own shade on the other.⁴⁶

Besides the above-mentioned interaction of cognition and learning with genetics and the environment (which is recapitulated for additional emphasis near the end of de Waal's book),⁴⁷ and the relevance of researchers' subjectivity in allowing empathy to develop, de Waal, above all, calls for animals to be considered on their own terms. De Waal grounds his understanding of animals as beings deserving of empathy and respect not in Singer's Argument from Analogy,⁴⁸ but in his own experience of animal research and in the works cited by him, concluding that

True empathy is not self-focused but other-oriented. Instead of making humanity the measure of all things, we need to evaluate other species by what *they* are. In

⁴³ Ibid., pp.71-73.

⁴⁴ Ibid., pp.240-243. Monkeys, for example, despite their long and supple arms, legs, and tails forming tangles of intertwined extremities during playfighting, and despite their failure to pass the mirror test, never appear to mistake their own feet for someone else's and gnaw them. (De Waal, p.240.)

⁴⁵ M.Bekoff, 'The Evolution Of Animal Play, Emotions, And Social Morality: On Science, Theology, Spirituality, Personhood, And Love', p.621.

⁴⁶ A.Fleming, 'The Secret Life Of Plants: How They Memorise, Communicate, Problem Solve, And Socialise', *The Guardian*, 5 April 2020. Available at: <https://www.theguardian.com/environment/2020/apr/05/smarty-plants-are-our-vegetable-cousins-more-intelligent-than-we-realise> [Accessed: 20 March 2023].

⁴⁷ De Waal, pp.265-275.

⁴⁸ Singer, 'All Animals Are Equal'.

doing so, I am sure we will discover many magic wells, including some as yet beyond our imagination.⁴⁹

This final thought offers a glimpse of the perspective taken by Kimmerer above when she speaks of learning *from* other species as opposed to solely learning *about* them. The idea is also developed in Marc Bekoff's work, who begins his exploration of *The Emotional Lives of Animals* by questioning the common assumption of animals only ever experiencing a subset of the emotions experienced by humans. While agreeing that there may well be emotions that humans experience and animals do not, and while stressing the importance of recognising the existence of an intersection of emotions experienced by humans and non-human animals alike, Bekoff is equally open to the possibility of there being emotions experienced by non-human animals which are not experienced by humans.⁵⁰

It is what Bekoff does with the intersection of emotions experienced by humans and non-human animals alike that is of particular interest in the context of this thesis. In a move reminiscent of Mary Midgley's method of approaching an unfamiliar human vantage point through the creation of increasingly well-informed stepping stones of questions, starting from, but increasingly liberated from being shaped by, one's familiar one, Bekoff, in collaboration with his colleague Alexandra Horowitz, argues that anthropomorphising is an evolved perceptual strategy,⁵¹ which can and should be successfully employed as long as it is understood as the starting point of our journey towards understanding each other, as opposed to being understood as its end.⁵²

It has been found that humans' assumptions of the presence of particular emotions in non-human animals can be mistaken: for example, a "grin" on a chimpanzee's face, initially interpreted as a grin, later turned out to be an expression of anxiety.⁵³ However, this is the very point made by Bekoff: it *did* later turn out to be an expression of anxiety, and the method by which this was achieved was based on an initial assumption of a capacity to feel, used as a starting point for a journey towards increased familiarity.⁵⁴

As did Shay Welch in her observations on communication of emotions between humans,

⁴⁹ De Waal, p.275.

⁵⁰ M.Bekoff, *The Emotional Lives Of Animals* (Novato: New World Library, 2007), pp.6-7.

⁵¹ *Ibid.*, p.10.

⁵² *Ibid.*, pp.124-131.

⁵³ Cooke, p.388.

⁵⁴ Bekoff, *The Emotional Lives Of Animals*, p.125.

Bekoff cites several studies exploring the role of mirror neurons in communicating emotions between humans and non-human animals.⁵⁵ Bekoff concedes that to date, the existence of mirror neurons has only been proven conclusively in humans.⁵⁶ Theoretically, if no mirror neurons were to be found in non-human animals, this could then lead us to assume that while humans' mirror neurons are likely to be involved in our recognition of emotions in non-human animals, non-human animals, on the other hand, might not be capable of doing the same. However, this assumption would overlook the findings cited by de Waal above, showing that the same evolutionary outcome may well be achieved by different physiological processes.⁵⁷ It would also overlook the findings of several studies cited by Bekoff, showing empathetic behaviour of non-humans towards other non-humans.⁵⁸

A personal story related by Bekoff shows him to have made a profound change to his professional life as a result of emotions being communicated between species. His PhD project required him to kill a cat he had been studying, and Bekoff openly admits to the cat's communication of fear breaking his heart, and to this being instrumental in his subsequent refusal to become involved in research that involved intentionally inflicting pain on, or the killing of, another being.⁵⁹

While I believe it to be important to highlight Bekoff's response as the role model that it provides for all of us in taking a stand against casual disregard, and against exploitation of another being, I also believe that an equally important part of Bekoff's story is the part just before this. It is safe to say that Bekoff was in possession of as much propositional knowledge about cats the moment before he killed the cat as he was the moment when he had. He would not have been studying his lecture notes at that moment, adding to the collection of facts he was already aware of. What transformed Bekoff – what made him want to turn away from harmful research, and engage in a form of science which not only allowed a role for the emotions, but honoured them – was his participation in his relationship with the cat.

Bekoff's choice to engage in a different form of research after this event would have been

⁵⁵ Ibid., pp.128-131.

⁵⁶ Ibid., p.129.

⁵⁷ De Waal, pp.71-73. De Waal specifically reiterates this in the context of the question of involvement of mirror neurons in apes' imitation: de Waal, p.274.

⁵⁸ Bekoff, *The Emotional Lives Of Animals*, p.130.

⁵⁹ Ibid., p.51.

understood by Kimmerer, who asks, as part of her discussion of scientific reductionism, “What good is knowing, unless it is coupled with caring?”⁶⁰ I suspect that Kimmerer, too, would have located the heart of the story in the inter-species communication taking place before this choice. Relating her own story of leading a group of students required to complete a five-week period of experiential learning at a wilderness field station, she stresses that it is not usually the facts memorised in lectures and seminars which result in students’ engagement in relationships with non-humans. The turning point, rather, tends to be their participation in an afternoon of digging roots, after which “there is something tender in them, and open, as if they are emerging from the embrace of arms they did not know were there.”⁶¹

There may or may not be a Western, scientific explanation for the emotional communication effected by the roots: Kimmerer notes that breathing in the smell of humus stimulates the release of oxytocin, the same hormone that promotes bonding between mother and child, and between lovers.⁶² At no point does she suggest that the story can be reduced to this.

Bekoff’s commitment to an emotional form of rationality in his work openly aims to convince others to adopt this attitude, too: “Holism and universal compassion and love need to replace impersonal reductionism.”⁶³ He is, however, acutely aware of currently being in a minority among Western scientists in this. Bekoff makes reference to difficult encounters with colleagues engaging in disrespectful research, and only to the beginnings of a liberating effect of pioneering literature on the subject of animal emotions on an otherwise sceptical Western scientific community.⁶⁴

15.b. The potential usefulness of offering an anthropocentric argument as a starting point for discussion

The difficulties described by Bekoff appear to be widespread, and this is bound to have an effect on the way the debate is conducted.

On the one hand, Raimond Gaita calls on us to allow our imagination to explore the

⁶⁰ Kimmerer, *Braiding Sweetgrass*, p.345.

⁶¹ *Ibid.*, p.236.

⁶² *Ibid.*

⁶³ Bekoff, ‘The Evolution Of Animal Play, Emotions, And Social Morality: On Science, Theology, Spirituality, Personhood, And Love’ p.651.

⁶⁴ Bekoff, *The Emotional Lives Of Animals*, pp.116-120.

possibility that other species may have different ways of engaging in relationships from those we have become accustomed to expecting in fellow humans. He argues that the inter-species intelligibility of *some* way of being “sufficiently like us” to support the first steps of a journey towards eventual mutual understanding may become apparent in unexpected forms once a relationship has been embarked upon.⁶⁵ Much of the Western debate with the exception of Gaita, on the other hand, appears to be focusing on already familiar terrain, forced, at least initially, to focus on analogy in order to overcome the scepticism shown by the majority of the scientific community discussed, for example, by Bekoff above.

It was also Bekoff who pointed out that anthropomorphism can be understood to be a natural response, and welcomed as a starting point for further attunement.⁶⁶

What appears to be emerging now, in addition, is an entirely separate proposition: the scepticism encountered when attempting to discuss animal emotions appears, at least in some cases, to be capable of forcing the discussion onto anthropocentric terrain at least at the beginning, irrespective of the stance on anthropomorphism of those involved. We are not talking about getting to know an animal and perceiving similarity. We are talking about being forced to demonstrate an animal’s analogy with humans, or, failing that, at least usefulness to humans, before others will consider considering the animal.

This may, at least in some situations, be a necessary step along the way. A thesis based on Mary Midgley’s method of setting out from the familiar in order then to venture further afield cannot then criticise the work of others for doing the same. Anthropocentrism and, with it, anthropocentric forms of anthropomorphism, constitute familiar ground for many sceptics. It is what happens next, once an argument has used the familiar as its starting point, which matters. If it remains rooted in the familiar, claiming that “they are just like us”, then we are unlikely to progress from our initial misconception of our above “grinning” chimp’s grin actually being a grin. If, on the other hand, we remain conscious of the fact that “they” may be less like “us” than we initially think, and that it may well be our differences as much as our similarities which have the capacity to become the beating heart of our relationships, then we have completed some groundwork for understanding

⁶⁵ Gaita, *The Philosopher’s Dog*, p.193.

⁶⁶ Bekoff, *The Emotional Lives Of Animals*, p.125. It is going to be shown below that Bekoff’s thinking shares similarities with Midgley’s and with Gaita’s on this point.

that Cordova did eat her above onion,⁶⁷ and also for understanding that she did not eat it in the same spirit as we might have done.

Mark Rowlands, for example, similarly to Marc Bekoff above, first makes the point that “brute, lived reality” must be considered alongside philosophy, and that it was his relationship with his dog Hugo at least to the same extent as philosophical considerations which allowed him to learn to appreciate Hugo as a person.⁶⁸

Rowlands then proceeds to make an argument rooted in the tradition of analytic philosophy for the personhood of at least some animals, basing his rationale on a claim of there being four core constituents of personhood, which he names as consciousness, rationality, self-awareness, and other-awareness.⁶⁹ His definition of personhood is thus very different from, for example, Cajete’s above conception of ecological personhood,⁷⁰ as well as from Deloria’s and Wildcat’s explicit inclusion of “plants, animals, and other natural features”⁷¹ in their use of the term to denote aspects of relationships, as opposed to individuals displaying particular characteristics.

The fact that it is difficult, with an argument structured in the way chosen by Rowlands, to avoid the use of human characteristics as a yardstick, becomes evident from the very beginning of his book: the author asserts that a “common sense” definition of a person would include non-human science fiction characters, due to the fact that “as far as their mental lives are concerned, they are just like us.”⁷²

This is a far cry from Gaita’s understanding above.⁷³ It is even further from, for example, Kimmerer’s observation that relationships between non-humans are bound to have existed without human involvement, as we humans are the youngest form of life on earth: when Skywoman arrived on earth, Loon, Otter, Beaver, Sturgeon, and Muskrat

⁶⁷ Cordova, *How It Is*, p.173.

⁶⁸ M.Rowlands, *Can Animals Be Persons?* (New York: Oxford University Press, 2019), p.x.

⁶⁹ Ibid.

⁷⁰ Cajete, *Native Science*, pp.288-289.

⁷¹ Deloria and Wildcat, p.93.

⁷² Rowlands, p.3.

⁷³ Gaita, *The Philosopher’s Dog*, p.193.

were already living together on it.⁷⁴

As previously discussed, more Indigenous authors, alongside Kimmerer, go further than Gaita, including those relationships in their considerations of personhood which may not involve “us” humans at all. This was why, in the **Part 1** section on Indigenous ethics, Burkhart was able to argue that it is not “our” role as humans to ascribe value to other beings, as “everything has all the value there is”.⁷⁵ It is also, as shown above, one of the reasons for Indigenous thinkers to find themselves drawn to Spinoza’s conception of the world as a web of relationships, too complex for “us” humans to grasp, where only a minority of relationships are centred upon our own involvement, much as our own locality is bound to constitute our own starting point for exploration.

We are thus returned to Cordova’s Indigenous view of an onion, which she ate, but which she did not eat in the same anthropocentric spirit as we Westerners might. We are, at the same time, returned to Westling’s Western work, employing the example of two ancient *Western* myths to show the complexities of relationships containing the potential to create meaning at the same time as containing the potential to cause each other’s deaths.⁷⁶ It is thus not the fact of our being Western which is causing the scepticism that forces the work of non-anthropocentric authors such as Bekoff and Rowlands onto argumentative terrain involving an anthropocentric perspective of an argument from analogy as its starting point. It is the fact of our having made a philosophical, political, and economic choice in the West, as shown in **Part 1**,⁷⁷ to spend the last five centuries disregarding the non-anthropocentric wisdom contained in our own stories.

As a result of this, we have just seen the initial establishment of the new discipline of ethology under the existing conventions of contemporary Western science alone, despite the sensitivity and open-mindedness shown by at least one of its founding fathers, who, despite acknowledging the relevance of scientific discovery beyond the exclusive application of Newtonian physics, nonetheless contributed to firmly placing the new

⁷⁴ Kimmerer, *Braiding Sweetgrass*, p.4. If this sounds unfamiliar to our Western ears, it is perhaps helpful to remember that Kimmerer makes exactly the same point based on Western evolutionary theory, too. It is, however, also worth noting that Kimmerer’s case study of her postgraduate student and the plant of sweetgrass, discussion of which is going to form a substantial part of the remainder of this thesis, is going to show that the two strands of this argument appear to be more intertwined than contemporary Western science alone would typically assume.

⁷⁵ Burkhart, *Indigenizing Philosophy Through The Land*, p.200.

⁷⁶ Westling, pp.49-60.

⁷⁷ Apffel-Marglin, *Subversive Spiritualities*, pp.35-54.

discipline into that tradition. We can thus appreciate the usefulness of initially anthropocentric arguments, such as Rowlands', being made. In equal measure, however, we can appreciate their function of being starting points rather than destinations of our journey.

Rowlands' work is of equal relevance to both. Its beginning, once seen in the context of the remaining chapters, may best be understood as an initially anthropocentric concession to help the above-mentioned sceptics become attuned to his ideas: Rowlands' book opens with a discussion of the four criteria of personhood formulated, with the aim of "reducing" the concept of a person to these.⁷⁸ Ten pages further in, Rowlands is already citing Gaita and Wittgenstein, and asking his readers to be open to the possibility of there being overlap between logic and psychology.⁷⁹

The thrust of Rowlands' argument, for a substantial part of his book, remains one of analogy between humans and non-human animals. The argument for all four criteria being met by some animals is grounded in their being met in a similar way to the way in which they are met by humans – in particular, in the fact that human cognition can, to a significant extent, be shown to be embodied rather than linguistic, too.⁸⁰

It is only once these points have been made that Rowlands ventures onto the argumentative terrain which has been shown to sit uncomfortably with the Western tradition of the last five centuries of relating to non-human nature as an "it" as opposed to a "thou". In his final chapter, and building on his case for animal personhood now made, Rowlands draws our attention to the need not simply to treat persons "well": instead, their treatment as persons involves asking them how they would like to be treated, as their actual interests may be quite different from those we initially attribute to them.⁸¹

This final, non-anthropocentric point – of non-humans needing more from the

⁷⁸ Rowlands, pp.21-23.

⁷⁹ Ibid., pp.33-34.

⁸⁰ Rowlands goes on to demonstrate that all four criteria can be argued to be met by at least some animals. As did Welch, above, in the context of dance, Rowlands, too, points out the relevance of embodied cognition alongside human language to this. He is able to show, for example, the similarities which exist between his own tracking of a ball before catching it and Hugo's doing the same with a frisbee, and of both thereby showing the same pre-reflective self-awareness claimed by Sartre in his example of answering without thinking that he was counting cigarettes. (Rowlands, pp.133-143.)

⁸¹ Rowlands, pp.194-200.

relationship between us than simply a comfortable dog bed, and of dogs' ability to communicate, for example, that they would rather go out than lie down on their dog bed – would have been more difficult to make, in the scientific and philosophical climate prevalent in the contemporary West, without the author's prior engagement in the customary, anthropocentric form of debate currently prevalent in the West. If Rowlands had done away with his four criteria of personhood conceived in our own image as humans, and if he had instead built his argument on the potentially entirely different cognitive and non-cognitive capacities of Wilshire's above extraterrestrials,⁸² most of us would have found it more difficult to engage with Rowlands' message. I would therefore argue that Rowlands' first step – of engaging with the currently prevalent, anthropocentric form of debate – has been a useful one.

I would, however, also argue that his second step, far from being able to constitute the destination of our journey of increased understanding, is more realistically characterised as another stepping stone. Despite the undoubted importance of sensitivity to individual animals' preferences, it does not yet address the capacity for participation, and thus contribution, of that which we perceive to be "other" in the weaving of the web that sustains us all. A journey content to end on the stepping stone of acknowledging the dog's communication of their wish to leave their dog bed and go out is a journey content to overlook the fact that the dog may have something to communicate that concerns others as well as the dog. It thus fails to accommodate Kimmerer's, and other Indigenous authors', conception of non-humans as bearers of wisdom pertaining to the whole. It stops short of our learning *from* non-humans, let alone our engagement in shared learning and creation *with* them.

15.c. Two caveats with regards to the accommodation of anthropocentrism as a starting point

15.c.i. The French don't speak much English, revisited.

The previous section allowed a first glimpse of some of the opportunities potentially lost by accommodating anthropocentrism in order to start a debate, unless care is then taken to progress from this starting point. It was shown that even the mildest form of anthropocentrism (the form granting personhood, and related entitlements, to non-

⁸² Wilshire, *The Primal Roots Of American Philosophy*, p.76.

humans, based on biological and philosophical research demonstrating high levels of ability in areas understood by humans, or perceptibly relevant to relationships with humans) cannot help but miss the unique contributions of non-humans beyond this currently existing comfort zone of ours.

This dynamic has been a recurring theme throughout this thesis, albeit so far mainly in relation to other humans. The **Part 1** section discussing the relevance of feminist thinking to the resolution of issues of epistemic injustice in relation to Indigenous thought showed that true expansion of our comfort zone to accommodate a new vantage point is more likely to transform the mainstream than merely to add to it.⁸³

Mere addition of the “other” to our already existing understanding of the world relegates the “other” to being a less complete version of ourselves: in its crudest form, and already mocked above, it makes us feel excited about our upcoming holiday in France, only to complain on arrival that “they” don’t speak much English. The same dynamic, however, is also the reason for de Waal’s argument that it is difficult to measure intelligence between species.⁸⁴ In its subtler forms, it prevents us from entertaining the possibility of there being more unfamiliar phenomena of the type of a bat’s echolocation: abilities beyond our human radar, unless someone or something opens our eyes to them.

Crucially, in relation to the latter, what we humans frequently fail to consider is that wisdom pertaining to the web of relationships within the whole may be contained in these non-human abilities. When Kimmerer speaks of the wisdom contained in plants, the relevance of this wisdom is twofold: on the one hand, the plants’ (apparently non-propositional) wisdom allows the plants to thrive. On the other hand, it can play a part in allowing the whole to thrive. Some of this wisdom may then be accessible to us in the form of stories and metaphors.⁸⁵ Kimmerer’s example of the Three Sisters of corn, beans, and squash is not only an example of plants’ individual *conatus* allowing individual plants

⁸³ Narayan and Harding, ‘Introduction’, p.vii.

⁸⁴ De Waal, p.128.

⁸⁵ David Peat, in **Part 1**, was shown to have arrived at a similar conclusion based on his discussion of acausal relationships, particularly in relation to the possibility explored by Jung and Pauli of there being a relationship between synchronicities and elements of a collective conscious and unconscious (for example Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.110). It was shown that some kinship existed between this point made by Peat and Cajete’s thinking regarding the interaction between story and community (Cajete, *Native Science*, p.95). Some potential implications of this are going to be revisited in the next chapter, in the context of a more detailed case study again supplied by Kimmerer.

as well as the system they are embedded in to thrive, although it is that, too.⁸⁶ It is also a story as we have seen story understood by Welch: it is a story for all of us to help each of us find our way forward in our own situation within the whole.⁸⁷ Kimmerer, being situated at an intersection of Indigenous knowledge and Western science, applies the wisdom contained in the example by offering her metaphor of a mutually supportive relationship between Indigenous and Western science, understood as a polyculture of complementary knowledges rather than an intellectual monoculture, being more nourishing to the world.⁸⁸ Others will draw out their own applications.

Spinoza's conception of there being no relationship of binary dualism between the individual and the whole, but a potentially mutually supportive one, does not usually form an integral part of our Western, underlying assumptions when interacting with the world. We are more accustomed to drawing a distinction between individualism and collectivism, and to weighing up priorities,⁸⁹ as opposed to persevering in questioning and exploration in the hope of finding a way forward that honours both, as an Indigenous talking circle was earlier shown to aim to do.⁹⁰

What this has meant, every time we have come across it above, has been that once we have made a choice to take Mary Midgley's method seriously – whether it be within our own species, or in our inter-species relationships – this choice has been directly relevant to our interaction with different forms of epistemic injustice. Once we have made a choice to allow our mind-bodies to embrace the possibility of going beyond a model of interaction with the “other” that merely seeks to add it to the existing mainstream, and started to expect to encounter transformative learning – once we have made this choice, our accustomed remedies for epistemic injustice of type 1 and type 2⁹¹ become insufficient on their own.

It is, beyond this point, of course going to continue to be as necessary as it was before to ensure that no one is prevented from making their epistemic contribution by others'

⁸⁶ Kimmerer, *Braiding Sweetgrass*, pp.128-140.

⁸⁷ Welch, *The Phenomenology Of A Performative Knowledge System*, p.160.

⁸⁸ Kimmerer, *Braiding Sweetgrass*, p.139.

⁸⁹ For example, Kymlicka, *Multicultural Citizenship*, p.153.

⁹⁰ Peat, *Blackfoot Physics*, p.49.

⁹¹ M.Fricker, 'Evolving Concepts Of Epistemic Injustice'. **Part 1** showed that unfortunately, to this day, both types of epistemic injustice discussed in Miranda Fricker's work continue to be barriers to successful knowledge transfer, as well as to successful collaboration, between Indigenous and Western individuals and groups. Their elimination is going to be necessary, but not sufficient, for more successful knowledge transfer and collaboration to be able to take place in the future.

prejudice, nor by a group's failure to make its concepts available to new members. In addition, however, and as part of the application of Mary Midgley's method in the process of familiarisation that has been with us throughout this thesis, it is going to be necessary to address the third type of epistemic injustice, the type that arises when the existing mainstream struggles to relate to the new vantage point's *own* concepts, even in a fictional scenario where discrimination has been overcome, and the problem has become one of inability, as opposed to unwillingness, to appreciate the new vantage point in its difference.

"We" Westerners are not going to understand Indigenous relationships with and on the land by allowing Indigenous groups access to Western conceptions of land ownership, any more than we are going to understand what Bouillabaisse is by giving the French a copy of *Good Housekeeping*. Indigenous access to Western conceptions of land ownership remains necessary, too, in order not to exclude Indigenous groups from, for example, buying a house in the United States. But it is no longer sufficient on its own, because it achieves nothing with regards to transcending our existing comfort zone. It achieves nothing with regards to Narayan and Harding's conception of transforming rather than adding to the mainstream. It achieves nothing with regards to Mary Midgley's method of approaching an unfamiliar vantage point by asking increasingly well-informed questions. Our increasingly well-informed questions are only going to arise from our engagement with *their* concepts alongside our own.

I would argue that the above-mentioned excerpt from Kimmerer's work in relation to the Three Sisters is an example of a possible application of this to our inter-species relationships. Kimmerer herself, in a different part of her work, argues that our dismissal of the possibility of communication between plants is grounded in our research findings showing the absence of *animals'* communicative processes in plants: "The potentials for plants were seen purely through the lens of animal capacity."⁹² In other words, a familiar starting point was used, which (as we have seen) can in itself be legitimate, but then no effort was made to approach the unfamiliar on its own terms by asking increasingly well-informed questions.

This might just be on the cusp of change: unsurprisingly in light of de Waal's above comments in relation to similar outcomes potentially being achieved via different

⁹² Kimmerer, *Braiding Sweetgrass*, p.19.

evolutionary pathways, the possibility of communication and cooperation between plants and animals is now beginning to be considered.⁹³ Evidence has also been identified of trees communicating via pheromones.⁹⁴ Kimmerer openly discusses our current inability fully to understand this process: “Tree conversations are still far above our heads.”⁹⁵ With this, Kimmerer goes to the very heart of the matter. There is not the slightest whiff of the French not speaking much English in her dealings with plant pheromones. She expects to get to know them on *their* terms, and she is aware that this can only be achieved once the gap in understanding on our part has been acknowledged.

15.c.ii. The inconsideration of assessing considerability

Kimmerer’s approach is, as previously stated, still unusual in the West. Although relationship and contemporary Western science are beginning to be seen, at least by some, to be compatible,⁹⁶ this does not automatically imply human openness to learning from, or with, non-human nature. Most scientific research conducted is not conducted with an expectation of entering into the type of relationship with non-humans where existing wisdom is exchanged, let alone where new knowledge and new additions to Merleau-Ponty’s web are jointly created. The lion’s share even of that proportion of animal research which is not conducted for exploitative purposes, falls into the category of serving as an anthropocentric starting point to a potentially non-anthropocentric continuation of a conversation about animals’ capabilities, as outlined in an earlier part of this chapter. There are, then, also cases where there appears to be little progression from this: an anthropocentric starting point can be a factor in the conception of research methodologies which fail to respect the animal.

Rats have been fed poisonous substances by humans in order to assess their ability to learn without immediate feedback.⁹⁷ Mice have been bullied in order to assess whether they are then capable of responding to Prozac.⁹⁸

Vultures have been blinded in order to assess their sense of smell.⁹⁹ Marmosets have

⁹³ Bekoff, *The Emotional Lives Of Animals*, p.107.

⁹⁴ Kimmerer, *Braiding Sweetgrass*, p.20.

⁹⁵ Ibid.

⁹⁶ For example, Bekoff, *The Emotional Lives Of Animals*, p.xvii.

⁹⁷ De Waal, pp.57-58.

⁹⁸ Bekoff, *The Emotional Lives Of Animals*, pp.10-12.

⁹⁹ Cooke, p.139.

been immobilised while awake to obtain brain scans.¹⁰⁰

Much has been said regarding humans' lack of consideration shown when working with animals in laboratories, on farms, in zoos, and in the wild, and there is much to do.¹⁰¹ In the following, I want to highlight a potential pitfall with one particular aspect of such research: I am going to give an example of research conducted in order to assess the moral considerability of animals potentially *itself* using inconsiderate means, thus defeating the object. This example is also going to be used for later reference in relation to questions of performative knowledge processes, and of Western interaction with the above attempt at a family resemblance of the sacred in the material.

The example in question involves a researcher wanting to assess whether chimpanzees were capable of remembering specific past events and of purposeful behaviour (as opposed to solely being subject to instincts causing them to respond to stimuli).¹⁰²

I am not going to take issue with the question: as shown above, there is a case to be made that it may sometimes be useful to begin an argument from a starting point of analogy in order to engage a new audience, before then progressing to the application of Mary Midgley's method from there. With regards to this particular question, Bekoff states that behavioural flexibility is an indicator of there being consciousness at play (as opposed to what is understood to be an instinctive response to a stimulus).¹⁰³ If the premise is that an anthropocentric starting point may be legitimate, and that behavioural flexibility is the trait to look for in order to answer the particular question at stake, then the researcher assessing the chimpanzees for this was, so far, engaging in a potentially legitimate pursuit.

It is what happened next that highlights why such research can still raise serious ethical questions. At the time when the research was being carried out, the apes had taken to travelling long distances, setting off early, which was not their usual preference, in order to access a particular source of food which they had come across in previous years.¹⁰⁴ Their early starts alone were thus already an indication of their capacity to remember, and to act purposefully on what they knew. Regardless of this,

¹⁰⁰ De Waal, p.115.

¹⁰¹ For example, Bekoff, *The Emotional Lives Of Animals*, pp.138-162.

¹⁰² De Waal, pp.206-210.

¹⁰³ Bekoff, *The Emotional Lives Of Animals*, p.31.

¹⁰⁴ De Waal, p.210.

The intrepid primatologist followed the travelling party on foot, but whereas the chimps typically ignored her tripping or stepping on a noisy branch, now they all would turn around and stare pointedly at her, making her feel bad. Sounds draw attention, and the chimps were on edge in the dark. This was understandable since one of the females had recently lost her infant to a leopard.¹⁰⁵

Even in the face of this additional evidence of memory and of purposeful behaviour, the researcher chose to continue to follow the travellers. She was there to assess their moral considerability, yet she does not appear to have thought that she was there to consider them.

It is for this reason that Bekoff calls for the precautionary principle to be applied with regards to animal emotions. Bekoff makes his case based on the possibility of animals possessing “sentience and an emotional richness equal to humans”;¹⁰⁶ Wilshire would invoke his extraterrestrials and argue that it need not be equal to humans, as it could be equally sophisticated in ways entirely beyond our own imagination’s reach.¹⁰⁷ So would Gaita,¹⁰⁸ and it was shown above that Kimmerer, for example, sees no particular requirement for any of this to be relevant to a non-human being’s capability to form relationships with “us”: non-humans were there long before humans, participating in relationships within the whole as it then was.¹⁰⁹ Such relationships are likely to be as relevant to the individuals concerned, and to the whole, as those “we” are capable of participating in. Cordova ate her onion, but she did not do it lightly,¹¹⁰ any more than Gaita went out to shoot rabbits lightly once he had seen them in a new light.¹¹¹

This attitude appears to be glaringly absent from the researcher’s behaviour towards the apes who were uncomfortable with being placed in danger by the noise she was making.

Regardless of utility (which was shown above now to be non-existent anyway, as the research question had already been answered in entirely unanticipated ways), the researcher’s behaviour failed to respect the apes. They had communicated their wish to be left alone.¹¹² However, in the account of the incident cited above, no mention is made

¹⁰⁵ Ibid.

¹⁰⁶ Bekoff, *The Emotional Lives Of Animals*, p.137.

¹⁰⁷ Wilshire, *The Primal Roots Of American Philosophy*, p.76.

¹⁰⁸ Gaita, *The Philosopher’s Dog*, p.193.

¹⁰⁹ Kimmerer, *Braiding Sweetgrass*, p.4.

¹¹⁰ Cordova, *How It Is*, p.173.

¹¹¹ Gaita, *The Philosopher’s Dog*, p.170.

¹¹² There was even a reason for their preference which was readily accessible to a human’s understanding (the leopard incident). This, although it is of course possible to respect someone’s wishes even when we are unable to understand their rationale for these, would have made it easy to see the need to comply.

of this even being considered. The project plan, and with it the apes, were duly followed regardless. Ellul, no doubt, took note.

Within a Western paradigm, and recalling some aspects of the discussion of Western environmental ethics in **Part 1**, Bekoff's call for the application of the precautionary principle to such situations could be argued from a sentientist as well as from a biocentric perspective:¹¹³ if the apes themselves have intrinsic value and thus moral standing, and their flourishing also does, then surely, in a situation where a preference expressed by the apes demonstrably relates to their flourishing, it should be considered regardless of what we may or may not believe about the sophistication of their emotions. It can even be argued from an ecocentric perspective,¹¹⁴ based on the rationale of the apes' being followed against their wishes potentially (through the loss of another of their young) preventing them from fully making their contribution to the good of the whole.

It can certainly be argued from the Indigenous paradigm's seeking of the dynamic balance of honouring the thriving of the individual at the same time as the thriving of the whole, and from Spinoza's conception of everyone's individual *conatus*, once matured into intuitive knowledge, contributing to their own well-being at the same time as to that of the whole.

¹¹³ Attfield, *Environmental Ethics*, p.10.

¹¹⁴ *Ibid.*, p.11.

Chapter 16 – Scientific research as conversation: a viable form of inter-species relationship?

16.a. A first glimpse and a first roadblock

Kimmerer argues that it is possible to conduct research projects within the realm of Western science in such a way that they can be conceived as conversations.¹ The fact that she places her arguments into a wider context of honourable harvest is as relevant to the points she makes about contemporary Western science as her points are in their own right. Both are going to be discussed below.

First and foremost, Kimmerer advocates respectful use (in the case studies discussed here, of black ash and of sweetgrass):² her findings are similar to Fienup-Riordan's relating to populations of geese cited earlier,³ demonstrating that it is not human absence that promotes thriving of the whole, but respectful human interaction. Black ash, and sweetgrass, benefit from our honourable harvest, as did Fienup-Riordan's populations of geese, while being harmed by our disrespect and greed. Underharvesting will cause problems, just as overharvesting will: "(...) ash relies on people as the people rely on ash."⁴

In the particular context of scientific research, framed as a further instance of humans turning to non-human nature to meet human needs (in this case, the human need for information), Kimmerer points out that it is not the fact of asking questions of non-human nature in itself which causes harm. What she does, however, advocate is a more holistic, more respectful conception of scientific research than that exemplified in the case studies above:

To me, an experiment is a kind of conversation with plants: I have a question for them, but since we don't speak the same language, I can't ask them directly and they won't answer verbally. But plants can be eloquent in their physical responses and behaviours. (...) Experiments are not about discovery but about listening and translating the language of other beings.⁵

The journey of a research student supervised by Kimmerer is then charted as she plans

¹ Kimmerer, *Braiding Sweetgrass*, p.158.

² *Ibid.*, pp.141-166.

³ Fienup-Riordan, 'A Guest On The Table', pp.545-553.

⁴ Kimmerer, *Braiding Sweetgrass*, p.149.

⁵ *Ibid.*, p.158. The point made by Kimmerer here chimes with the introductory discussion in **chapter 9** of the **Part 2** challenge of communicating where no shared spoken language is available.

and implements her respectfully conceived research project based on a hypothesis put forward by Indigenous holders of traditional ecological knowledge. It becomes clear from an early stage that the discipline of botany is by no means immune to the difficulties in relation to epistemic injustice discussed throughout this thesis. The author comments:

In the early years, no matter how carefully you prepared, this was nearly a rite of passage for women scientists – the condescension, the verbal smack-down from academic authorities, especially if you had the audacity to ground your work in the observations of old women who had probably not finished high school, and talked to plants to boot.⁶

It had been common knowledge for centuries that “for sweetgrass, human beings are part of the system, a vital part. (...) If we use a plant respectfully, it will stay with us and flourish.”⁷ The committee responsible for overseeing the student’s work, however, were dismissive of this idea when it was put forward as a hypothesis, insisting instead that any human intervention was going to be detrimental to the plant. The wording of their dismissal revealed an underlying refusal to contemplate a richer conception of research,⁸ rooted in an understanding of science which has been criticised by Deloria and Wildcat for forcing information from nature as opposed to taking our cue from it, and for failing to see the wood for the trees as a result.⁹

Similarly, on completion of the project, it was only once the research student’s findings, confirming her hypothesis, had been stripped of contextualised meanings and reframed “in the language of mechanism and objectification”¹⁰ that they became acceptable to the committee.¹¹

The language of mechanism and objectification alone, however, is unlikely to be capable of accommodating the nuance necessary in order to discuss the relationships involved. The language of mechanism and objectification alone is thus likely to be sufficient to accommodate Ellul’s technique, and the reign of due process, but it is unlikely to be able to accommodate the *I-thou* relationships advocated by Buber in order to balance and to modify our *I-it*.

⁶ Ibid., pp.159-160.

⁷ Ibid., p.163.

⁸ Ibid., p.159.

⁹ Deloria and Wildcat, p.65.

¹⁰ Kimmerer, *Braiding Sweetgrass*, p.165.

¹¹ A detailed discussion of how the project, once approved, unfolded and matured to completion can be found in the following section.

The language of mechanism and objectification alone, in its extreme form, is a programming language. Its function is to reduce the range of that which can be said to the range which a particular operating system has been programmed to be capable of processing on a computer, enabling those interacting with the computer to convey their ideas to it and to have the computer execute them. Ideas which lie beyond the preconceived range programmed into the operating system cannot be conveyed to the computer, with the exception of a few which may turn out to be communicable through unanticipated, innovative combinations of preconceived ones.

Whenever we restrict the range of that which can be accommodated by a model we create, we are reducing complexity, and thus only creating a simplified model of our participation in the world. It was shown above, in a variety of ways, that it is not the use of such stepping stones to understanding in itself which tends to cause us problems, but the fact of our subsequent treatment of the map we have created as the actual territory it was created to represent.¹²

The Plain English Campaign does important work. It gives us clear energy bills.¹³ Simple terms help readers. Main clauses are enough.

Even within the realm of propositional knowledge alone, however, the Plain English Campaign's advice reveals its limitations as soon as nuance begins to be required. For example, their recommendation to use the term "people" to replace "persons"¹⁴ is clearly only useful in those contexts where there is no difference between the two. Similar points can be made regarding other linguistic features besides vocabulary, such as, for example, syntax.

Similar points can also be made regarding any other limitation imposed on our language use. Once Kimmerer's student's committee had insisted on the exclusion of anything that could not be said in what they conceived to be academic English, the only possible outcome was for everything else to be excluded from the paper submitted. It took Kimmerer's book to allow it back in.

¹² For example, Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.74; James, *The Varieties Of Religious Experience*, p.334; Bohm and Peat, *Science, Order, And Creativity*, p. vii; Cordova, *How It Is*, p.108; Wilshire, *The Primal Roots Of American Philosophy*, p.56.

¹³ Plain English Campaign, *How To Write In Plain English*, URL: <<https://www.plainenglish.co.uk/files/howto.pdf>> [Accessed: 20 March 2023].

¹⁴ *Ibid.*

Once we extend our consideration of this point beyond the realm of propositional knowledge alone, we may, as shown above, soon arrive at a point where we have to accept that *any* use of human language – confined to exclusive use of one particular, pre-defined register or not – is only ever likely to convey a subset of our participation in the world. Even in the West, Martin Buber, for example, asserts that by the time we have codified our experience of such participation into the categories available to speech, our speech only “snatches away at the fringe of real life.”¹⁵

This is the difficulty Wilshire refers to when he cautions against premature assumptions of our having discerned “whats” from “thats”.¹⁶ It is also the reason why, for example, Gaita¹⁷ and Midgley¹⁸ value the role of story and of poetry, and why Welch values the role of story and of dance.¹⁹ It is why the Cree in **Part 1** found metaphor helpful in creating shared meanings when communicating their world to those outside it.²⁰ It is why Dewey is pessimistic regarding the ability of human language fully to convey our emotions at all.²¹ It is why the Rio 2016 women’s eight’s process of shared learning and creation, even once it had been translated into words, was only adequately captured by these words for those who were participants in the rest of the story.²² It is why Havi Carel found in a healthcare setting that some experiences can only be communicated where a certain level of shared background is already in place.²³ It is why David Abram found human language to be insufficient to accommodate all facets of his communication with non-humans.²⁴ It is why McPherson and Rabb advocate experiential forms of learning, and cite examples of stories being written “back into the land”.²⁵

It is in the moments before we emerge from our participation, before we extract ourselves and attempt to tame elements of the world into compliance with the categories

¹⁵ Buber, p.13.

¹⁶ Wilshire, *The Primal Roots Of American Philosophy*, pp.55-56. Vine Deloria, relatedly, quips that the West has “foreclosed the possibility of experiencing life in favour of explaining it.” (V.Deloria, *God Is Red: A Native View Of Religion* (Golden: Fulcrum Publishing, 1994), p.291.)

¹⁷ Gaita, *The Philosopher’s Dog*, p.85.

¹⁸ Midgley, *Animals And Why They Matter*, p.145.

¹⁹ Welch, *The Phenomenology Of A Performative Knowledge System: Dancing With Native American Epistemology*.

²⁰ H.A.Feit, ‘Hunting, Nature, And Metaphor: Political And Discursive Strategies In James Bay Cree Resistance And Autonomy’, pp.411-452 (pp.415-416).

²¹ Dewey, p.70.

²² Houghton, p.57.

²³ Carel and Kidd, ‘Epistemic Injustice In Healthcare: A Philosophical Analysis’, p.530.

²⁴ Abram, pp.166-169.

²⁵ McPherson and Rabb, p.176.

available to our speech, that Spinoza's above conception of intuitive knowledge and Deloria's above growing into synthetic attentiveness meet, where intuitive knowledge can be conceived as a form of love which is deeper than reason but reached through reason,²⁶ and where PRATEC's ongoing conversation with the world unashamedly defines itself as being about mutual nurturing.²⁷

This is why Lloyd calls for a wider conception of rationality than that currently accepted by the Western mainstream,²⁸ and why Cajete was cited in an earlier chapter, recommending the acceptance of Indigenous forms of knowing into Western forms of scientific research. Cajete was asking for the research proposal that was to be submitted by Kimmerer's postgraduate student years later to be considered on merit by her committee, as opposed to being dismissed as a result of the third type of epistemic injustice, the type resulting not from our failure to share "our" concepts with "them", but from our lack of familiarity with "theirs". He was asking for a scientific context in which thoughts such as those put forward by Bekoff regarding animal emotions no longer inevitably mark the beginning of a difficult and potentially professionally damaging conversation. He was asking for a scientific context where it is no longer irrational to be an embodied and emotional individual sharing in the flesh of the world.

It appears that one of the potential roadblocks predicted at the end of **section 14.a.** has materialised as part of the above case study. However, given that the purpose of **Part 2** is to explore the possibility of contemporary Western engagement with the sacred in the material, and that the trouble predicted in **section 14.a.** relates to an aspect of the potential actualisation of such engagement, this, in itself, pending further investigation below, may well be viewed as first a sign of the above case study being likely to be found to be in tune with what is being attempted.

16.b. Applying the family resemblance, part 3: can current Western scientific communication with non-human nature be understood to be based on shared learning and creation, and potentially involve attunement to the sacred?

A sketch of a family resemblance of our potential attunement to the sacred in the material was attempted in **section 14.a.** . The journey of the Rio 2016 women's eight was

²⁶ Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.127.

²⁷ Rengifo, 'The Ayllu', p.92.

²⁸ Lloyd, 'The Man Of Reason'.

then held up against this yardstick, as were two examples of wider contemporary Western human society's attempts to navigate our interdependencies. Then, some case studies of our human interaction with non-human nature were provided. It is now time to consider the latter in light of the family resemblance, too: this was, after all, identified as a potential stepping stone to the fostering of understanding between humans and non-humans in the current near-absence of Western ritual.

The family resemblance attempted, above all, relied on the presence of mutually respectful, responsive relationships, providing fertile ground for processes of shared learning and creation to emerge and to enable mutual attunement of the individual's *conatus* with that of the whole.

As things currently stand, and based on the evidence so far presented in this chapter, pockets of emerging respectful practice appear worth considering in this context, such as those exemplified in Kimmerer's work above.

Attunement could also, for example, be said to have been involved in the interaction between Bekoff and the laboratory cat he was required to kill for his PhD project: it is evident that communication had found a way of taking place despite there being no common spoken language available. The outcome, although heartbreaking, showed that learning must have occurred at least on Bekoff's part, as the incident turned out to be influential in Bekoff's career choices thereafter.²⁹

Bekoff's account of the incident focuses on the final day. This means that there is insufficient information available to say more than the above. The fact that Bekoff learnt from the situation, on its own, is insufficient to permit assessment of whether or not this was as a result of an ongoing process of shared learning and creation engaged in as part of his relationship with the cat. However, I would argue that what *can* be said is that Bekoff's comments bode well for the emergence of such processes in his future relationships with non-humans: he openly admits to having been deeply shaken by the experience, and relates that a project's encouragement of researchers' relating to the animals involved by name became one of his criteria when selecting future projects to contribute to.³⁰

The above interaction between Kimmerer's postgraduate student and the sweetgrass

²⁹ Bekoff, *The Emotional Lives Of Animals*, p.51.

³⁰ *Ibid.*

studied as part of her research is described in more detail, and over a period of time. It is also of interest due to the involvement of plants rather than animals, where similarities with humans offering starting points for attunement are likely to be more elusive. Bekoff, for example, cites studies demonstrating the importance of eye contact in emotion recognition.³¹ Eye contact cannot be achieved between humans and plants. Is it likely to be feasible, in light of this, for a Western-trained researcher without ready access to the use of ritual, to enjoy attunement in her relationship with the plants studied, leading to shared learning and creation, as opposed to exclusively subjecting the plants to the methodologies favoured within the existing Western paradigm?

On the surface, the project described appears straightforward enough. The postgraduate student's hypothesis is based on the Indigenous experience of sweetgrass growth being encouraged by honourable harvesting, while her postgraduate research committee is sceptical of this based on their understanding of human utilisation of non-human nature inevitably having a detrimental effect. In addition, the project aims to compare the effects of two different methods of harvesting sweetgrass practised by two different Indigenous communities.³²

Besides her emotional and spiritual as well as scientific appreciation of plants discussed earlier, Kimmerer had a particular motivation for encouraging a holistic approach in the case of sweetgrass, which was grounded in her tradition's long-standing relationship with the plant.³³ The project was therefore conceived from the beginning to include an experiential approach to the postgraduate student's familiarisation with the plant.³⁴

It was the practicalities of implementing this approach which led to deeper questions being considered. The fact of their being embedded in an organisation expecting the postgraduate student to work within the conventions of an exclusively Western understanding of research meant that the introduction of any form of ritual into the relationship would have constituted a breach of the neutrality expected of her.³⁵ At least as importantly, being Western-trained and from a Western background, the student did not have her own tradition of living in relationship with the plant, and would have felt

³¹ Ibid., pp.50-51.

³² Kimmerer, *Braiding Sweetgrass*, pp.156-159.

³³ Ibid., p.158.

³⁴ Ibid.

³⁵ Ibid., p.161.

uncomfortable appropriating a ritual relationship enjoyed by others.³⁶

As the project progressed, however, it turned out that she was unable to stay entirely neutral in her interaction with the plants:

(...) after so many days among them, learning and listening, neutrality proved impossible. Eventually she was just careful to show them all her mindful respect, making her care a constant as well, so that she would not sway the results one way or the other.³⁷

The results obtained by the study matched the findings communicated by the Indigenous groups at its beginning: removal of up to 50% of the plant biomass stimulated growth, while no removal, as well as excessive removal, were both shown to be detrimental.³⁸ No significant difference was found between the effects of the two different methods of harvesting practised by the two different Indigenous communities in the area.³⁹

The absence of a shared spoken language between humans and plants makes it difficult to say with certainty whether the relationships that developed during the project involved shared learning and creation in the sense discussed in relation to interaction between humans above, regarding the journey of the Rio 2016 women's eight and the two examples of wider contemporary, Western, human society navigating our interrelatedness.

At least two points, however, *can* be made:

Firstly, as exemplified by the above citation regarding the postgraduate student's inability to stay entirely neutral towards the plants studied, some attunement does appear to have taken place.

Secondly, and intriguingly, shared learning and creation appears to have taken place, too, and it seems to have taken place in a way that does not usually appear to be considered as a possibility by the mainstream.⁴⁰

On completion of the project, the postgraduate student was asked in her viva whether

³⁶ Ibid.

³⁷ Ibid.

³⁸ Ibid., p.165.

³⁹ Ibid., p.163.

⁴⁰ It is at this point that the wisdom contained in Deloria's initially unpalatable stance in **chapter 10** shines through: even as it was shown above that evolution demonstrably does involve genetics, reflection on the postgraduate's case study is going to show that its reduction to genetics alone, omitting relationship, would leave comprehension incomplete. Without prior engagement with Deloria's initially unpalatable stance, this would have been likely to remain hidden from our Western view.

she was implying that the sweetgrass in the (unharvested) control plots “had its feelings hurt by being ignored”.⁴¹ While admitting that the scientific literature offers no explanation for the relationships between sweetgrass and the Indigenous communities harvesting it, Kimmerer is able, in retrospect, to put forward an explanation from existing scientific research involving buffalo and grass: compensatory growth helps grass recover after being grazed by free-range buffalo herds. “Free-range buffalo graze and move on (...). Thus they obey the rule of not taking more than half, of not overgrazing.”⁴²

The biochemical balances involved are described as intricate ones, based not only on the obvious role of fertiliser supplied by the herd, but also on chemicals contained in their saliva.⁴³

To my knowledge, there is no comparable research available as yet regarding the biochemical intricacies of human honourable harvest, and this is not the point I am making. The point I am making here is twofold:

Firstly, when humans engage in honourable harvesting of sweetgrass, they may well be availing themselves of wisdom imparted – most likely in the form of non-propositional knowledge – by buffalo they have met. This would, for example, apply to a society living in proximity to a herd of buffalo, and falling into shared habits in a similar way to that described in relation to dogs and humans by Raimond Gaita.⁴⁴ In other words, even if it were to be found that no case can be made for the existence of direct processes of shared learning and creation between humans and plants, the case study provides evidence of a role played by plants in a wider web of relationships involving contributions of wisdom made by non-human animals.

Secondly, Kimmerer’s work was contextualised earlier, in the section considering Vine Deloria’s views, as an example of the interplay which is possible between evolutionary theory and Indigenous worldviews.⁴⁵ Kimmerer’s example of human interactions with wild strawberries is comfortably situated within both, and leads her to conclude that “the

⁴¹ Kimmerer, *Braiding Sweetgrass*, p.163.

⁴² *Ibid.*, p.164.

⁴³ *Ibid.*

⁴⁴ Gaita, *The Philosopher’s Dog*, pp.49-50.

⁴⁵ It may be helpful at this point to recapitulate a parallel with Cajete’s thinking in relation to the scope of Native science including not only our rationality in the narrower sense, but also our interaction with the world around us by means of our metaphoric mind (Cajete, *Native Science*, pp.28-31). It was through the latter that the postgraduate student became attuned to the origins and meanings of the phenomena shown in her research findings.

stories we choose to shape our behaviours have adaptive consequences.”⁴⁶

Millennia of evolutionary attunement between buffalo and grass – and, if we are open to considering the Indigenous side of Kimmerer’s argument, millennia of shared learning and creation in the relationship enjoyed by buffalo and grass – have now culminated (for the moment, and pending further development) in the intricate balance of buffalo saliva, grass growth, buffalo growth, and buffalo dropping fertiliser on grass described by Kimmerer above. Story and Western science have turned out not to be in opposition, but intertwined as in Kimmerer’s metaphor of the Three Sisters above.⁴⁷ As in Candace Pert’s laboratory in **Part 1**,⁴⁸ story has found a way to grow through the map that is not the territory. There is no need for us to abandon evolutionary theory, but there is a need to allow it to continue to grow into wholeness, and to allow it to engage with those aspects of reality it was shown in **chapter 10** and in **section 15.a.i.** to have excluded to date. Its underrepresentation of the relational aspects involved, which made Deloria deny its validity altogether at the beginning of **Part 2**, has now revealed itself not to have been caused by their genuine unimportance to evolutionary processes, but by the theory’s being situated in a conception of science unwilling to be seen to be engaging with relationship, and unwilling to permit the use of language allowing relationship to be overtly discussed.⁴⁹ The example of buffalo and grass, and of Kimmerer and her postgraduate student rediscovering it in their relationship with sweetgrass, has been there for millennia, hidden in plain sight, ready for us to gather up the threads of the

⁴⁶ Kimmerer, *Braiding Sweetgrass*, p.30. I do not intend here to distract from what is being said here by offering a discussion of the problems surrounding Lamarckism, as that is emphatically not what Kimmerer is proposing: what she *is* saying is that her example illustrates the link between evolutionary advantage and relationships in an organism’s or group’s environment (in her earlier case, interaction of humans and wild strawberries).

⁴⁷ Kimmerer, *Braiding Sweetgrass*, pp.128-140.

⁴⁸ Apffel-Marglin, ‘Western Modernity And The Fate Of Anima Mundi’, pp.29-30.

⁴⁹ It may be helpful here to consider that the committee overseeing Kimmerer’s postgraduate student’s research were far from the first to fall into this trap: none less than Niko Tinbergen, despite, as shown in **section 15.a.i.**, demonstrably having the sensitivity to relate to the animals he met throughout his career, was shown in the same section not only to have turned down an offer of transdisciplinary work involving engagement with the spiritual, but also to have actively located the question of animals’ own experience outside the emerging discipline of ethology – only to find himself later having to concede that both his and Lorenz’s research had failed to account for feedback from the animal’s environment appropriately. Long before the committee considered the postgraduate student’s research, Tinbergen’s acceptance of the same tacit assumption frequently made by contemporary Western science (of issues of relationship not forming part of scientific enquiry) had already turned out to have prevented him from contributing to the development of ethology as fully as he would otherwise have been capable of doing.

story and to live the next episode.⁵⁰

What other term can be used for this, if not shared learning and creation, at a slower pace than with Gaita's family dog, and maturing across generations and eventually millennia? And if we humans – as exemplified by Kimmerer's postgraduate student – manage to attune to this, and to participate with it by engaging in a relationship of responsiveness, respect, and honourable harvest with a patch of sweetgrass, then what other description can be offered of this, if not that from our family resemblance above, of our individual *conatus* balancing on its barrel to play jazz with the *conatus* of the band that constitutes the whole?

It is at the very least in this sense that I would therefore argue in favour of the above case study being an example of human interaction with non-human nature by means of Western science being capable of interacting with the sacred in the material.

Who is to say, however, that the aspect of the case study considered up to this point is all there is to be learnt from it? Could there, for example, not be a case to be made for so-called "instinctive" behaviours being underrated? We Westerners tend to feel the need to justify non-humans' moral considerability by demonstrating that they have a similar form of consciousness to ours, evidenced by a form of behavioural flexibility we humans are able to recognise. We then tend to understand this to be in opposition to instinct.⁵¹ However, this overlooks the possibility of non-humans already having found their own way of balancing on Cordova's shifting sand and playing jazz with the *conatus* of the whole, which may have developed as differently from ours as wasps' facial recognition above.⁵²

Western science is, to my knowledge, as yet unable to tell us how evolutionary and emotional relationships such as that discussed in this section relate to the **Part 1** ideas of Peat and Bohm regarding deeper levels of order underlying those we can readily see, or to Jung's and Pauli's ideas of synchronicity, and of there potentially being collective

⁵⁰ I find it useful to note in this context that inclusion of the relational aspect also exposes the untenability of the above-mentioned misappropriation of evolutionary theory for racist purposes: once our focus has been adjusted to include the development of the relationships in our jazz band allowing individual *conatus* to play jazz with that of the whole, any supremacist misinterpretation of "survival of the fittest" must collapse – also illustrating Burkhart's **Part 1** point with regards to a wider conception of science and its natural inclusion of ethics. (Burkhart, *Indigenizing Philosophy Through The Land*, pp.233-234.)

⁵¹ For example, Bekoff, *The Emotional Lives Of Animals*, p.31.

⁵² De Waal, pp.71-73.

aspects to our unconscious, which were also considered in **Part 1** .

With regards to the latter, we know from Peat's work that at least Pauli sided with those post-Enlightenment alchemists for whom involvement of our bodies and, with it, openness to the development of ritual ways of interacting with each other, remained an integral part of our engagement with the world.⁵³ It may be worth bearing in mind here that Cajete's comments, made in the same context, on the constitutive role of story did not require all stories to be verbal any more than Welch's work on dance did.⁵⁴

If we allow ourselves to become open again to the potential for the meaningful to emerge in the material in the West, are we then likely to refer to the sacredness of meanings found and created as "spiritual", bearing in mind that, as Apffel-Marglin pointed out in **Part 1** , the term has a connotation of other-worldliness which is now no longer going to be intended in this context?⁵⁵ – We may find ourselves unable fully to express ourselves in human language alone: we may find, as we have with love, that some things cannot be controlled and claimed as ours alone in the form of propositional knowledge at all.

16.c. Pockets of good practice do not attunement make, and why there is yet hope

16.c.i. First ideas on fertile ground for cross-species I-thou relationships in the West

Having found, in the previous section, the possibility of contemporary Western human engagement with the sacred in the material being present in at least some of our existing relationships with the non-human world, I would now argue that this is likely to be the rationale behind Kimmerer's suggested way forward of each of us forming our own, personal relationships with it.⁵⁶

It is unlikely to be coincidental that the most disrespectful examples of interaction between humans and non-humans through the medium of Western science – those cited

⁵³ Peat, *Synchronicity: The Marriage Of Matter And Psyche*, p.90.

⁵⁴ Cajete, *Native Science*, p.95.

⁵⁵ Apffel-Marglin, *Subversive Spiritualities*, p.87.

⁵⁶ For example, Kimmerer, *Braiding Sweetgrass*, p.340. The idea takes a variety of forms throughout Kimmerer's work, one of which is a thought experiment involving seven different forms of relationship between humans and land, ranging from an absence of relationship to Kimmerer's preferred option of "land as home". With participationalist aspects to her thinking clearly in evidence, she points out, citing Joanna Macy, that action arising from such a relationship is going to be reciprocal: there is no need for us to wait to be transformed before we begin to nurture the land. We are going to be nurtured in return, and this reciprocity is going to be capable of transforming us as well as the world around us (Kimmerer, *Braiding Sweetgrass*, pp.339-340.) Shared ground is evident with Dewey's above doings and undergoings (Dewey, pp.51-52), as well as with PRATEC's nurturing and being nurtured (Rengifo, 'The Ayllu', p.92).

at the beginning of the previous section, involving, for example, the deliberate feeding of poison to rats in order to assess their moral considerability – are those taking place in a context detrimental to the development of relationships. Marc Bekoff supplies ample evidence of Western scientists’ development of successful relationships with non-humans – with the family dog, for example – and of the cognitive dissonance of their failure then to relate to the animals in their laboratories in any form of respectful or responsive way.⁵⁷

It thus appears that proximity alone does not inevitably lead to the development of relationship. The animals in the disrespectful examples above appear to have been as thoroughly appropriated for consumption by Ellul’s ever-spreading web of techniques as the humans in the earlier section on contemporary Western human society’s attempts to navigate its interdependencies. Undoubtedly, due process was followed in the case of the poisoned rats as much as it was in the case of the humans unable to claim their Covid-19 isolation payments. In the case of the rats, due process is likely to have relied on the above amendment to the Animal Welfare Act stating that they were no longer rats,⁵⁸ illustrating Ellul’s above findings of any part of nature, human or otherwise, being depersonalised by the spread of technique.⁵⁹

Similarity – perceived as much as actual, as the earlier example of the grinning chimpanzee⁶⁰ shows – cannot help but form a starting point on our journey to meet the unfamiliar. It is what happens next that matters. In the case of the grinning chimp, we did not leave it there, and now we know better. The question, going forward, is how we can participate in creating conditions for this outcome to become a likely one.

It has been shown that alongside this being a matter of respect and of compassion (and this matters, regardless of what I am going to say next), and alongside its being a feature of the family resemblance being considered, it is also a matter of scientific rigour: Kimmerer’s postgraduate student in the previous section would, demonstrably, have learnt less if she had confined her project to stay within the boundaries currently favoured by mainstream Western science.

Bekoff calls for our subsequent steps, after the inevitable, initial one of anthropomorphic perception of similarities, to place the animal at the centre of our observation, as

⁵⁷ Bekoff, *The Emotional Lives Of Animals*, pp.114-116.

⁵⁸ *Ibid.*, p.139.

⁵⁹ Ellul, p.217.

⁶⁰ Cooke, p.388.

opposed to relying on our own, pre-existing experience of the world.⁶¹ In doing so, he appears to be applying Mary Midgley's method for approaching an unfamiliar worldview, as practised in this thesis, across species boundaries.⁶²

This implies that Midgley's method in its immediately obvious form of *verbalising* increasingly well-informed questions is now unlikely to be all that is going to be involved. When allowing our relationships with non-humans to include learning from them as well as about them, we may also, as stated above, find ourselves learning *with* them, and this has been shown above to be likely to be predominantly non-verbal. It is worth remembering, to appreciate the vital role played by performative knowledge processes here, the parallels shown in **Part 1** between Indigenous thought and quantum theory: Indigenous worldviews tend to understand the world as dynamic rather than static, and, as a corollary, any knowledge contained in it as process rather than as static fact.⁶³ We can say where an electron has landed on a photographic plate, and offer a representation of a state of affairs once an agential cut has been made, but our representation may no longer be accurate when the Rio 2016 women's eight seat-race in a new combination the following day.

A participationalist understanding of our relationships with non-humans is therefore likely to be helpful to scientific enquiry (as it was shown to be, for example, in the case of Kimmerer's postgraduate student above), as well as being a feature of the family resemblance sketched above and now used as our yardstick. It may be understood to coexist with the representationalist elements we are accustomed to in the contemporary West: it was shown above that Buber, for example, does not expect us to give up our *I-it* relationships altogether. Buber acknowledges their vital role in our making sense of the world, while asking for them to be kept in a malleable state, ready to be shaped and tempered by *I-thou*.⁶⁴ Static elements of knowledge,⁶⁵ and their accompanying logical

⁶¹ Bekoff, *The Emotional Lives Of Animals*, p.125.

⁶² This idea may appear unusual at first. However, if we understand our inter-species relationships as potential routes to learning from and with non-human wisdom, in the way that we have seen Indigenous thinkers do, then this is likely to be sound advice. We are approaching an unfamiliar vantage point. This time, it happens to be a non-human one.

⁶³ Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue*, p.89.

⁶⁴ Buber, p.24. In the same vein, it is shown in **Appendix B** that the thrust of Karen Barad's argument is not that it would be in any way helpful to refrain from making agential cuts: rather, she agrees with these being made, as long as they are then made transparent, and as long as the reality thus reported is then understood as a situated reality.

⁶⁵ Buber, p.30.

operations such as those of causality,⁶⁶ are entirely realistic as well as useful. What Buber objects to is any assumption of these being all there is.

The relationship appears to be similar to that discussed in **Part 1** between Newtonian physics and the contemporary understanding that while Newtonian physics is as “correct” as it was before the arrival of quantum theory, it should now be considered to be explanatory of certain aspects of reality, as opposed to being explanatory of reality in its entirety.⁶⁷ As Newton’s apple can be shown to have fallen to the ground, the apes in de Waal’s above example demonstrably did travel towards their source of food.⁶⁸ No participationalist understanding was needed for that. The difference made by the absence of one, however, was significant with regards to the rest of their world outside the study: their very survival was potentially affected; their relationship with the researcher in question almost certainly was.

In the complexity of structures, attitudes, and relationships at play, two particular difficulties have been shown to stand out, and these can be understood to interact with each other. On the one hand, contemporary, mainstream Western worldviews tend to be reluctant to see non-humans as persons.⁶⁹ On the other, contemporary mainstream structures in the West tend to be detrimental to the flourishing of *I-thou* relationships, whether or not we understand those involved to be persons.⁷⁰ The two difficulties interact whenever the former appears to render it permissible to enact the latter in relation to those we depersonalise,⁷¹ and also, conversely, whenever the latter prevents

⁶⁶ Ibid., pp.36-37.

⁶⁷ For example, Peat, *Blackfoot Physics*, p.170.

⁶⁸ De Waal, p.210.

⁶⁹ As shown in **Part 1**, this reluctance tends to be linked to an anthropocentric definition of the term “person”, which was shown to be different, for example, from Cajete’s relational one. The difficulty was shown, unanimously, by Rowlands’, de Waal’s, and Bekoff’s work in **Part 2**, although the very fact of their unanimous criticism of it appears to indicate that attitudes may now be on the cusp of change. For now, however, the authors are facing an uphill struggle: the problem already became evident in the fact that their predecessors, the founding fathers of ethology, felt the need to establish the discipline without including animals’ own experience in its scope, despite at least one of them demonstrably having the sensitivity to acknowledge it (Burkhardt, p.435.) The underlying attitudes, as described, for example, by Apffel-Marglin in **Part 1** of this thesis (Apffel-Marglin, ‘Introduction: Knowledge And Life Revisited’, p.20), appear to have been firmly established even then.

⁷⁰ Our failure to enter into *I-thou* relationships has the potential to remain even where personhood is acknowledged, as shown in the two above case studies illustrating the operation of Ellul’s technique taken from contemporary Western human society.

⁷¹ The above case study of rats being declared not to be rats is but one example (Bekoff, *The Emotional Lives Of Animals*, p.139.)

us from reviewing our attitudes in relation to the former.⁷²

Considered in light of this vicious cycle, Kimmerer's assertion at the beginning of this section of the transformative role of our responsive engagement with non-human nature⁷³ seems no more than a logical next step. To the extent that *technique* is capable of removing the potential for interaction with the sacred from our relationships – which was one of the points made by Ellul⁷⁴ in **section 12.a.ii.** – the importance of our preventing the depersonalisation of others by allowing *I-thou* relationships to emerge appears to follow seamlessly.

16.c.ii. Two case studies of the Jekyll-and-Hyde duality of anthropomorphism to illustrate the point

Two different, Western, examples of anthropomorphism illustrate the above point.

1. Of bats emanating citrus aroma, courtesy of Ellul

Cheryce Kramer's research offers a disturbing account of the polar opposite of any application of Mary Midgley's method of approaching the unfamiliar once initial similarities have been located as a potential starting point.⁷⁵ Kramer describes and analyses a scenario of anthropomorphically manipulated animal images being commercialised by a "Prêt-à-Porter supplier of visual content", and consumed by wider society through their use, for example, in the fashion industry.⁷⁶

The process involves the (in itself innocent) above first step of human perception of similarities with animals: for example, upside-down pictures of hanging bats are shown. Their creator must have noticed the hanging bats' similarities with standing humans.

⁷² Bekoff's above story of the laboratory cat is an example of relationship enabling a change in attitude (Bekoff, *The Emotional Lives Of Animals*, pp.50-51). Bekoff's subsequent reports, also cited above, of difficult conversations with colleagues showing disregard in their relationships with laboratory animals then provide ample evidence of this being anything but the norm (Bekoff, *The Emotional Lives Of Animals*, pp.114-116). A similar relationship of mutual reinforcement of ill-treatment and depersonalisation has been discussed by Glover in relation to stigmatised groups of humans (Glover, p.342). Glover's argument relates to deliberate cruelty, whereas the danger inherent in the dynamic discussed in this section lies precisely in the fact that it will operate (as shown in the earlier section introducing Ellul's technique) even in the absence of ill-will. It may therefore be understood as one reason why Apfel-Marglin's asserted embeddedness of contemporary Western disregard for non-human nature in societal structures is likely to be challenging to eliminate.

⁷³ Kimmerer, *Braiding Sweetgrass*, pp.339-340.

⁷⁴ Ellul, p.425.

⁷⁵ C.Kramer, 'Digital Beasts As Virtual Esperanto: Getty Images And The Colonisation Of Sight' in *Thinking With Animals: New Perspectives On Anthropomorphism*, ed. by L.Daston and G.Mitman (New York/Chichester: Columbia University Press, 2005), pp.137-171.

⁷⁶ *Ibid.*, p.140.

However, no attunement is then attempted through relationship or through questioning by means of Western science, let alone through any interaction of the two. Instead, the images of bats are adapted for human consumption, and utilised as human brushstrokes to be sold for commercial purposes. Kramer observes that “viewers identify not with the animals themselves but with their placement in a familiar symbolic context.”⁷⁷

The most obvious consequence of this has already been stated: no approach of the unfamiliar in the animal in its current form takes place. The process ends as soon the familiar has been located. Less obvious at first glance, but of at least equal importance, is the fact that the possibility of gaining any sense of the animal’s cultural meaning is excluded by the process, too:⁷⁸ the images extract the animal from *all* aspects of its context as an animal, not only from biological ones.

With regards to the representationalist side of learning about the animal as it already is – which is where the author’s focus lies – Kramer summarises that its treatment as a human brushstroke leaves nothing but its alignment with corporate interest in place, “pumping citrus aroma into the marketplace”.⁷⁹ Kramer’s statement carries resounding echoes of all that was said regarding Ellul’s technique above.

With regards to learning from or with the animal, it was shown above – by Dewey,⁸⁰ and by Welch,⁸¹ to name but two – that this has been short-circuited here.

2. *A mediaeval conception of understanding, and its shared ground with the case study of Kimmerer’s postgraduate student*

Lorraine Daston, on the other hand, offers an example of an entirely different approach to anthropomorphism, one which involves exploration of the question of what it may have been, initially, which caused its validity to be questioned at all.⁸² The point made by Daston is that the meaning of the term “anthropomorphism” is contingent on our underlying idea of what “understanding” involves, and on our conception of what

⁷⁷ Ibid., p.152.

⁷⁸ Ibid., p.161.

⁷⁹ Ibid., p.167.

⁸⁰ Dewey, pp.184-193. It was shown above that the consequences of taking such shortcuts to what is then mistaken for understanding are not limited to our own perception: they are also capable of placing limitations on the range of responses available to our interlocutor (and thus on the relationship), as demonstrated by the **Part 1** example of John Steinbeck’s Chinese immigrant to California, Lee.

⁸¹ Welch, *The Phenomenology Of A Performative Knowledge System*, p.45.

⁸² L.Daston, ‘Intelligences: Angelic, Animal, And Human’ in *Thinking With Animals: New Perspectives On Anthropomorphism*, ed. by L.Daston and G.Mitman (New York/Chichester: Columbia University Press, 2005), pp.37-58.

constitutes our mental life. It is in this regard that Daston's thinking can be shown to be related to the participationalist ideas explored in this thesis, and to Lloyd's and Spinoza's, as well as to the Indigenous authors' cited, as they call for a richer conception of rationality above.

The thrust of Daston's argument, in line with this existing shared ground, is that our post-Enlightenment tendency in the West to expect to contemplate more-than-human nature, as opposed to participating in it, carries much of the blame for transforming anthropomorphism into anthropocentrism: once we assume a representationalist paradigm to be all there is, and once we then assume our own perspective to be privileged over others', perceived similarity results less in empathy and in development of relationship than it does in arguments of near-analogy associated with a deficiency model.

Additional detail on Daston's argument can be found in **Appendix G**. What matters for the argument made in this section of the thesis is, above all, the kinship between Daston's thinking and that of Apffel-Marglin regarding the death of Anima Mundi above,⁸³ as well as Rengifo's **Part 1** criticism of the Western tendency to prioritise knowledge of the "other" over knowledge as empathy.⁸⁴ For Daston, as for Indigenous worldviews, understanding includes one's own emotions as an integral part of the story of a relationship as it develops.

This is, by now, bound to sound familiar: to the extent that our emotions are allowed to form part of our understanding, it was shown above, for example, through the case study of Kimmerer's postgraduate student,⁸⁵ that favourable conditions are created for the two interacting difficulties highlighted in the previous section to disappear. Daston's paper thus shares common ground with the Indigenous harvesters of sweetgrass whose experience gave rise to the research carried out by Kimmerer's postgraduate student in the previous section.

None of the basket makers gathering sweetgrass commented on their understanding of what it might be like to be sweetgrass. The idea of asking this question was only

⁸³ F. Apffel-Marglin, 'Western Modernity And The Fate Of Anima Mundi', in *Contemporary Voices From Anima Mundi: A Reappraisal*, ed. by F. Apffel-Marglin and S. Varese (New York: Peter Lang, 2020), pp.17-44.

⁸⁴ Rengifo, 'Education In The Modern West And In The Andean Culture', pp.172-174.

⁸⁵ Kimmerer, *Braiding Sweetgrass*, pp.156-165.

introduced by the committee responsible for overseeing the postgraduate student's research.⁸⁶ The basket makers' relationship with the plant was, rather, characterised by an expectation of living together in respectful reciprocity. Living with the plant naturally gave rise to emotions, and these were accepted as part of the interaction.⁸⁷ The basket makers' participationalist worldview saw no need to pinpoint the plant's characteristics as categorised by Western science. They lived with the plant, and in doing so, were already attuned to the underlying evolutionary relationships long before Western science even thought to ask the question, in a similar way to the majority of the Rio 2016 women's eight's shared learning and creation taking place in a form beyond the reach of their training notes.

As a corollary, the basket makers' attunement – attained as it was by living their relationship on the assumption of its being conducted in mutual respect and responsiveness, as opposed to consisting in knowledge obtained through an investigative process conducted by a subject and imposed onto an object – was then almost bound to be richer than the output of propositional knowledge generated by the research project cited. The very nature of contemporary Western scientific research entails holding those factors constant which are not currently under investigation. An example of this, in this particular context, was the above-mentioned need to ensure that emotional attachment, once no longer avoidable altogether, was enacted equally in relation to all three types of plots.⁸⁸

This meant that the research project was then, by necessity, unable to comment on whether or not the existence of an emotional relationship between humans and plants had any impact on the development of either. The project's output was, by necessity, limited to knowledge pertaining to those factors which were *not* held constant. The postgraduate student's learning in relationship (with the plant of sweetgrass as well as with those who already knew sweetgrass), which was shown above to have been able to come alive and to grow through the map that was not the territory, was not reflected in the project's official output. We only know about it through Kimmerer's story.

⁸⁶ Ibid., p.163.

⁸⁷ Ibid., p.165.

⁸⁸ Ibid., p.161.

16.c.iii. Intuitive systems theory and intuitive knowledge

Attempts have been made, in response to a growing awareness in the West of an Indigenous tendency to consider a situation in its entirety, to understand Indigenous knowledge as an intuitive form of systems theory.⁸⁹ I would argue that there is demonstrable merit to this conception, as there is to the respect that may be implied: for example, the use of integrative variables (such as body fat as an indicator of a caribou herd's overall health) not only offers a cost-effective way of monitoring the substantial cluster of individual factors involved, but also information on the success of their interaction.

However, I would caution that the relationship between Indigenous knowledge and systems theory is unlikely to be as straightforward as a mainstream, Western understanding of the term "intuitive" might suggest. Respect may be implied in smaller quantities than it appears at first glance: as long as we think of intuition as being inferior to scientific reasoning,⁹⁰ "an intuitive form of systems theory" remains in danger of being understood as "a rudimentary form of systems theory". Fikret Berkes himself, aware of this danger and eager to avoid any ambiguity in this regard, cites several studies suggesting that this is far from likely to be the case.⁹¹

In addition to what was said in the previous section, common sense would appear to suggest the same. Our exclusively human Wittgensteinian riverbeds are already of such complexity that it is not usually feasible for us to articulate in propositional form what they consist of. This is despite the very fact that they *are* Wittgensteinian riverbeds demonstrating that we are obviously competent at navigating them.⁹² I cannot articulate exactly *how* those I know well and I relate to each other, but the fact *that* there is such a "how" is evidenced by the question, "What's up?" when one of us behaves unusually.

Where there is no shared spoken language available, allowing at least elements of an interaction to be recast as propositional knowledge and thus simplified, attempts to articulate what is in our riverbeds, once these have developed into an accustomed shape, cannot but become impossibly difficult. I can articulate my experience of the first time a

⁸⁹ For example, Berkes, pp.203-225. **Part 1** of this thesis also made reference to a related comment made by Burkhart: *Burkhart, Indigenizing Philosophy Through The Land*, p.193.

⁹⁰ For example, Genevieve Lloyd's 'The Man Of Reason' was cited earlier in this regard.

⁹¹ Berkes, p.211.

⁹² Hanfling, p.162.

particular cat placed her paw on my shin and drew me closer, but I have no hope of articulating the contents of the riverbed we then made together over the years, learning and creating comfortable positions on the sofa, both half asleep.

Louise Westling gives an example of a talented rider and a horse interacting in such a way that both become both cause and effect of each other's movements.⁹³ She points out that we are unaware of at least some aspects of these movements. A static picture of one of these alone would illustrate some of our difficulties in articulating what is in our inter-species riverbeds. In addition, the picture need not be static: in a similar way to that described in the context of the Rio 2016 women's eight's journey of shared learning and creation, the shape of our riverbeds can change before we are necessarily aware of such change taking place. **Appendix B** shows that Karen Barad's agential cuts will not necessarily become part of our conscious experience in their entirety. Deloria and Wildcat, again, caution against reductionism: exclusive focus on Western scientific conceptions of food chains and ecosystems fails to take into account "powers which are irreducible to discrete objects or things."⁹⁴ We are taken back to Merleau-Ponty's **Part 1** comment regarding meanings irreducible to mere cause and effect,⁹⁵ and to David Bohm's fish tank.⁹⁶

The basket makers whose experience gave rise to Kimmerer's postgraduate student's research project had, over millennia, by passing on ways of interacting with plants from generation to generation, grown into their role as part of a system of relationships involving positive adaptive consequences for both. This was demonstrated, in the first instance, by the project's research output, and then, as outlined above, further explicated by the author's example of the evolutionary relationships known to have developed between buffalo and grass, long before the arrival of humans.⁹⁷

We could, of course, if we wanted to, be as free as we were before to make a choice to understand "intuitive systems theory" as "rudimentary systems theory" when referring to its kinship with Indigenous knowledge. I would argue, however, that this would miss the point. The point is that the basket makers' interaction with sweetgrass demonstrates attunement of their *conatus* to the *conatus* of the section of the whole which they had

⁹³ Westling, p.140.

⁹⁴ Deloria and Wildcat, pp.14-15.

⁹⁵ Merleau-Ponty, p.277.

⁹⁶ Bohm, *Wholeness And The Implicate Order*, p.237.

⁹⁷ Kimmerer, *Braiding Sweetgrass*, p.164.

been participating in. I would argue, therefore, that their “together-doing”⁹⁸ is closer to Spinoza’s conception of intuitive knowledge than to any mainstream Western conception of a rudimentary nature of their ideas. They are participating in more than the section of the world that laboratory notes can account for. In order to bridge William James’s above gap in our attunement,⁹⁹ we are likely to be required to grow into the world, alongside our purposive questioning of its workings. It is time to remind ourselves that while shared learning and creation was first discussed solely as a feature of our family resemblance of the sacred above, it has since, through Kimmerer’s case study of the postgraduate student’s interaction with sweetgrass, shown itself to be simultaneously capable of enhancing scientific rigour.

I would argue that on second thoughts, this can be understood to be far less surprising than it might first appear to our Western minds. For one thing, it was already pointed out in the chapter on Deloria and evolution at the beginning of **Part 2** that the Indigenous conceptions of the non-binary dualisms of the individual and the whole, and of the sacred and the material, are most realistically understood to be intertwined. In addition, our Western mind-bodies have since been given case studies of performative knowledge processes as stepping stones to help us relate to this. If we are open to understanding the sacred to be present in the material, then our interaction with the sacred can be seen to be as natural a part of our interaction with the world as any other. If the role of science is to support our understanding of our participation in the world, then any *more* interaction, with *more* parts of our mind-bodies and with *more* parts of the world, is likely to be supportive of our efforts to transcend our understanding of maps and of simplified models that we initially made to help us begin to make sense of the world.

Montaigne famously wondered whether he was playing with his cat, or whether the cat

⁹⁸ The term is borrowed from Jack D. Forbes, whose native language uses this verb-based way of referring to a process which can be likened to the creation of inter-species, Wittgensteinian riverbeds, and which shares common ground with PRATEC’s work: it usually appears to be translated as “culture”, but the fact of its being verb-based is understood to place additional emphasis on its dynamic nature. Forbes, as did PRATEC, also stresses the importance of the absence of species boundaries in the relationships involved. Forbes goes on to compare a variety of other Indigenous languages’ terms to his own, Lenape one, and concludes that the idea of culture as “together-doing” appears to be a widely shared concept. J.D.Forbes, ‘Nature And Culture: Problematic Concepts For Native Americans’, in *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, ed. by J.Grim (Cambridge: Harvard University Press, 2001), pp.103-124 (pp.118-119).

⁹⁹ James, pp.205-210.

was playing with him.¹⁰⁰ Considered through the Indigenous conceptions of performative knowledge processes discussed above, however, and in addition now through Daston's, related thinking, there also appears to be every possibility that they may both, together, have been engaged in the complex business of shared learning and creation, of making and of inhabiting a Wittgensteinian riverbed, of "together-doing", of attuning their *conatus* to each other's, in the same way as Westling's horse and rider are likely to have done, and Kimmerer's basket makers and the plant of sweetgrass, and millennia of generations of buffalo and prairie grass before them.

16.c.iv. *The map is not the territory, revisited*

The point was made in the previous section that our inclusion of relationship and emotion in our rationality – which was initially considered as a feature of the above family resemblance of our potential interaction with the sacred in the material – can be argued, at the same time, to be supportive of enhanced scientific rigour.

It was shown that it is not only our willingness to enter into a relationship where we are prepared to learn *about*, or even *from*, a non-human being which can be of relevance in this context. As Gaita to an even greater extent than Midgley illustrated above,¹⁰¹ it is also our willingness to learn *with* the "other" that matters, to form part of the same system, and to engage in "together-doing", in riverbed-making. Within this, Kimmerer's work shows that our conception of riverbeds can be wider than a Western paradigm would usually assume.

If we work on the assumption that it is not necessarily only relationships with *us*, as humans, which may surprise us if we allow them to, if we begin, with Kimmerer, to entertain the possibility of our attunement to systems, processes, and individuals that we, being the youngest species, may have had no previous relationship with, then we may be rewarded with glimpses of Spinoza's intuitive knowledge in return. However, if we are to be open to this, with Kimmerer's postgraduate student, then it has been shown that this will require us to give ourselves permission to be Dewey's entire live creatures¹⁰² while continuing to be Western scientists: it will require us to give ourselves permission

¹⁰⁰ M. Montaigne, *Essays, Book 2, Chapter 12: Apology For Raimond Sebond* (Urbana, Illinois: Project Gutenberg, 2004), URL: < <https://www.gutenberg.org/files/3600/3600-h/3600-h.htm#chap12> > [Accessed: 20 March 2023].

¹⁰¹ Gaita, *The Philosopher's Dog*, p.193.

¹⁰² Dewey, p.206.

to practise Indigenous thinkers', Spinoza's, Merleau-Ponty's, Barad's, and Daston's, participationalist version of understanding, alongside our accustomed, representationalist one. There appears to be no reason why verbalisation of increasingly well-informed questions should be our only option for applying Mary Midgley's method of approaching the unfamiliar. There appears to be nothing to stop us from participating in the placement of additional stepping stones by engaging in shared learning and creation with the world alongside this. Deloria makes explicit reference to this process taking place across species boundaries.¹⁰³ We will still be asking increasingly well-informed questions; we will only be asking them non-verbally. What is more, we will be asking many of these to learn about Merleau-Ponty's web as we are creating it together, and creating it as we ask.

This is likely to be relevant for reasons which, by their very nature, we are unlikely to be able to see from our current vantage point. The blind spot already became evident through the journey of the Rio 2016 women's eight: two theoretically superior challengers lost their seat races because there was more to the eight's shared learning and creation than its conscious representation was able to convey.

The same was true of Kimmerer's postgraduate student's findings: living with the plant of sweetgrass for a period of several years, the student *unexpectedly* found herself drawn into a web of existing evolutionary relationships full of wisdom and story which later – as Kimmerer's explanation of the interaction between buffalo and grass illustrates – turned out to be significantly older than the human species.

The postgraduate student's project itself did not produce these findings, for the simple reason that it could not have known to look for them. Its role was to explore the effect of human harvesting on plant population density. Hence, it produced no evidence of any embeddedness in systems and relationships older than humans. This is entirely predictable and, at least initially, entirely acceptable. William James's earlier comment, in a religious context, regarding a gap in our understanding usually involving a blind spot in relation to its bridging,¹⁰⁴ which chimes with Spinoza's legitimisation of fictions "as an aid to the imagination, rather than a substantive part of the truth",¹⁰⁵ was shown by

¹⁰³ Deloria, *The Metaphysics Of Modern Existence*, p.276.

¹⁰⁴ James, pp.205-210.

¹⁰⁵ Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.124.

Polkinghorne and others to apply in a contemporary Western scientific context too.¹⁰⁶ Arguably, these fictions – these simplified models – are also what our increasingly well-informed questions are made of as we apply Mary Midgley’s method. It is only if we then mistake the map we have created for the actual territory that we are in error.¹⁰⁷

Deloria and Wildcat, developing Alfred North Whitehead’s thinking, refer to this as “the fallacy of misplaced concreteness”, and appear bemused that the West should have allowed it to become an issue at all.¹⁰⁸ If we absolutise the tenuous conclusions arrived at as a result of our enquiry about a single aspect of the world, if we fail to suspend judgement and to remain open to learning more, then our map of reality cannot help but remain incomplete. If we then, in a subsequent move, convince ourselves that the data we excluded cannot have been important because our model was functional without them, we cannot help but be surprised by the very same data at a later date. Deloria cites Heisenberg regarding the importance of our reintroduction of such data into our thought processes.¹⁰⁹ For Deloria and Wildcat, arguing from within a paradigm hinging on power and place, with power being the living energy of the universe, and place the relationships of things to each other,¹¹⁰ it is inevitable that personal involvement is a vital ingredient, not a hindrance, to such learning.¹¹¹

Who is to say what wisdom there may lie, waiting to be discovered through shared learning and creation, in the relationships we could choose to begin to enjoy with the more-than-human world? Kimmerer’s work has offered us a glimpse. We could, if we wanted to, make choices that would allow us to play our own part.

¹⁰⁶ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.74.

¹⁰⁷ Cordova, *How It Is*, p.108.

¹⁰⁸ Deloria and Wildcat, pp.2-6.

¹⁰⁹ Deloria, *The Metaphysics Of Modern Existence*, p.51.

¹¹⁰ Deloria and Wildcat, pp.22-23.

¹¹¹ *Ibid.*, p.6.

Chapter 17 – The elephant on the reservation: parallels between Western treatment of Indigenous humans and of non-humans

Genevieve Lloyd argues that the polarisations inherited after centuries of operating under an almost exclusively Cartesian paradigm in the West make it difficult to discuss rationality critically without falling into “vacuous affirmation of the importance of feeling or imagination.”¹ As a more realistic way forward, she calls for our conception of rationality to be extended not only to allow a role for the embodied and for the emotions alongside logical thought, but to treat these as vital constituents of rationality itself, entering into a relationship of mutual transformation with thought, as opposed to functioning as mere additions to it.² In doing so, Lloyd makes a similar point to that made by Narayan and Harding in the context of intersectionality above. Exposure to that which we currently perceive to be “other” is unlikely only to add to the mainstream: “it is going to transform the mainstream.”³

Lloyd, too, places these thoughts into the terrain of Deloria’s comments on Whitehead’s fallacy of misplaced concreteness: the intention of her paper is not to offer a detailed critique of Descartes’ method, but to be critical of our allowing his categorisations, created in order to attain certainty regarding some selected elements of reality, to be mistaken for “the real nature of consciousness.”⁴ If we only include certain aspects of reality in our exploration, we cannot help but miss much of the rest. As stated above, our strategy can be perfectly acceptable, at least initially – but only as long as we remain aware of our choice. The map is not the territory. It has been shown that the very similarities capable of serving as helpful starting points for attunement are equally capable, if we are not careful, of ending our journey of discovery before it has begun.⁵

Lucy Cooke, amusingly, likens our misjudgement of penguins’ “clumsy” moves when out of water to our watching an Olympic athlete stumbling about in the dark and inferring clumsiness from that. She points out that penguins’ feet are anything but clumsy when doing what they usually do, which is to work as rudders.⁶

¹ Lloyd, ‘The Man Of Reason’, p.35.

² Ibid., pp.23-24.

³ Narayan and Harding, ‘Introduction’, p.vii.

⁴ Lloyd, ‘The Man Of Reason’, p.32.

⁵ Kramer, ‘Digital Beasts As Virtual Esperanto: Getty Images And The Colonisation Of Sight’.

⁶ Cooke, p.338.

Several points can be made in relation to this outwardly trivial observation.

Firstly, the only way to find out that there is more to penguins' feet than immediately meets our eye is to leave our own comfort zone. Our human habitat is on land, and this is not where we are going to see penguins' feet doing what they do best.

Secondly, we know about penguins' feet being rudders because occasionally, we do take to the water. When we do, penguins' feet are something that we can readily see, and we also happen already to know from other contexts how rudders work. Other facets of the more-than-human world may be less accessible to our immediate understanding. As demonstrated by the above examples of dog whistle frequencies, of bats' use of echolocation, and of Kimmerers' basket makers' ancient relationship with sweetgrass, all manner of things may be hidden in plain sight, until something awakens us and we take a look. There is almost certainly more of this than we are currently aware of.

Thirdly, the question of whether penguins are clumsy or graceful need not impact on our openness to entering into relationships with them. As we saw Raimond Gaita point out, we cannot tell in advance of entering into such relationships what exactly it is going to be that may constitute sufficient similarity to allow them to begin to flourish.⁷

Relatedly, it is also Gaita who offers powerful examples of the difference between similarity and equality: a colleague working on a psychiatric ward, as well as his father when relating to an otherwise marginalised friend, showed him that the emergence of equality and of potential for relationship may be contingent on our prior assumption of their existence, rather than on others meeting any criteria that we may have defined.⁸ In both Gaita's examples, it was the assumption of equality in dignity that was there first. Based on this, sufficient similarity to embark on a relationship was able to emerge. Then, once this has taken place, Gaita stresses the importance of welcoming everyone's unique contribution to the harmony of the band:

(...) we must be open to the distinctive voice of others, and that in turn means that we must encourage the conditions in which those voices can form and be heard.⁹

It is the word "distinctive" that matters here. First and foremost, Gaita does not expect that which is perceived as "other" by the mainstream to meet any criteria imposed by the

⁷ Gaita, *The Philosopher's Dog*, p.193.

⁸ R.Gaita, *A Common Humanity: Thinking About Love And Truth And Justice* (New York: Routledge, 2002), pp.2-3.

⁹ *Ibid.*, p.104.

mainstream before it is deemed dignified. Then, in a second step, which is subsequent to the recognition of dignity and not its prerequisite, he fully expects the “other” to be relevant to the whole, and he expects this relevance particularly to lie in its difference.¹⁰

There is no need for the above penguins to prove anything to anyone. Their dignity is already there without this. And then, on the basis of this dignity (and not vice versa), we can expect to find that their contribution to the whole will matter. If we stay within our own comfort zone, and if we fail to meet them on their own terms, all we will ever see is their waddle.

Finally, in light of what was said in the previous chapter, it is worth remembering that when Cordova ate her onion, but did not eat it lightly,¹¹ this appeared to be no more contingent on any knowledge of the onion’s embeddedness in evolutionary relationships than Kimmerer’s postgraduate student’s developing emotional attachment to sweetgrass was contingent on the knowledge of its embeddedness in evolutionary relationships which was to become available to her at a later date.¹²

It was by honouring the plant that the postgraduate student began to participate in the wisdom of these ancient relationships which were there before us, and not vice versa. The emotional relationship, growing from a recognition of inherent dignity, was allowed to develop first, and with it, then, came attunement to wisdom.

There is every likelihood that penguins’ evolutionary journeys are imbued with all manner of wisdom currently beyond our human field of vision, and there is every likelihood that some of it will begin to reveal itself once we dignify penguins unconditionally.

In addition, and through this, it now also begins to become intelligible to our Western mind-bodies that those who have lived in relationship with penguins may well have engaged, and may well be engaging, in processes of shared learning and creation which

¹⁰ Given the necessity of William James’s gap in our understanding discussed in **chapter 13**, and Spinoza’s comments with regards to our inability to comprehend in its entirety the network of relationships that constitutes the whole discussed in **chapter 12**, Gaita’s stance here is only one small logical step away, as is the Indigenous conception of disagreement as progress (for example, Burkhardt, *Indigenizing Philosophy Through The Land*, p.263). Once we have acknowledged our inability to apprehend the entire network from our own current position within it, it becomes likely that those parts of the network currently beyond our reach are going to be accessible precisely to those who are *not* like us. Those with similar capabilities to ours, conversely, and those who are currently located near us in the network, will be likely to struggle to apprehend the same parts that we are failing to reach.

¹¹ Cordova, *How It Is*, p.173.

¹² Kimmerer, *Braiding Sweetgrass*, p.164.

may not be fully accessible through human language alone. We Westerners can readily relate to the Western scientific aspect of evolutionary processes, as demonstrated by Kimmerer's postgraduate's encounter with her committee. However, there is nothing and no one compelling us to persist in our Western scientific tendency to claim that this is all there is. We are, at any moment, as free as the postgraduate student was to become open to the possibility of our experiencing that there might be more, whether it already be manifest or potentially capable of becoming manifest if we weave Merleau-Ponty's web wisely. There may be wisdom to be found in Indigenous stories that is beyond the reach of current mainstream versions of evolutionary theory alone, and we may need to extend our repertoire of behaviours in relation to the non-human world before we can share in it.

The pattern of our failure to do so does not seem to be restricted to our relationships with non-humans. Discrimination against Indigenous humans was discussed in **Part 1** of this thesis, and it is now evident that it tended – and still tends – to follow a similar pattern to that just illustrated in relation to penguins' feet.

In our dealings with penguins, the trouble was that we used our own feet as yardsticks, even though our own feet have evolved to walk on land, whereas penguins' feet have evolved to be rudders in water. In our dealings with Indigenous humans, the trouble is that we use our own worldview as a yardstick.¹³

Our Western conceptual framework was shown in **Part 1** to focus on those aspects of the world which appear to lend themselves to abstraction and universalisation: Apffel-Marglin, after offering an array of examples of this, concluded that domination “also works through the construction of a particular type of person and a particular epistemology and ontology.”¹⁴ Dussel's observations on the “myth of modernity”¹⁵ showed a potential direct path from universalism, via a misplaced sense of superiority, to the justification of genocide. Even in the recent absence of such atrocities against Indigenous groups, the “othering” of Indigenous humans which has been shown still to be rife – besides, first and foremost, being discriminatory and thus unethical – has also been shown to result in epistemic injustice, and thus in failure to recognise wisdom.

¹³ Cordova, in **Part 1**, referred to this as our “conceptual framework”: for example, Cordova, *The Concept Of Monism In Navajo Thought*, p.1.

¹⁴ Apffel-Marglin, *Subversive Spiritualities*, p.137.

¹⁵ Dussel, ‘Eurocentrism And Modernity (Introduction To The Frankfurt Lectures)’, p.75.

Western scientists frequently suggest that the Indian way of looking at the world lacked precision because it was neither capable of nor interested in creating abstract concepts or using mathematical descriptions of nature. (...) in some instances, when defining common personality traits that people and animals shared, the Indian seemed to be talking nonsense. He or she appeared to be combining aspects of things that, at first glance, could not and should not be together.¹⁶

Without the experience offered by Kimmerer's basket makers, and by their peers elsewhere such as those living in relationship with the geese they hunt,¹⁷ Western science would have been less likely to explore the wisdom of the idea of honourable harvesting by humans potentially having a beneficial effect on non-humans.¹⁸

Deloria and Wildcat are hopeful that Western science may be becoming increasingly open to extending its comfort zone beyond the Newtonian paradigm.¹⁹ However, in the absence of any resulting change in societal attitudes, this would be the equivalent of acknowledging the competence of a penguins' feet to function as rudders while continuing to objectify the penguin. It would allow Western science to continue to reserve the right to validate that which may lie outside its chosen remit, and to remain in a position of unquestioned authority even in those realms that it explicitly excludes from exploration. It would entail our learning about penguins' feet if we happened already to know what rudders were, while walking straight past our next opportunity to relate to sweetgrass and to become attuned to the ancient wisdom contained in the wider evolutionary relationships it was embedded in.

It would also entail Indigenous humans remaining in their position of dependency which could never reasonably have been justified in the first place. It was shown in **Part 1**, for example by Kyle Whyte,²⁰ that in order to be accepted by the dominant majority,

¹⁶ Deloria and Wildcat, p.3. The same dynamic was found to be at work, for example, in Siberia by Vitebsky in **Part 1**: Vitebsky, p.263.

¹⁷ Fienup-Riordan, 'A Guest On The Table', pp.545-553.

¹⁸ Indigenous wisdom overlooked by the West, incidentally, is not necessarily limited to understanding of the non-human world. Deloria's work cites a number of proposals put forward by Charles Reich (which share common ground, for example, with recent discussions of a universal basic income). Deloria concludes that the form of society likely to be facilitated by these would share Paul Radin's list of characteristics of aboriginal civilisations. (Deloria, *The Metaphysics Of Modern Existence*, pp.172-176.) Whether or not we agree with Deloria regarding this point, it remains noteworthy, either way, that none of the Western works listed in the bibliography of this thesis even mention it. Echoes of Miranda Fricker's **Part 1** comments regarding corruption of the knowledge base by epistemic injustice through prevention of contribution are loud and clear. (Fricker, 'Epistemic Contribution As A Central Human Capability'.)

¹⁹ Deloria and Wildcat, p.3.

²⁰ Whyte, 'Indigenous Research And Professional Philosophy In The U.S.'.

Indigenous humans are still usually first required to concede the alleged inferiority of their own conceptual framework. This is despite the fact that any reason that might be cited for the assumption of such inferiority was only ever created by their colonisation. They were not colonised because they were inferior: they were labelled “inferior” once they had been colonised.²¹

With striking similarity to Indigenous humans before contact with white settlers, pandas, too, used to be perfectly competent to relate to their environment in a way which allowed them to thrive.²²

Pandas had no difficulty breeding, or managing any other aspect of their continued flourishing, until their habitats began to be threatened by ill-conceived intervention by contemporary Western humans.²³ Once the damage had been done, humans assumed a role of stewardship, with limited success.²⁴ The outcome is a “benign bungling comedy act that does indeed need human help in order to exist.”²⁵

The relationship is thus complex: we do not consciously set out to harm or to diminish pandas, but this is nonetheless what we do. Panda diplomacy (also cited in Cooke’s case study) can only exist because our feelings towards pandas tend to be affectionate. A similar dynamic is described in Lucy Taylor’s nuanced account of Welsh settlers’ relationships with Indigenous groups in 19th-century Patagonia:²⁶ Welsh settlers’ treatment of Indigenous Patagonians, in contrast to the more usual pattern of open disdain and of violence discussed in **Part 1**, was characterised by painstakingly fair trade arrangements and by genuinely experienced camaraderie (for example, when hunting together). It was, however, nonetheless *treatment* of the “other”²⁷ as opposed to an *I-thou* relationship developing from mutual recognition of dignity. In fact, it is particularly *because* the friendships were genuine that it remains difficult even now to challenge the power structures involved.²⁸ Indigenous Patagonians were permitted to conduct friendly relations with those colonising them, but only to the extent that they remained prepared

²¹ Smith, *Decolonising Methodologies*, p.91.

²² Cooke, pp.305-333.

²³ *Ibid.*, p.327.

²⁴ *Ibid.*, p.323.

²⁵ *Ibid.*, p.306.

²⁶ L.Taylor, ‘Welsh-Indigenous Relationships In Nineteenth Century Patagonia: “Friendship” And The Coloniality Of Power’, *Journal Of Latin American Studies*, Vol.49 (2016), pp.143-168, DOI: 10.1017/S0022216X16000353 [Accessed: 20 March 2023].

²⁷ *Ibid.*, p.153.

²⁸ *Ibid.*, p.166.

to meet their colonisers' expectations.²⁹ The Patagonian arrangement thus shares similarities with a stewardship approach to contemporary Western human relationships with non-humans: genuine goodwill may well be present, but in the absence of recognition of dignity, learning is likely to remain largely restricted to – selective – learning *about* the “other”. Learning *from*, let alone shared learning and creation *with*, were shown above to require mutual respect in order to flourish.³⁰

Cordova, observing that “the poet often points to a truth that escapes the scientist,”³¹ offers a fictional, human example of this dynamic, set in a less convivial colonial environment, which was mentioned briefly in **Part 1**. It involves a Native American experiencing a period of mental illness as a result of his forced interaction with European systems. Before this forced interaction, he was thriving under his own conceptual framework: his integration within this had been entirely successful. It was once this integration became threatened by those absorbing him into theirs, as opposed to entering into a relationship with him while honouring his alongside theirs, that the trouble started.³²

The human equivalent of the panda enclosure is then portrayed as the fringe existence offered by the dominant majority to now struggling Indigenous humans, in the form of a ready supply of alcohol, followed by an offer of remedial measures predicated on the necessity of acceptance of a Western conceptual framework despite the Indigenous conceptual framework having been experienced as perfectly adequate prior to

²⁹ Ibid., pp.162-163. This dynamic is by now familiar as that experienced by Steinbeck's Lee, first cited in **Part 1** (Steinbeck, p.161).

³⁰ For example, Welch, *The Phenomenology Of A Performative Knowledge System*, p.45.

³¹ Cordova, *How It Is*, p.126.

³² Ibid., p.122. It might be tempting to hope that the issue highlighted by Cordova here might have been overcome since the publication of *How It Is*. However, this appears to be anything but the case. For example, as recently as 2018, mainstream research as well as mainstream practice in the field of Indigenous suicide prevention were shown to continue to be premised on exclusively Western assumptions, and therefore incapable of being applied successfully in an Indigenous context. (J.Ansloos, 'Rethinking Indigenous Suicide', *International Journal Of Indigenous Health*, Vol.13(2), 2018, pp. 8-28, DOI: 10.18357/ijih.v13i2.32061 [Accessed: 20 March 2023]. Ansloos' findings carry echoes of everything that was said with regards to those of Linda Tuhiwai Smith in **Part 1**.) At least as disturbingly, a 2020 publication encouraging Indigenous young readers to take part in Native sports saw a need to actively place this encouragement into a context of suicide prevention: its foreword by competitor Nick Iligutchiak Hanson makes reference to the author's having lost a friend to suicide, and recommends engagement in the camaraderie and cultural affirmation of Native sports as a preventative strategy. He concludes his foreword with the statement, “Alaska Native sports saved my life, and they still help point the way to hope.” (N.I.Hanson, 'Foreword: The Value Of Playing Games', in T.N.Brown, J.K.Spiess, and R.Corrall (Photographer), *Alaska Native Games And How To Play Them* (Fairbanks: University of Alaska Press, 2020), pp.ii-iii (p.iii).)

colonisation.

Within the structures described by Cordova, it is at best conceivable that the Indigenous human panda's eyes may be appreciated for their aesthetics, judged by criteria which are already in existence within the dominant majority's paradigm. The human panda's competence in the realm beyond this is bound to remain hidden from view.

The "cure", in Cordova's example, involves reinforcement of the dignity of that which is perceived as "other" by the mainstream. As shown, for example, by Gaita above, the same cure is, first and foremost, already a requirement of decency and then, in a second step, a likely path to learning which would have been beyond our reach from our current vantage point within our existing comfort zone.³³

The "cure", in Cordova's example, has striking similarities with those scenarios explored above which showed the potential for us Western humans to enter into *I-thou* relationships rather than succumbing to the ongoing spread of Ellul's technique. It was shown that it is in these relationships that we are likely to find attunement, and to be open to the development of shared learning and creation. Through this, as shown by Kimmerer's example of the relationship between humans and sweetgrass, our attunement may take us further into relationship with the *conatus* of the whole than we may consciously articulate. The honourable harvesters of sweetgrass – Indigenous basket makers and Western postgraduate student alike – found themselves growing into attunement with the wisdom contained in ancient evolutionary relationships beyond their own species boundaries both taxonomically and temporally, and they were doing so long before they could have stated that they were. Similarly, at the Dialogues, Indigenous academics in their relationship with *nilch'i* (and with similar phenomena elsewhere, as discussed above), and quantum physicists in their learning to relate to the realm beyond Newtonian physics, were both attuning to realities of wisdom and complexity only partially ready to be articulated at the time of learning.³⁴

Our Western communication with non-human nature, as with non-Westerners, does have

³³ Gaita, *A Common Humanity: Thinking About Love And Truth And Justice*, p.104.

³⁴ Parry relates that Leroy Little Bear and his contemporaries felt themselves to be "coming home" as soon as they realised the direction of travel of the contemporary findings in the field of quantum physics being discussed at the Dialogues. Attainment of detailed understanding, as well as shared learning and creation based on both delegations' contributions, followed in subsequent steps: Parry, *Original Thinking*, p.24, and Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue*, pp.45-60.

the potential to allow attunement to the wisdom that Spinoza would have conceived as the *conatus* of the whole. The above examples show that the ability to give dignity to the “other” is in our gift to the extent that we can find the humility to give it, within or across species boundaries. They also show the importance of our remaining alert to the way we roll our inner layers of Cordova’s snowball, to the way we participate in weaving Merleau-Ponty’s web that sustains us, in order for the gift then to flourish.³⁵

³⁵ The focus of this thesis is on non-humans and on Indigenous humans, but its message extends beyond these two groups under focus. While the focus must remain where it is, some thoughts on the wider implications of the message are offered in **Appendix H**.

Chapter 18 – What can this mean with regards to a way forward?

Part 1 ended with the untenability of our continued, unilateral, human decision-making. **Part 2**, thus far, has shown shared learning and creation in mutual respect and responsiveness, both with non-humans and with non-Western humans, to be an avenue to explore.

At the same time, in the contemporary Western world that we have made, the inner layers of Cordova's snowball, the sections of Merleau-Ponty's web already woven, involve political systems predicated on societies larger than those able to sit in a circle and discuss everyone's understandings until a way forward is found that honours all. It has been shown that alongside the schools and hospitals that we value, we have created conditions for the spread of Ellul's technique.

How can we, then, retain our ability to collect predictable amounts of tax revenue for our schools and hospitals, and safeguard the rights of those whom others, due to sheer numbers, are in a position to lose interest in – without allowing the very system devised to achieve this to cause all of us to lose interest in everyone?

Part 1 showed that while not everyone agrees on the extent of collaboration to aim for, encouraging examples exist of some forms of both knowledge transfer and of collaboration having been attempted, with some of these being experienced as successful by those involved.

Having now seen Spinoza, quantum theory, Merleau-Ponty, and Indigenous worldviews transcend the perceived binary dualisms of individual versus whole, of meaningful versus material, of Cartesian rationality versus the wild – can we dare to hope to find a way of transcending the remaining binary dualism of Ellul versus Buber, of Western universalism versus Indigenous locality, alongside the first few? This remaining dualism appears to be largely what the dilemmas considered in **chapter 7** were concerned with, and when we looked closely, we could see it lurking in the undergrowth of our more recent case studies, too.

18.a. What others say

No one appears to be offering a simple solution. This may carry more promise than it might seem to at first glance: in any context of complexity, and in this particular context more than in most, a simple solution could hardly help but smack of the reign of due

process, and of the further spread of Ellul's technique once more casting itself as the alleged one best way to work.

Deloria, while committed to the importance of locality as shown above,¹ fully endorses the enshrinement of certain concepts in society's legal system. He grounds this in citizens' tendency to recognise that which is recognised in court.² The incompatibilities that exist between Indigenous worldviews and current Western legislative arrangements (as discussed, for example, in the context of the question of reparations in **Part 1**) are real. It is, however, not the use of legislative arrangements to regulate our behaviour *per se* that constitutes this incompatibility. Rather, it is the fact of their currently being based on a Western paradigm alone. Legislative arrangements carefully considered with both paradigms in mind may be viewed as beneficial. The legal personification of non-human nature, for Deloria, is an example of this.³ The fact of there being unresolved issues in relation to the practicalities is only a deterrent if there is a prior expectation of one already existing, universal solution just waiting to be applied.⁴

We have encountered this intrepid approach to uncertainty before: it chimes, for example, with Polkinghorne's earlier advice to "hold on to the strangeness of experience by the skin of one's intellectual teeth, knowing that progress will not come from a facile abandonment of any part of that experience."⁵ We also saw at the beginning of **Part 2**, through the chapter discussing Deloria's views on evolution as an example of learning from those we disagree with, and from its coming to life with the case study of Kimmerer's postgraduate student unexpectedly attuning to ancient buffalo and grass, that the initial appearance of disagreement may reconcile in unanticipated ways if we allow all its dimensions to unfold. We also saw that due to the complexity of the web of relationships we are part of, this process of growing into greater wisdom cannot entirely be subject to our control.

¹ For example, Deloria and Wildcat, pp.35-36.

² Deloria, *The Metaphysics Of Modern Existence*, p.187.

³ *Ibid.*, pp.177-188.

⁴ Non-human, corporate entities are already able to attain legal status. The detail of Deloria's discussion of court cases in relation to non-human parts of nature doing the same shows him to be anything but naïve to the challenges involved. However, he is also true to the Indigenous view discussed, for example, by Cordova, of questions often being more helpful than answers (Cordova, *How It Is*, pp.49-60) – as well as his ideas being supported by recent developments, for example, in New Zealand: E.A. Roy, 'New Zealand River Granted Same Legal Rights As Human Being', *The Guardian*, 16 March 2017. Available at: <https://www.theguardian.com/world/2017/mar/16/new-zealand-river-granted-same-legal-rights-as-human-being> [Accessed: 20 March 2023].

⁵ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.90.

Kimmerer, from her vantage point spanning both worldviews, embraces this uncertainty throughout her book, while cautioning us to be candid regarding the temptation to impose ourselves.⁶

As Deloria above, Kimmerer also acknowledges the role of legislation in shaping collective behaviour. This is why she advocates political action and civic engagement as “powerful acts of reciprocity with the land”,⁷ and it is why her criticism of the near-destruction of her culture of origin lays the blame at the feet of the legislative provision made by the colonial power at that time.⁸

Alongside this, however – in fact, more than this, judging by the frequency and passion with which her point is put forward – Kimmerer is interested in our connectedness with the meanings contained in our engagement with non-humans. Her Western scientific knowledge leads her to recognise plants and people as forming a “co-evolutionary circle”, and acting as “selective forces on each other’s evolution”; her poet’s heart finds love and mutual nurturing in the very same relationships.⁹

PRATEC’s, and Apffel-Marglin’s, above dissatisfaction with existing legislative arrangements – not only in relation to unhelpful financial “aid”,¹⁰ but above all in relation to its wider context of having produced institutions which now make it difficult to relate to non-humans as anything other than dead matter¹¹ – are testament to their conviction of the impact of legislation on our interactions, and thus of the importance of legislating wisely.

At the same time, however – and again, at least as importantly, judging by the frequency and passion with which this is pointed out, as well as in line with their critical stance on universalist worldviews – both are concerned with meaning-oriented rather than

⁶ Kimmerer, *Braiding Sweetgrass*, p.92. Kimmerer’s example at this point is an amusing case study of her efforts to restore a pond to allow her children to swim in a healthy body of water. However, having rendered scores of non-humans homeless in a muddy and exhausting quest to clear the pond, she later reflects, “(...) restoring a habitat, no matter how well intentioned, produces casualties. We set ourselves up as arbiters of what is good when often our standards of goodness are driven by narrow interests, by what we want.” As well we know, from Bekoff’s above example of rats not being rats when we find it more convenient for them not to be (Bekoff, *The Emotional Lives Of Animals*, p.139), and from my own, all-too-frequent failure to check what type of farm a dairy product came from.

⁷ Kimmerer, *Braiding Sweetgrass*, p.174.

⁸ *Ibid.*, p.318.

⁹ *Ibid.*, pp.121-127.

¹⁰ Grillo, ‘Development Or Decolonisation In The Andes?’, p.214.

¹¹ Apffel-Marglin, ‘Western Modernity And The Fate Of Anima Mundi’, p.21.

exclusively rule-based morals. Ample reference has been made to PRATEC's prioritisation of custom over habit, by which they mean the prioritisation of mutual nurture and conversation between all forms of life over institutional continuity.¹² Apffel-Marglin's choice to spend the final years of her academic career first working with PRATEC, and subsequently on a range of related regeneration projects, while collaborating with contacts from her previous employment to facilitate student placements engaging with ritual as a natural part of practical work,¹³ speaks for itself.

Within their focus on the relational alongside the legal, Kimmerer as well as PRATEC and Apffel-Marglin show clear commitment to acknowledging the role of ceremony and ritual in facilitating conversation with the more-than-human world.¹⁴ This seems inevitable in a conceptual framework where the sacred is part of the material as opposed to residing in a separate, non-material realm beyond it. For PRATEC, the Western distinction between ritual and labour does not even exist,¹⁵ and this chimes with Forbes' above explanation of his native term for "culture".¹⁶

The Indigenous conception of time as being interwoven with space, and of its having circular characteristics alongside linear ones,¹⁷ as well as the above, related findings of Western physicists,¹⁸ both add to the perception of this relationship being a multi-faceted one. Parry, relatedly, points out that the term "original" means "initial" alongside "innovative".¹⁹ The Rio 2016 women's eight's shared learning and creation was not only new every day. It was simultaneously rooted in everything that had gone before, and before they had even met,²⁰ as this rootedness and their new learning became one with their ongoing, shared creation. And herein lies, potentially, a clue with regards to the disentanglement of one of the knottier dilemmas in **chapter 7** above. Some possible dynamics of this are going to be explored below.

¹² Rengifo, 'The Ayllu', pp.118-120.

¹³ Apffel-Marglin, *Subversive Spiritualities*, p.201.

¹⁴ For example, Kimmerer, *Braiding Sweetgrass*, p.37.

¹⁵ Valladolid, 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', p.61.

¹⁶ Forbes, 'Nature And Culture: Problematic Concepts For Native Americans', pp.118-119.

¹⁷ For example, Cajete, *Native Science*, p.79.

¹⁸ An additional example is provided by Barad's nuanced discussion of the implications of the "which-slit" experiment in **Appendix B**.

¹⁹ Parry, *Original Thinking*, p.3. For example, the term "the original sin" usually refers to the first one (rather than to a particularly inventive one), while writing this thesis in verse would be an example of an "original" ("innovative") way of capturing readers' interest.

²⁰ Houghton, p.57.

18.b. A knotty dilemma revisited: Black Elk's Heyoka Ceremony, and the question of performative knowledge processes shared with those we disagree with

A case study was provided in **Part 1** of a Heyoka Ceremony involving the killing of an almost certainly healthy dog.²¹ Although the dog may conceivably have given itself to the humans conducting the ritual, and may have submitted to the ceremony in a similar way to that documented in the case of an Indigenous hunt,²² and despite the USA having no legislation to prevent the killing of a healthy dog,²³ such scenarios have been known to have raised moral as well as neighbourly eyebrows.²⁴ I would have had extreme difficulty watching the ceremony, irrespective of whether or not it was ethical for it to be conducted.

Is it *possible* for it to be ethical to conduct such a ceremony, though? How can animal rights legislation interact with our emotional, embodied, and potentially spiritual participation in the world in a case such as this?

Accounts of animals being sacrificed ritually do not appear to form an integral part of the Indigenous philosophical literature available: the works cited in this thesis offer little comment. It may be possible to interpret this as an indication of the practice being in decline. A worldview that emphasises its prioritisation of inter-species conversation and mutual nurturing over institutional continuity, and that lives this relationship through its performance of ritual and labour as one, is inevitably and continuously engaged in shared learning and creation as described in the chapter on performative knowledge processes above. This cannot help but shape and develop the customs practised over time. Just as the Rio 2016 women's eight's shared learning and creation could not help but grow into a new way of rowing, informed, but never defined by their earlier learning, a gradual move away from animal sacrifice may, conceivably, thus become an example of such change. In

²¹ Neihardt, *Black Elk Speaks*, p.118.

²² For example, Cajete, *Native Science*, p.161.

²³ United States Department of Agriculture, *USDA Animal Care: Animal Welfare Act And Animal Welfare Regulations*, July 2020, available at: <https://www.aphis.usda.gov/animal_welfare/downloads/AC_BlueBook_AWA_508_comp_version.pdf> [Accessed: 20 March 2023].

²⁴ For example, R.Govindrajana, 'The Goat That Died For The Family: Animal Sacrifice And Interspecies Kinship In India's Central Himalayas', *American Ethnologist*, Vol.42, No.3, pp.504-519, DOI: 10.1111/amet.12144 [Accessed: 20 March 2023].

addition, specific accounts exist of traditional Indigenous practice being adapted on compassionate grounds.²⁵

However, there is no denying the fact that sacrificial inter-species relationships exist in the present as well as in Black Elk's day. Vitebsky, for example, describes scenarios of animals dying in lieu of the Indigenous Even humans they live in relationship with in Siberia.²⁶

A more detailed discussion is offered by Radhika Govindrajan in relation to a Hindu context, set against the background of a remote, Himalayan community, and of a worldview which, with regards to its human relationships with animals, appears to have strong parallels with the Indigenous worldviews discussed.²⁷ Govindrajan considers the case of the local custom of the ritual beheading of a goat, after the animal has lived as a member of a human family for years.

There is no suggestion of the goat being objectified or exploited: the goat is understood to be a self-aware being,²⁸ and the humans involved testify that the goat communicates its wish to be sacrificed.²⁹ This communication is framed as an embodied one, and likened to the type of non-verbal communication that would otherwise take place between a mother and her child.³⁰

The mother-child parallel is invoked for a further reason: the ritual is contextualised with an older, now discontinued practice of children being sacrificed. The goat is thus understood to be saving a human family member.³¹

Photographs are included in Govindrajan's account, of goats rubbing their heads on their humans as humans gaze lovingly at their goats.³² I would find it unbearably difficult to watch any of this. And yet, I fail to be consistent in my resolve only to buy ethically sourced dairy products, and this makes me complicit in practices of factory farming which

²⁵ For example, V. Wallis, *Two Old Women* (New York: HarperPerennial, 1994).

²⁶ Vitebsky, p.275.

²⁷ It is for this reason that Govindrajan's work has also been discussed, for example, in the context of the inter-species relationships formed in Indigenous whaling communities (Sakakibara, p.26).

²⁸ Govindrajan, p.516.

²⁹ *Ibid.*, p.505.

³⁰ *Ibid.*

³¹ *Ibid.*

³² *Ibid.*, pp.513-514.

I would be similarly reluctant to watch.³³

Govindrajan portrays the relationship involved as a complex one. It is the very fact of its culmination in the sacrificial beheading of the goat that is constitutive of the inter-species kinship relationship between goat and human, the very conception of the goat taking the place of the child that would have been sacrificed in times past.³⁴ Humans involved in the ceremony experience complex emotions of being devastated at the same time as feeling proud of their involvement.³⁵

I would still find it unbearably difficult to watch. And yet, looking back on Gaita's above comments regarding his array of options available for our treatment of spiders,³⁶ I am forced to admit that there are ways in which the goat's treatment can at least be seen to honour the goat, while the same can hardly be said of factory farming.

The practice of sacrificing children has been discontinued, and I cannot help but wish that the same will be possible for the practice of sacrificing goats. Reflecting on my reasons for this, however, I am forced to concede that my raised eyebrow must be a neighbourly one more than it can be a moral one, as I lack understanding to venture the latter.³⁷

An argument made exclusively from within a contemporary Western paradigm might be tempted to make a case for relativism here, and it was shown above that this entirely misses the point. It cannot be relativism that is at stake when discussing Indigenous

³³ Compassion in World Farming, *Farm Animals: Dairy Cows*, <URL: <https://www.ciwf.org.uk/farm-animals/cows/dairy-cows/>> [Accessed: 20 March 2023].

³⁴ Govindrajan, p.515.

³⁵ Ibid., p.507.

³⁶ Gaita, *The Philosopher's Dog*, p.100.

³⁷ Even before venturing beyond the boundaries of my original, accustomed, contemporary Western paradigm, and in relation to points made about non-human animals earlier in this thesis, two particular reasons stand out for me when, despite my wish that the practice may be able to be discontinued at some point, I find myself unable to support the point of view that there can be no possibility of there ever being a scenario where animal sacrifice can be ethical (which is, of course, not to imply that it is therefore always right). Firstly, with regards to an animal's consent, de Waal's discussion of convergence (introduced in **section 15.a.ii.** and exemplified, in his case, by wasps' facial recognition being achieved by different parts of the organism than humans') shows that the absence of a particular organ or biochemical pathway cannot be taken to prove the absence of a particular capability in every case. It would be difficult, therefore, to argue that it was a priori impossible for non-human animals to consent to a particular course of action. Secondly, cross-species attunement, achieved without the involvement of human language, has been discussed in a variety of scenarios throughout this thesis, the most well-known of which may perhaps be Montaigne's cat in **section 16.c.iii.** . There does not appear to be any way for contemporary Western science to rule out the possibility of Indigenous ritual having become sufficiently attuned over time to achieve communication with non-human phenomena such as, for example, a swarm of bees' waggle dance. It would therefore be difficult, even when arguing exclusively from within a Western paradigm, to show that it was a priori impossible for humans to discern animal consent.

philosophies, where there is a clear conception of there being right and wrong, and of it being our responsibility to find and maintain our balance within this by engaging in respectful and responsive relationships with those sharing in the same locality. We are not dealing with the human hubris of our perceived freedom to create whatever society that appears to suit us, for the simple reason that we are not in a position of authority. Burkhart's ethic of locality was shown to arise from the land,³⁸ and Apffel-Marglin's agency to reside in the relationships between those sharing in it.³⁹

The role of Cordova's ripples is to become attuned to the *conatus* of the whole, and to interact respectfully and successfully with everyone else's ripples. An ethical framework relying on a perceived exclusively binary relationship between universalism and relativism, and invoking conceptions of societies' freedom to make their own choices here, misses this vital point. It is not individual freedom that is at stake here; it is the freedom to come alive as an individual in relationship with the whole that is beckoning from the far side of our attunement. It is learning to play jazz in the great jazz band of the wider world, to celebrate our talents in a way supportive of our creating harmony with the band, and to be buoyed by the band's response in return. An argument made exclusively from within a contemporary Western paradigm, placing the question into a context of relativism, fails to acknowledge the difference between the freedom of Waters' maturing into shared learning and creation in Buber's *I-thou* relationships on the one hand, and the freedom to engage in wanton acts of "othering" and self-indulgence on the other.

Such a point of view further misses an observation made, for example, by Lloyd in relation to feminist thinking: it can be as unhelpful to place the unfamiliar on an exoticising pedestal as it is to denigrate it, as both prioritise the preservation of a perceived binary dualism over any potential for shared learning and creation.⁴⁰ In Lloyd's example of feminism, it is unhelpful to romanticise what has become known as "female intuition", as

³⁸ Burkhart, *Indigenizing Philosophy Through The Land*, p.86.

³⁹ Apffel-Marglin, *Subversive Spiritualities*, p.134.

⁴⁰ Lloyd, 'The Man Of Reason', p.35. Related points were made in the contexts of multiculturalism and intersectionality by several contributors to Narayan and Harding's *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* and cited in **Part 1**, as well as by Lorraine Daston above and in **Appendix G** in the context of anthropomorphism. Parallels can, of course, also be drawn to the attitude displayed by the committee overseeing Kimmerer's postgraduate student's project above: their conviction that any form of harvesting by humans must be harmful can be placed in the tradition of a conception of "pristine nature" entirely separate from humans, as opposed to human and non-human nature being understood to be sharing in the same biological, storied, and meaningful processes of evolving together.

this leaves the previously existing, polarising conception of “reason” as being free from intuition in place unchanged. What is required, instead, is a conception of reason that no longer excludes intuition.⁴¹ This does not make intuition, or indeed women, always “right”. What it does do, however, is to include intuition, and indeed women, within the scope of mainstream rationality, and thus to counteract any prevention of their epistemic contribution. Once their dignity is recognised, with Gaita, as a matter of decency, the second step – of their contribution containing wisdom – is able to follow. In the absence of the first step, this wisdom remains hidden from view, just as Kimmerer’s postgraduate student’s inadvertent attunement to ancient buffalo and grass would have been likely to be lost on us had we not been prepared first to dignify Deloria’s initially unpalatable stance.⁴²

Applied to the scenario described by Govindrajan, this shows that any perceived exhaustiveness of a dichotomy of a relativist point of view on the one hand, and a reproachful, universalist one on the other, is going to be insufficient as anything but a starting point. Uncomfortable as it may initially be: with Lloyd, Fricker, and Gaita, as well as with Welch,⁴³ the dignity of allowing relationship to develop, and the respect of listening as well as talking, must be paid first – and then, in a second step, shared learning and creation may be able to take place. The above cases of Vine Deloria and his stance on evolutionary theory, and of Mary Midgley’s reservations regarding aspects of Spinoza’s thinking, exemplified the wisdom contained in the Indigenous preference of nuanced exploration over exclusive reliance on ready answers.

All that we have seen so far entails the insuperability of our fallibility. The vastness and complexity of Spinoza’s web of relationships, and its corollary of the impossibility of any individual apprehending it all, chimes with James’s necessary gap in our understanding of what it is that we are longing for, as it chimes mathematically with the magnitude of the

⁴¹ Lloyd, ‘The Man Of Reason’, p.36.

⁴² I find it useful to reiterate here that it would have been unhelpful to understand Deloria’s initially unpalatable ideas exclusively through his personal history, as outlined in the chapter at the beginning of **Part 2** discussing these. As much as Deloria’s personal history deserves to be acknowledged as a likely contributing factor, an understanding of it as a sole explanation would have been patronising, and likely to preclude engagement with the wisdom contained (especially against a background of continuing disagreement), in much the same way as an exclusively binary discussion of the above case study involving goats was shown to be bound to miss the point. We cannot see that a penguin’s feet are rudders if we stop engaging with them once we have established that it is not they, but the short legs that they are attached to, which are responsible for penguins being slow walkers.

⁴³ Welch, *The Phenomenology Of A Performative Knowledge System*, p.45.

integral of our individual and collective past forming under the ever-evolving curve of our existence: we catch glimpses of the curve's derivative each moment that we live it, while never grasping all that it may become. Today's balance in the women's eight, every day, is more than yesterday's training notes. Westling's horse and rider may be cause and effect at once, if they have remained causal at all, and they are one and one, a minuscule microcosm of all that there is, and of all that may be becoming. The Indigenous Trickster, and the agency in Buber's *I-thou* relationships, are neither an inconvenience to be eliminated nor an exotic species to be controlled, pinned, and admired under glass. They are wild, as are we, and they are our allies as we open our heart-mind-bodies to a wider rationality, as we let go of our faith in Lloyd's 'Man of Reason' as the sole purveyor of wisdom. He is as fallible as any of the rest of us, as one of the rest of us is all he ever was. Our fallibility, however, requires not our resignation, but rather our sincerity in our commitment to, and wisdom in, our shared learning and creation as we venture from our place of origin in Spinoza's web of relationships into the ever-regenerating web that we are, with Merleau-Ponty, with Barad, and with Cordova, participating in weaving for the new day. We have learnt above, from Spinoza, from PRATEC, as well as from the stories of the Rio 2016 women's eight and of Kimmerer's postgraduate student, that we may hope for our journey to be a joyful one.

Since ritual and labour tend to be one in worldviews underpinning practices such as that described by Govindrajan, and since the cohesion of the multi-species communities concerned is conceived to be grounded in conversation and mutual nurturing as opposed to institutional continuity;⁴⁴ since the *I-thou* of the responsive relationships entailed has been shown to provide fertile ground for the shared learning and creation of performative knowledge processes, it appears likely that a society living under a participationalist paradigm will address its own, inevitable, individual and collective fallibility. In fact, there is a case to be made that such a learning society is better placed to respond to its fallibility than one whose rationality has been distilled down to scientism and then freeze-dried by the spread of Ellul's technique. It is at this point that, once again, we are being offered a glimpse of what may have led Deloria to assert that our assumption of unilateral control constitutes the original sin:⁴⁵ it will, if we allow it to, prevent our shared learning and creation of the piece of web supporting the new day's

⁴⁴ Rengifo, 'The Ayllu', pp.118-120.

⁴⁵ Deloria, *The Metaphysics Of Modern Existence*, p.203.

sweet spot on Cordova's barrel where our *conatus* is able to ring true with that of the whole.

The point I am making is not that the ritual killing of an animal is right, or that it is wrong. As stated above, I lack understanding to make any such pronouncement. The point I am making is that we are looking at another case – as with Deloria's controversial treatment of evolutionary theory above – of our very disagreement potentially bearing some of the most valuable seeds of our learning about this remaining, perceived dichotomy of legislation and seeing with our heart. We may, in the very pain of this remaining dichotomy, find our ability to grow it into a yin and yang, but only to the extent that we remain alive to its potential for shared learning and creation, and that comes at a price of challenging our habit of engaging in "othering". It is with reference to complexities such as this that Cordova stresses the importance of valuing questions more than ready answers.⁴⁶

There can be no doubt that in relation to the example discussed by Govindrajan alone, uncertainties exist, for example, with regards to consent. As stated above, the goat is understood to be a person with self-awareness. In this sense, the goat consenting to its own killing in order to save another being is thus no different from St. Maximilian Kolbe.⁴⁷ However, a person with self-awareness is not necessarily a person without embeddedness in power structures. The author is aware of this, and it leaves her uneasy.⁴⁸ And yet, she concludes

(...) that isolating the violence of sacrifice from its companion constituents – love, guilt, grief, and devotion – would be to do fundamental injustice to the complexity of the interspecies encounter it entails (...) and the promise it holds not just for those living in it but also for those who aspire to more ethical relationships with nonhumans.⁴⁹

As Kimmerer observes, "Killing a *who* demands something different than killing an *it*."⁵⁰ The cognitive dissonance that allows me to be inconsistent in my resolve only to buy ethically sourced dairy products, the cognitive dissonance that allows Bekoff's colleagues to treat laboratory animals differently from their dogs at home,⁵¹ and that allows

⁴⁶ Cordova, *How It Is*, p.36.

⁴⁷ Westminster Abbey, *St. Maximilian Kolbe*, <URL: <https://www.westminster-abbey.org/abbey-commemorations/commemorations/st-maximilian-kolbe>> [Accessed: 20 March 2023].

⁴⁸ Govindrajan, p.505.

⁴⁹ *Ibid.*, p.516.

⁵⁰ Kimmerer, *Braiding Sweetgrass*, p.183.

⁵¹ Bekoff, *The Emotional Lives Of Animals*, pp.114-116.

committees to pronounce rats not to be rats,⁵² would not be possible in the intimacy of the relationships described by Govindrajan. The goats involved die as prematurely as Western factory farm animals do, but up until that point, they are embedded in a web of loving, caring, mutually nurturing family life.⁵³

Our unease is of importance here. It is an unease that is all too aware of the complexities involved as we attune our *conatus* to that of the whole. It is an unease we feel, too, when considering Westling's ancient stories, bringing ancient non-human persons to life as if they were part of our own web of relationships today, to reflect, as we live the stories through Westling's prose, on our potential to make meanings together and on our potential to cause each other's deaths.⁵⁴ It is an unease that could, arguably, alert the wider rationality of our mind-bodies in good time that something needs our attention when we are in danger of painting our world into a corner.

Without the stories, without the meanings, we find it easier to buy dairy from factory farms. Without the stories, without the meanings, Ellul's technique can freeze-dry our emotions and deaden our responses to a lonely man losing his home at the day centre in the run-up to Christmas. Without the stories, without the meanings, due process is enough; legislation, on its own, is enough, to be applied as dictated by due process. Technique spreads to harden the hearts of the committee. It has no need of shared learning and creation; it has no need of *I-thou*, because rats have been freeze-dried, and they are no longer rats.

When Roger Fisher famously proposed the implantation of the nuclear codes next to a volunteer's heart, so that the US President would be forced to kill the volunteer for access to the codes, the Pentagon refused on the grounds that this would make it impossible for the President to deploy nuclear weapons. Their response proved Fisher's point that it was

⁵² Ibid., p.139.

⁵³ A related sentiment is, reluctantly, expressed by Kimmerer, without making reference to ritual sacrifice, and using the example of a trapper instead. The deaths inflicted by the trapper are deaths as unrelated to the food chain as the deaths of the goats above, and Kimmerer is initially reluctant even to meet the trapper. After an extensive conversation, and with reservations remaining, she concludes that although those purchasing the trapper's furs are unlikely to be part of a relationship of honourable harvest, the trapper himself appears to be, and his work appears to involve a range of practices showing genuine care for the land and for those sharing in it, including apparently genuine care for those eventually killed by him. Having softened to adopt a nuanced stance regarding the trapper's own behaviour, Kimmerer's criticism of those purchasing his products without need remains, as does her sense of unease with the situation as a whole. (Kimmerer, *Braiding Sweetgrass*, pp.190-194.) It is far from the first time that she has had to point out that "balance is not a passive resting place." (Ibid., p.94.)

⁵⁴ Westling, pp.49-60.

distancing that allowed us to behave inhumanely, and that therefore the reversal of distancing would restore our humanity.⁵⁵ Spinoza's work is not alone in showing that it takes another affect, as opposed to propositional knowledge, to restrain an affect.⁵⁶

Mark Johnson, cited above, argues that our moral judgements rely on imagination more than Western society's almost exclusive focus on legislation would suggest:⁵⁷ even in the presence of hard and fast rules, the need remains to discern which of these can be applied as a new situation arises, followed by the need to discern how it may be appropriately applied. There is a reason why, throughout **Part 2**, the Indigenous conception of stories providing guidance to find our situational, respectful, responsive path to regulating our behaviour has kept reappearing,⁵⁸ and that reason is meaning. John Dewey succinctly expresses a similar view: "The great secret of morals is love (...) a man to be greatly good must imagine intensely and comprehensively."⁵⁹

It was shown above that in a web of relationships where we are able to relate to each other as living beings, where we are able to claw back our *I-thou* from the spread of technique, such discernment finds fertile ground for shared learning and creation. It was also shown that in the absence of *I-thou*, this fertile ground is absent. We stop learning and creating with each other when the *I-it* of due process is all there is.

Legislation is as necessary as reparation payments were shown in **Part 1** to be, and for similar reasons.

It is for similar reasons, too, that it cannot remain our exclusive concern.

18.c. From Western *I-thou* relationships to a new, Western form of *together-doing* where ceremony may arise naturally from shared learning and creation

The answer to the above question of Western interaction with the sacred may now well be short: if we are open to Indigenous thinkers', and Spinoza's, idea of the sacred being present in the material world rather than beyond it, then any *I-thou* relationship of responsive interaction in this world will not be able to help but interact with the sacred

⁵⁵ R. Fisher, 'Preventing Nuclear War', *Bulletin Of The Atomic Scientists*, March 1981, available at https://books.google.co.uk/books?id=ygoAAAAAMBAJ&lpg=PA16&ots=oVkrzABnMr&pg=PA11&redir_esc=y#v=onepage&q&f=false, [Accessed: 20 March 2023].

⁵⁶ Spinoza, p.123 (E4P14).

⁵⁷ Johnson, 'Imagination In Moral Judgment'.

⁵⁸ For example, Welch, *The Phenomenology Of A Performative Knowledge System*, p.170.

⁵⁹ Dewey, p.363, and **Appendix F**.

for the simple reason that the sacred will already be there. Ritual – ceremonial, conversational ways of doing things – may then develop out of everyday actions, and this may well turn out to have some overlap with what is meant by the Indigenous conception of ritual and labour as one.

From this point of view, Western abandonment of ritual in the last 500 years does not primarily appear to be an abandonment of ceremony, but rather, first and foremost, an abandonment of our previous *I-thou* relationships with non-humans, and our careless casting aside of these as objects rather than subjects. The absence of ceremony from our everyday interactions with non-human nature can then be understood as a result of this at least as much as it can be seen as its origin.

It is also from this point of view that it becomes possible to see common ground emerge from the potential ways forward proposed by the authors cited. If we return to treating the material as meaningful, new ceremonial ways of “together-doing” have space to emerge.⁶⁰ These are likely to be informed by older traditions, intentionally or otherwise. Colonial societies’ residential school systems have reduced the volume of traditional ecological knowledge and customs readily accessible,⁶¹ but this does not mean all their wisdom has been lost. Contemporary Indigenous groups and individuals are working to recover it, and to grow it into today’s world.⁶² In addition, we saw the phrase “the land remembers” take on some Western-accessible meaning when Kimmerer’s postgraduate student sought attunement to sweetgrass through her honourable harvest, and found attunement to an ancient evolutionary relationship besides.⁶³

Kimmerer was cited earlier, linking our acting as selective forces on each other’s evolution to love and to nurturing.⁶⁴ It is in this context that she recommends that in order to restore relationships between land and people, everyone should plant a garden, as “a nursery for nurturing connection, the soil for cultivation of practical reverence (...) once

⁶⁰ Kimmerer, for example, cites Thomas Berry regarding our treatment of the universe as “a communion of subjects, not a collection of objects” in this regard. Kimmerer, *Braiding Sweetgrass*, p.56.

⁶¹ Cordova, for example, goes further than this, showing that the exclusion of Indigenous worldviews continues in contemporary education systems: “I learned another thing (...) The reality of my father was not the reality that I had to contend with. I had discovered America.” (Cordova, *How It Is*, p.39.)

⁶² For example, Kimmerer, *Braiding Sweetgrass*, pp.254-267.

⁶³ Kimmerer, *Braiding Sweetgrass*, pp.158-166.

⁶⁴ *Ibid.*, pp.121-127.

you develop a relationship with a little patch of earth, it becomes a seed itself.”⁶⁵

It is in our interactions in this world that she sees our relationship with the sacred being restored through what she refers to as “practical reverence.”⁶⁶ Consistent with a conception of time as having circular characteristics alongside its linear ones,⁶⁷ she relates a story of an Indigenous custom being brought to life anew in today’s world. It involves a Western scientific restoration project aiming to encourage salmon to return to an estuary after being driven away by changes made to support large-scale cattle farming. During the day, ecologists working on the project employ methods of Western science to restore the ability of tidal waters to flow back and forth. At night, one of them leaves his microscope lamp on in a nod to the Salmon Ceremony’s lighting of beacons to guide the salmon home.⁶⁸

Consistent with the above conception of ritual and labour as one, and of our relationship with the sacred arising naturally from our – by necessity related – relationship with the material, Kimmerer makes clear that she does not see the cultural appropriation of other societies’ ceremonies as a way forward, but the shared learning and creation that will bring forth our own:

To have agency in the world, ceremonies should be reciprocal co-creations, organic in nature, in which the community creates ceremony and the ceremony creates communities.⁶⁹

The ecologist leaves his microscope lamp on, and waits to see how the more-than-human world responds. His practice is informed by ancient custom, but he does not attempt to copy the ritual as it was.

A similar point is made by Deloria, also cautioning against any attempt simply to appropriate old Indigenous customs in the modern era.⁷⁰

Kimmerer stresses the importance of refraining from “othering” in this,⁷¹ as well as the

⁶⁵ Ibid., pp.126-127. Kimmerer’s suggestion may be seen in context with the comments made at the end of **section 16.c.i.** regarding the potentially transformative role of responsive engagement with non-human nature in breaking the vicious cycle formed by the spread of Ellul’s *technique* and contemporary Western reluctance to accept non-humans as persons.

⁶⁶ Kimmerer, *Braiding Sweetgrass*, p.190.

⁶⁷ Ibid., pp.206-208.

⁶⁸ Ibid., pp.251-253.

⁶⁹ Ibid., p.250.

⁷⁰ Deloria, *The Metaphysics Of Modern Existence*, p.4.

⁷¹ Kimmerer, *Braiding Sweetgrass*, pp.348-359.

importance of inculcating trust in the world's generosity and abundance.⁷² Her conception of community as being central to this chimes with related findings from the field of psychology,⁷³ but is unlikely to be reducible to these.⁷⁴

At the moment, we Westerners have a tendency only to see wisdom in non-humans via the pathway of evolved biochemical systems involving buffalo saliva and grass growth, because that is what we choose to focus our scientific observations on. Deloria's earlier call for "synthetic attentiveness"⁷⁵ in this context chimes with Lloyd's earlier call for a wider conception of rationality.⁷⁶ Traditions cannot simply be reduced to science or to myths; they carry wisdom regarding our relationships within the universe.⁷⁷ The postgraduate student's attunement of her own *conatus* to that of the whole did not come through her knowledge of the biochemistry involved: it came through her relationship with sweetgrass, which was facilitated by her encounter with the basket makers' traditions, and then her knowledge of the biochemistry involved followed. At no point is any suggestion made that the biochemistry involved is all there is.

It is for this reason that Deloria and Wildcat, as did McPherson and Rabb above, stress the importance of experiential learning,⁷⁸ and it is also here that it becomes most clearly visible that Deloria's reasons for finding evolutionary theory insufficient at the beginning of **Part 2** go deeper than its mainstream, Western version has been willing to address to date. It is no longer solely cooperation shown by Bekoff's coyotes today that is at stake.⁷⁹ It is also the pull of attunement, the pull of story, and the pull of Welch's dance,⁸⁰ on unconscious ties to evolutionary relationships millennia old. Evolutionary theory, in its current, mainstream form, even when uncorrupted by political misappropriation, is, as

⁷² Ibid., pp.377-379.

⁷³ For example, van der Kolk, pp.397-412.

⁷⁴ Deloria and Wildcat, pp.35-36.

⁷⁵ Ibid., p.149.

⁷⁶ Lloyd, 'The Man Of Reason'.

⁷⁷ Deloria, *The Metaphysics Of Modern Existence*, p.230.

⁷⁸ Deloria and Wildcat, p.33.

⁷⁹ Bekoff, *The Emotional Lives Of Animals*, pp.102-103. Although only Bekoff's coyote study is being cited in this particular instance, it is important to reiterate that Bekoff, too, agrees that the way forward lies in the rejection of scientism, and in a creative approach "drenched in deep humility, compassion, caring, respect, and love."⁷⁹ (Bekoff, 'The Evolution Of Animal Play, Emotions, And Social Morality', p.628). Bekoff, too, cites Thomas Berry regarding human and non-human nature being a "community of subjects" (Bekoff, *The Emotional Lives Of Animals*, p.163) and, relatedly, dissolves the conventional boundaries between rationality and emotion, between philosophy and religion (Ibid., p.30 and p.166). The role of our emotions in developing our rationality to accommodate participation with the non-human world appears to be accepted by many.

⁸⁰ Welch, *The Phenomenology Of A Performative Knowledge System*, p.104.

yet, as oblivious to this pull as Newtonian physics is to Bohm's **Part 1** fish tank.

Temptation to ask a "sledgehammer question" will rear its head: does the scientist leaving their microscope lamp on overnight really think this will guide the salmon home? And, relatedly, if the salmon do come home – did the scientist really think it had anything to do with the lamp? Did it really happen?⁸¹ *Could* it really happen?

I would say, with Wilshire, that we are unlikely to know enough about what "it" is to venture an opinion here.

I made the claim earlier, citing William James,⁸² that the sacred is beyond the reach of our human capability unilaterally to define and to control. We have had glimpses through our *I-thou* relationships and found ourselves struggling to articulate even those. The Rio 2016 women's eight could only express what was happening in a way that those could understand who already understood anyway, having been participants in the shared learning and creation that was being described. Those who had not been participants could not be brought into the fold through language alone any more than Havi Carel's uninitiated could be told about certain experiences of illness.⁸³

The scientist leaving the lamp on was clearly engaged on a more-than-scientific level. This alone was likely to make a difference to the way he conducted himself at work. I would be surprised, however, if the difference could be reduced to this. Different conduct contributes to the development of different relationships, as Steinbeck's Lee first showed us in **Part 1**. An interested mechanic was included in Dewey's observations on the doings and undergoings of our artful engagement with the world.⁸⁴ Iris Murdoch's work shows the influence of our attitudes cultivated over time on our choices.⁸⁵ Kimmerer's postgraduate student's committee had only ever experienced the harvesting of plants in a Western context driven by profit. Their findings obtained through these relationships convinced them that harvesting was detrimental to a plant's thriving.⁸⁶ The postgraduate student learnt to engage in the practice of honourable harvesting, and her findings through her own relationships were diametrically opposed to the committee's.⁸⁷ In

⁸¹ Wilshire, *The Primal Roots Of American Philosophy*, p.83.

⁸² James, pp.466-467.

⁸³ Carel and Kidd, 'Epistemic Injustice In Healthcare: A Philosophical Analysis', p.530.

⁸⁴ Dewey, p.4.

⁸⁵ Murdoch, p.17.

⁸⁶ Kimmerer, *Braiding Sweetgrass*, p.163.

⁸⁷ *Ibid.*, p.165.

addition, and unbeknownst to her at the time, the relationship she found through her different conduct led to her participation with the ancient jazz band of buffalo and grass each doing what they do best, and supporting the system's thriving at the same time as their own.

The postgraduate student's attitude made a difference which extended well beyond her own well-being. It made a difference to the way she was able to enter into relationship with the world, opening up pathways to new *I-thous*, and to all the wonder of shared learning and creation to be brought into being through these.

It is no wonder that Indigenous thinkers find themselves drawn to Spinoza even despite his having been understood as a determinist by some, which would have jarred with a participationalist worldview. Understood as our learning to play jazz with the band of the whole, intuitive knowledge, rather than referring to our attainment of equanimity as we submit to a fate of being billiard balls, frees us to enjoy our creative participation with the band. We are feeling our way towards the ever-shifting sweet spot, where our *conatus* rings true with the *conatus* of the band, so that from this sweet spot we may begin to partake of the tastes and textures of the shared learning and creation that Spinoza's intuitive knowledge, James's doorway in our unconscious, Dewey's iterative doings and undergoings, PRATEC's conversation, Little Bear's shared ground between Indigenous worldviews of understanding the manifesting as being spiritual, Deloria's respectful success, Cordova's ripples, Kimmerer's postgraduate's attunement to sweetgrass, and the speed and friendship of the Rio 2016 women's eight have given us glimpses of.

It is as impossible for me to know, as an outsider, all the ways in which the scientist's attitude and behaviour may have contributed to the shared learning and creation taking place in the inter-species relationships developing in the vicinity of the microscope lamp, as it was for the two challengers to know how the Rio 2016 women's eight rowed together based on a verbal description of the crew's experience. It is also precisely this that does not allow me to dismiss it. It was not knowledge of the formula of the love hormone oxytocin that enabled Kimmerer's postgraduate student to attune to the wisdom contained in the ancient relationship between buffalo and grass. It was love of the plant of sweetgrass.

Chapter 19 – Recommendations

The beginning of a chapter discussing a recommended way forward seems an appropriate moment to appreciate the irony of such a chapter co-existing with an interim conclusion at the end of **Part 1**, giving reasons for its being hubris to think of this as our unilateral, human choice.

However, that, in its own way, already is a comment on how to proceed. In this spirit, it is perhaps helpful to begin with how *not* to proceed. Newtonian physics and, relatedly, the Western scientific paradigm, although not suddenly incorrect with the arrival of quantum theory, have been shown to be incomplete.¹ We do not know enough to retain any credibility as we cling to our accustomed role as sole decision-makers. This is why my interim conclusion spoke of asking for non-human input, and of conceiving doughnut economics,² and more generally a doughnut way of life, as Cordova conceived her ripples in a pond:³ as interacting circles, not as solitary, human ones.

If we are open to this, then a number of additional recommendations follow, relating to further actions that we may be better advised *not* to take.

Firstly, if we are serious about allowing interacting ripples to transform our doughnut, then it follows that the original set of four questions initially offered by Tinbergen⁴ becomes insufficient, as they stop short of addressing either inter-species relationships or the wisdom potentially contributed by non-humans to the whole (regardless of whether or not we allow the latter to be reduced to propositional knowledge pertaining to evolutionary systems alone). A non-human's behaviour, then, and before we even begin to think about casting our net wider and entering into the realm opened up by a participationalist paradigm, may be thought of as potentially containing answers to the two additional questions suggested above: (5) What does it mean with regards to the way we can respectfully relate to this individual? (6) What does it mean with regards to the way we can respectfully participate in the whole?

Secondly, if we are serious about allowing interacting ripples to transform our doughnut,

¹ For example, Peat, *Blackfoot Physics*, p.170.

² Compassion In World Farming, *Is The Next Pandemic On Our Plate?*, May 2020, p.15, <URL: <https://www.ciwf.org.uk/research/covid-19/is-the-next-pandemic-on-our-plate>> [Accessed: 20 March 2023].

³ Cordova, *How It Is*, p.230.

⁴ Burkhardt, p.427.

then it follows that our natural, initial anthropomorphism must be prevented from turning into lingering anthropocentrism, and Mary Midgley's method of approaching an initially unfamiliar vantage point via a series of stepping stones applied instead. As Gaita points out, we require *some* initial similarity in order to find a way to begin a relationship, but we are neither able to predict what such similarity might turn out to be, nor where it may lead us on our shared journey.⁵

Moving beyond a solely representationalist view now, and beginning to include a participationalist one, I would argue that the openness advocated by Gaita applies to the constitution of our stepping stones as much as it does to their location. The increasingly well-informed questions we hope to ask as we apply Midgley's method to our interactions with the previously unfamiliar need not all be static, representationalist ones, enabling us to learn *from* it. They may, just as easily, and with equal validity, consist in enjoyment of processes of shared learning and creation *with* those we form relationships with, in a rowing boat, or indeed elsewhere. Dewey, for example, sees a vital role for art and friendship in facilitating non-linguistic communication between cultures.⁶ Relatedly, Joanna Burch-Brown explicitly includes cooperation and friendship in her recommendations for the promotion of understanding between religious groups of humans.⁷ These findings are reminiscent of the Creek elder's emphasis on participation above.⁸ The latter means that they have already been applied across species boundaries, too.

Attunement found in such "together-doing", rather than – or alongside – the acquisition of propositional knowledge has the additional advantage of accommodating that which cannot be expressed succinctly in human language alone.⁹ This advantage necessarily acquires additional importance when relating to those where no common spoken language is available, and it thus constitutes an additional reason for the importance of guarding against any temptation to remain in a position of anthropocentrism. The primatologist in de Waal's above case study could simply have returned to camp on the day in question, had she but tuned in to what was being communicated by the primates.

⁵ Gaita, *The Philosopher's Dog*, p.193.

⁶ Dewey, pp.348-350.

⁷ J.Burch-Brown and W.Baker, 'Religion And Reducing Prejudice', *Group Processes And Intergroup Relations* 2016, Vol.19(6), pp.784-807, DOI: 10.1177/1368430216629566 [Accessed: 20 March 2023].

⁸ Hester, 'On Philosophical Discourse: Some Intercultural Musings', p.264.

⁹ For example, Dewey, p.70.

To persist with the original project plan had become as futile as it was inconsiderate from the beginning. Experiential learning was being offered on a silver platter, and the opportunity was squandered.

Relatedly, to remain in a position of anthropocentrism beyond the natural first step of an anthropomorphic starting point is to remain in a position of power which – at the very least, without help – we lack understanding to exercise responsibly. The creation of “celebrity scientists and elephants”,¹⁰ for example, may be a useful stepping stone, initially, in order to raise awareness of the beauty and of the needs of the more-than-human world. If we then fail to progress from this initial position, however, we run the risk of defeating the object through our lack of understanding: a “Big Brother House” of non-humans subject to being cast aside as soon as the television-viewing public loses interest in them is almost bound inadvertently to cast aside the habitats and food chains supporting those it had intended to vote to keep.

At least as importantly, it embodies the exact mechanisms of “othering” that Kimmerer cautions us to guard against.¹¹ If we are, with Spinoza and with Indigenous thinkers, open to a conception of the good of the individual and the good of the whole enhancing each other to the extent that we learn to play jazz with the band, then Burkhart’s initially controversial “Everything has all the value there is”¹² becomes an element of common sense, as well as one of an ethical theory we are now more easily able to relate to in the West.

Govindrajan’s humans’ faces gazing lovingly at their goats alone show that our attribution of value to some individuals more than to others is not only a natural part of our very being, but also a beautiful one.¹³ Spinoza’s, and Burkhart’s, requirement of our playing jazz with the band, in this context, can perhaps be approached through a stepping stone of placing our sentiment with Mary Midgley’s “kinship” petal in her arrangement of moral reasons,¹⁴ in the knowledge that the “kinship” petal is far from the only one. Playing jazz with the band is about skilfully, responsively, and compassionately weaving

¹⁰ G.Mitman, ‘Pachyderm Personalities’ in *Thinking With Animals: New Perspectives On Anthropomorphism*, ed. by L.Daston and G.Mitman (New York/Chichester: Columbia University Press, 2005), pp.177-195, p.178.

¹¹ Kimmerer, *Braiding Sweetgrass*, pp.348-359.

¹² Burkhart, *Indigenizing Philosophy Through The Land*, p.200.

¹³ Govindrajan, pp.513-514.

¹⁴ Midgley, *Animals And Why They Matter*, p.30.

together. It is not about drowning anyone out, with or without intent.

Intertwined, and potentially in tension, with any quest to choose attunement over “othering” is the reality of our causing harm to others by virtue of our very being. We use soap and water not despite its ability to stop the Covid-19 virus in its tracks, but because of it. We could, theoretically, make a different choice here, and let the virus have its way instead, but we could not reliably avoid treading on insects, nor could insects reliably ensure that they never bit us unless they were free of malaria. As Louise Westling points out, our ability to create shared meanings is interwoven with our ability to cause each other’s deaths.¹⁵ Interwoven with the question of how to enter into relationship with the non-human world is the question of how to navigate this tension.

In the transition from a discussion of what not to do to a discussion of positive steps we might take, I find myself, being Western, tugged at by habits I have been enculturated into all my life. These habits pull in the direction of creating structures and due processes, frameworks ensuring that tomorrow’s choices are going to be mindful of voices I cannot readily hear.

The case study involving the bus driver dilemma alone showed that this is a vital step, as does Cordova’s snowball analogy. However, we have also seen that we have the spread of Ellul’s technique to be wary of. Due process untempered entails a danger of creating a web of “human techniques”¹⁶ for non-humans. Whatever we do, our overarching concern must be to remain alive and responsive to those we meet. Kimmerer’s garden¹⁷ is anything but naïve; it is our doorway to Fisher’s volunteer’s heart in the more-than-human world.¹⁸ It is through stories reborn and allowed to flourish in lived realities that meanings emerge. Honourable harvest has been shown to be more than a matter of quantity. It was shown also to be a matter of listening to Gaita with regards to spiders,¹⁹ of Kimmerer’s postgraduate student relating as respectfully and responsively to sweetgrass as Inuit have been shown to relate to geese,²⁰ of buffalo and grass having

¹⁵ Westling, pp.49-60.

¹⁶ Ellul, p.413.

¹⁷ Kimmerer, *Braiding Sweetgrass*, *Ibid.*, pp.126-127. A similar point is made, for example, by Vine Deloria, when he points out that land may be consecrated by groups placing their roots in it, thus entering into relationships with fellow humans and non-humans sharing in the land, and developing new forms of spiritual unity in the locality in question. (Deloria, *God Is Red*, p.288.)

¹⁸ Fisher, ‘Preventing Nuclear War’.

¹⁹ Gaita, *The Philosopher’s Dog*, p.100.

²⁰ Fienup-Riordan, ‘A Guest On The Table’, pp.545-553.

found balance as have corn, beans, and squash.²¹ The story of honourable harvest, initially exemplified by Kimmerer in the context of responsible scientific research,²² grew into different expressions with interwoven meanings in the different relationships and localities above. Each time, the sweet spot of the individual's *conatus* playing jazz with the *conatus* of the band had its own signature tune.

It was shown above that Indigenous thinkers are not opposed to the Western tendency to legislate pre-emptively *per se*.²³ It is, rather, the mechanical application of universalist principles, excluding the possibility of epistemic locality operating as a process of kinship,²⁴ which they oppose. In a world where humans cast themselves as unilateral decision-makers, it becomes impossible for the land and for those already sharing in it to have any say in the way that the story develops *here*. No matter how much stewardship we may exercise, the land and its non-humans remain passive in this approach, excluding the possibility of shared learning and creation in locality, and of the development of the agency residing in relationships recognised by Apffel-Marglin.²⁵ And where there is no agency in our relationships, the danger arises of Ellul's technique reigning supreme, of PRATEC's custom being replaced by habit, of institutional continuity replacing conversation,²⁶ of the jazz band being served redundancy notice by the metronome, and of due process becoming all there is.

The question of how to embed this locality into a Western nation state, where we have already rolled our inner layers of Cordova's snowball into a largely depersonalised shape and where, at the same time, this very shape provides our reassuringly predictable tax revenue to run the schools and hospitals that we value, has been shown to be a knotty one. Where no relationship has developed, or where a developed relationship has failed, legislation provides security. As stated by Rebekah Humphreys and Robin Attfield above, mandatory principles of justice have the advantage of remaining in place where voluntary considerations such as compassion may have been abandoned.²⁷

²¹ Kimmerer, *Braiding Sweetgrass*, pp.128-140.

²² *Ibid.*, p.158.

²³ For example, Deloria, *The Metaphysics Of Modern Existence*, p.187.

²⁴ For example, Burkhart, *Indigenizing Philosophy Through The Land*, p.86.

²⁵ Apffel-Marglin, *Subversive Spiritualities*, p.134.

²⁶ Rengifo, 'The Ayllu', pp.118-120.

²⁷ R.Humphreys and R.Attfield, 'Justice And Non-Human Beings, Part I', in *Bangladesh Journal Of Bioethics* (7:3), 2016, <URL: <https://repository.uwtsd.ac.uk/883/>>, pp.1-11, and Humphreys and Attfield, 'Justice And Non-Human Beings, Part II', in *Bangladesh Journal Of Bioethics* (7:4), 2017, <URL: <https://repository.uwtsd.ac.uk/884/>>, pp.44-57. [Accessed: 20 March 2023].

Vine Deloria's call for legal personhood for parts of non-human nature above demonstrates that he would be the last to deny this.²⁸ There does, however, appear to be one crucial difference between a Western and an Indigenous understanding of regulating our behaviour. This difference is familiar to us from **Part 1** : an Indigenous talking circle leaves an opening for the Trickster to enter,²⁹ and Burkhart's work links the Trickster to the locality of the land, and to the relationships between those who share in it.³⁰ Burkhart's reference to Buber's *I-thou* and *I-it* relationships in this context constitutes a helpful stepping stone for our Western minds, and casts light on the relationship between locality and the shared learning and creation of performative knowledge processes.³¹

In Buber's thinking, as in Cordova's and Barad's, we are more than Ellul's elements of a mechanism, there merely to perform a role. It was shown above that Buber accepts the reality and necessity of *I-it* relationships alongside *I-thou*. It is the exclusive reign of *I-it* that depersonalises the world, rather than the fact of its existence.³² It is particularly in this context that the affinity between Buber's and Indigenous thinking (for example, PRATEC's with regards to conversation)³³ becomes clear.³⁴ Deloria's "habitude" is emphatically *not* repetitive habit. It is "an attitude or awareness of a deep system of experiential relations on which the world is building or living."³⁵

Western examples of nuanced approaches to the use of legislation – and to the ethical

²⁸ Deloria, *The Metaphysics Of Modern Existence*, pp.177-188. In addition, it is worth noting that as well as holding a science degree, Deloria subsequently qualified as a lawyer: University of Colorado Boulder, *Vine Deloria Jr.*, <URL: <https://www.colorado.edu/law/vine-deloria-jr>> [Accessed: 20 March 2023].

²⁹ Peat, *Blackfoot Physics*, p.177.

³⁰ Burkhart, *Indigenizing Philosophy Through The Land*, pp.xvi-xvii.

³¹ *Ibid.*, p.108.

³² Buber, p.24.

³³ Rengifo, 'The Ayllu', p.106.

³⁴ Buber, p.28. Buber, too, stresses the role of responsiveness in relationships here.

³⁵ Deloria and Wildcat, p.34. As a further stepping stone to increased understanding of the Indigenous points of view put forward here, I find it useful to recapitulate that it is not exclusively the consideration of giving space to others to have their say which is at stake here, although this clearly is one of the issues at stake. A case study was provided in **chapter 16** of an attitude of whole-mind-bodied, responsive interaction with the world being conducive to scientific rigour as opposed to hampering it. **Section e.** of **Appendix B** contains a brief summary of why this can be argued to be necessarily the case. The fact and nature of our blind spots can similarly be argued to entail a responsive legal system not only delivering an increase in consideration, but also one in fairness.

considerations giving rise to its conception – have been shown to exist.³⁶ However, they appear to feature less prominently in our underlying assumptions as we go about organising our nation states: we have a tendency to think of universalism as an antidote to the abuse of loopholes, and of nuance as a potential culprit responsible for the provision of these. Especially in largely depersonalised societies such as our Western ones, we may be justified in our caution with regards to flexibility being open to abuse in an allegedly victimless crime,³⁷ rather than its being applied as intended to accommodate compassion – compassion which may frequently be absent in any case, in the absence of its breeding ground of relationships supporting mutual attunement.³⁸

And yet, for the lonely man in the case study of the day centre above, the Trickster did succeed in making an appearance through an imperfection in the system's depersonalisation. With regards to societal provision available to those involved, due process was indeed all there was, and this made it difficult for a nuanced response to emerge. However, as in Fisher's above example of the volunteer and the nuclear codes, once the meanings contained in the situation were able to escape the spread of Ellul's technique, and to find their way into a handful of relationships nearby, they grew into seedlings empowered to crack the concrete of due process reigning supreme.

I would argue that this is what Dewey means when he extends his comments on artistic engagement involving the entire live creature to all areas of life,³⁹ and that this in turn relates to his comments regarding a richer conception of rationality needing to be applied to ethics,⁴⁰ to yield a morality which is heartfelt more than it is driven by fear of punishment.⁴¹

³⁶ For example, Mary Midgley's diagram of moral petals, and her discussion of these: Midgley, *Animals And Why They Matter*, pp.30-31. William James and John Dewey were cited above and in **Appendix F** as additional examples.

³⁷ The above case study of the day centre could easily have played out to become a case in point: any scope for responsiveness that might have existed could have turned out to be open to abuse by those looking for a loophole to obtain, or to sell on, a service free of charge.

³⁸ Continuing with the example of the day centre, in a perfectly depersonalised society, regardless of whether a more liveable solution might have been available for the service user, no one might have intervened to offer it because no one might have cared.

³⁹ Dewey, p.32 and pp.2-4.

⁴⁰ An application of a richer conception of rationality to questions of ethics, put forward by both Dewey and James, was discussed in the context of James's work above, with additional detail made available in **Appendix F**. Relatedly, James described an exclusively mechanistic morality as "dull submission" to the law, instead advocating a form of morality that makes "emotional and practical difference". (James, p.41.)

⁴¹ Dewey, p.206.

These comments are further brought to life by Dewey's related observations in the context of aesthetics: Dewey points out that the confusion of aesthetics with the competent use of one particular technique not only causes the discussion – inappropriately – to move from artistic engagement to form alone, but it also, crucially, entails “its inability to cope with the emergence of new modes of life”.⁴² We are being guided back to PRATEC's responsiveness above, and responsiveness by no means implies the impossibility of objective criticism: rather, “What follows is that criticism is judgement; that like every judgement it involves a venture, a hypothetical element (...) that it is concerned with an individual object.”⁴³ A yardstick alone cannot achieve this. Our judgement needs to be qualitative, not solely quantitative.⁴⁴

It is thus not only Indigenous authors', Dewey's, and James's visions of our interaction with the world in general which are diametrically opposed to the mechanisms described by Ellul. It is also, in particular, their ideas on regulating our behaviour which are diametrically opposed to the mechanism described by Ellul as the spread of “judicial technique”:

For the technician of the law, all law depends on efficiency (...) this complex corresponds exactly to the notion of technique in general, that is, an artificial search for efficiency. (...) The formula then becomes: “Better injustice than disorder.”⁴⁵

At first, adoption of a more responsive stance might appear not only to pose the above, practical difficulties in relation to predictability and to prevention of abuse, but also a philosophical difficulty for our largely Cartesian, dualist minds. If we dare to conceive morality as anything other than “dull submission”⁴⁶ to the law, does this not inevitably entail disorder *and* injustice?

It is worth noting at this point that Ellul himself, for all his depressing insight into the spread of the inevitability of the predefined, is anything but opposed to the creation and application of legislation as such:⁴⁷ it is, rather, when the smooth running of legal process becomes all there is, when automatism replaces nuance in the pursuit of justice, that Ellul becomes concerned.⁴⁸ He is candid about the fact that the interdependencies entailed by

⁴² Ibid., p.316.

⁴³ Ibid., p.321.

⁴⁴ Ibid., p.320.

⁴⁵ Ellul, pp.293-295.

⁴⁶ James, p.41.

⁴⁷ Ellul, p.296. Ellul goes as far as to refer to the law as one of humanity's “highest vocations”.

⁴⁸ Ibid., p.292.

the spread of his web of technique make the reign of automatism difficult to prevent,⁴⁹ but he encourages his readers to try.⁵⁰

This is where I believe it may become feasible for Western conceptions of rule-following to meet Indigenous conceptions of locality, and to embark on a new process of shared learning and creation. A case in point is, for example, Desmond Tutu's work on the South African Truth and Reconciliation Process: drawing on pre-colonial conceptions of *ubuntu* alongside those resulting from his Christian faith, Tutu by no means abandoned requirements for behaviour to be regulated. What he did do was to place these into a context of lived relationships as well as of legislative precepts.⁵¹ In other words, Tutu was re-introducing story and meaning into the legal process.

It was shown in the context of the West abandoning hylozoism that our almost exclusive adoption of Cartesian dualism has created conditions for dichotomies to be assumed even in those situations where this is unrealistic.⁵² Kimmerer, for example, was made to choose between science and poetry when she applied for college.⁵³ Years later, as a mature scientist, she reflects that the two are, in fact, more realistically understood as parts of a richer conception of rationality:

(...) science as a way of knowing is too narrow for the task (...) since science separates the observer and the observed, by definition beauty could not be a valid scientific question.⁵⁴

Doing science with awe and humility is a powerful act of reciprocity with the more-than-human world. I've never met an ecologist who came to the field for the love of data or for the wonder of a p-value. These are just ways of crossing the species boundary, of slipping off our human skin and wearing fins or feathers or foliage, trying to know others as fully as we can.⁵⁵

More than any of the detailed recommendations in the early part of this chapter, my overarching recommendation is therefore one of allowing Indigenous conceptions of

⁴⁹ Ibid., pp.185-186.

⁵⁰ Ibid., p.xxxi.

⁵¹ D.Tutu, *No Future Without Forgiveness* (London: Random House, 2000).

⁵² The illustration used in **Part 1** was that we are, on the one hand, of course justified in observing that a computer is either switched on or off. We then, understandably, struggle with waves being particles and with particles being waves, due to the genuine mathematical, physical, and logical complexities involved. However, we may also struggle where there are no such complexities creating roadblocks to a non-binary conception of a situation: our underlying assumption of binary dualisms, at least figuratively, can lead us to suppose that the Sahara cannot be in the grip of a heatwave because Death Valley is already experiencing one.

⁵³ Kimmerer, *Braiding Sweetgrass*, p.39.

⁵⁴ Ibid., p.45.

⁵⁵ Ibid., p.252.

performative knowledge processes to transform us into participants in shared learning and creation with those around us, human and non-human alike. A richer conception of rationality has been shown to be a vital stepping stone to this.

From Lloyd's thinking and the influence of Spinoza, to the intersectional ideas put forward by the authors in Narayan and Harding's anthology, to Cajete's and other Indigenous authors' call for a wider conception of science, we have, throughout this thesis, encountered contemporary thinkers inviting us not merely to add previously unfamiliar thinking to the mainstream, but to become open to its transformation by embracing the roles of our bodies and emotions in relationship as vital components of our reason.

Now that we have been helped to transcend the self-imposed boundaries of our Cartesian heritage in relation to science, there is nothing to stop us from participating in a shared quest to seek ways of removing false dichotomies from our legislative and moral regulation of our behaviour, too. This is likely to take some effort: no ready-made solutions are likely to be available, not least because our tradition of Cartesianism has meant that at least for the last few centuries, none of us have really thought to look. In addition, we have seen that the process may involve the potentially painful choice to engage with the initially disturbing over the easier choice of leaving dichotomies of condemnation and romanticism in place, as we approach those who may, in their difference, apprehend parts of the network beyond our own reach. However, we have learnt from Cordova that questions may be more helpful than answers,⁵⁶ and from Polkinghorne that progress will only come from acknowledging complexity,⁵⁷ and this bodes well for the fruitfulness of shared innovation.

We have learnt from Fisher, and from several others, that we are less likely to pronounce rats not to be rats wherever we create circumstances allowing us to remain alive to the meanings contained in a situation.⁵⁸ We have learnt from the Indigenous authors cited that such meanings can arise locally, in relationship, from sharing our lives with a patch of land, and with our human and non-human neighbours there.⁵⁹

We have learnt from Kimmerer that when we give space to our sensitivity to this, we may at the very least become attuned to the wisdom contained in evolutionary relationships

⁵⁶ Cordova, *How It Is*, p.36.

⁵⁷ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.90.

⁵⁸ Fisher, 'Preventing Nuclear War'.

⁵⁹ Burkhart, *Indigenizing Philosophy Through The Land*, p.131.

previously beyond our cognitive reach.⁶⁰ We have learnt from William James that since the very nature of the sacred is that it is beyond our ability to control and to define,⁶¹ we may well be doing more than this: as we engage in our shared learning and creation with those we are fortunate enough to meet, as we balance on Cordova's barrel and allow our ripples to interact with the rest, as we navigate Westling's complexities of shared meanings and potential deaths, as we allow our own *conatus* to become attuned and to learn to play jazz with the *conatus* of the band, we may well be engaging with the sacred in the material.

It is important to bear in mind what participation has been shown to mean here: it means that the stepping stones found in this thesis can be no more than just that. The real work, once we are ready to embark on it, is going to come with the ensuing journey of shared learning and creation. Dewey and James, and Kimmerer and Cajete, have given us food for thought that our Western mind-bodies can utilise, but they cannot tell us what to learn and create with the humans and non-humans we are going to meet tomorrow. We have been given notes on the way that the Rio 2016 women's eight rowed with more-than-human nature yesterday. Now, on the day that we prepare to take our own seats in the boat, it is up to us to enter our own, ongoing, process of shared learning and creation with the more-than-human world.

We have no reason at all to dismiss Indigenous stories as mere symbolism. If we were to do so, we would be asking Wilshire's sledgehammer question before we knew what the stories even were.

Conversely, if we take Kimmerer's advice and each make a start by planting a garden,⁶² and by entering into relationship with everyone there, who is to say that given some time, we may not be telling some sacred stories of our own.

Buber, writing from a Western point of view, can see it happening for us too.⁶³

Once it has, we may think of ourselves as having begun to participate in regenerating the part of our world lost in what Apffel-Marglin mourns as the death of Anima Mundi: the part of our world Louise Westling draws upon when she cites ancient Western stories to

⁶⁰ Kimmerer, *Braiding Sweetgrass*, p.164.

⁶¹ James, pp.466-467.

⁶² Kimmerer, *Braiding Sweetgrass*, pp.126-127.

⁶³ Buber, pp.88-89.

show our sharing in the flesh of the world.

We may, at the same time, begin to think of ourselves as having begun to move towards becoming bicultural, too, and as attuning to a stepping stone half way across the distance between contemporary Western and Indigenous paradigms. We may, from there, begin to be able to see those coming into view who have been travelling from the other side, and who may be willing, as we all feel our way, to embark on a journey of shared learning and creation together.

Chapter 20 – Conclusion

This thesis began with Viola Cordova’s observation that more than one way of thinking is going to be needed to regenerate our disintegrated human relationship with the more-than-human world.

Indigenous worldviews tend to be largely overlooked in the West. This is partly due to voting systems and numbers, but also, to this day, due to epistemic injustice resulting from discrimination. In addition, a difficulty referred to by McPherson and Rabb as the “incommensurability problem” and understood to be related to Merleau-Ponty’s conception of the impossibility of a complete phenomenological reduction, has been shown to prevent understanding in at least some situations,¹ even in an imaginary, future scenario once discrimination has been eliminated. An unfamiliar vantage point may, at least initially, be out of our imagination’s reach. A similar phenomenon was, for example, documented by Havi Carel in a healthcare setting.²

This thesis set out to consider the above barriers to understanding, and to apply appropriate methods in order to overcome these. In the case of epistemic injustice of types 1 and 2, some existing feminist and intersectional thought was shown to be transferrable, as similar challenges have been encountered by these groups before. The incommensurability problem, on the other hand, by its very nature required new ground to be broken.

In order to achieve this, a method initially proposed by Mary Midgley was applied.³ It was introduced as an iterative approach by which, from a starting point of an element of initial, perceived familiarity, a process of asking increasingly well-informed questions was embarked upon, thus avoiding the temptation of allowing the familiar to validate or appropriate the unfamiliar, and instead progressing towards a new understanding of the new on its own terms.

Resources utilised therefore originated from both worldviews: Indigenous scholars on the one hand, beginning with an anthology containing works by the first Indigenous holders

¹ McPherson and Rabb, *Indian From The Inside: Native American Philosophy And Cultural Renewal* pp.147-148.

² Carel and Kidd, ‘Epistemic Injustice In Healthcare: A Philosophical Analysis’, p.530.

³ Midgley, *Animals And Why They Matter*, p.127.

of PhDs in Philosophy in the United States in the early 2000s,⁴ as well as the output produced by a related project led by John Grim at Harvard.⁵ Progressing from there, relevant works by Western as well as by Indigenous authors were considered.⁶

In this context, a series of conferences referred to as “The Dialogues”, held regularly over a period from the early 1990s to the early 2000s by a working group of Indigenous and Western academics proved of particular interest, as Indigenous thinkers felt themselves to be coming home to contemporary findings in the field of quantum theory shared by Western physicists. The parallels identified by this working group form the heart of this thesis, offering pathways into the shared ground of the interwovenness of Indigenous thinking not only with quantum theory,⁷ but also, relatedly, with Spinoza’s philosophy and with phenomenological thought.

In particular, a cluster of three analogies utilised by Viola Cordova were shown to chime with Karen Barad’s application of her findings as a quantum physicist to a comprehensive conception of a participationalist paradigm. It was shown that both stress the importance of acknowledging our participation as individuals in the greater whole, and the responsibility implied by our participation in its continuing co-creation, in a thought process that shared common ground with Merleau-Ponty’s regarding our participation in weaving the network that sustains us.⁸ The Indigenous conception of locality, and its incommensurability with Western delocality, was shown to be related to this.⁹ Acausal relationships were considered alongside causal ones.

An interim conclusion, reached after consideration of some dilemmas emerging in the process of initial knowledge transfer and identification of potential areas for collaboration, formed the end of **Part 1**. It suggested the adoption of an adapted doughnut economics and wider way of life: Viola Cordova’s analogy of the ripples in a pond created by our actions interacting with other humans’ and non-humans’ ripples was applied, resulting in acknowledgement of the need for humans to proceed in interaction with, as opposed to in sole charge of, more-than-human nature, as we have been shown

⁴ A. Waters (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004).

⁵ J. Grim (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community* (Cambridge: Harvard University Press, 2001).

⁶ **Appendix I** contains some thoughts on the range of Indigenous contributions included in the thesis.

⁷ With regards to quantum theory, Karen Barad’s work was shown to be of overarching significance to both parts of this thesis, as summarised in **Appendix B**.

⁸ Merleau-Ponty, *Nature: Course Notes From The Collège de France*, p.176.

⁹ Burkhart, *Indigenizing Philosophy Through The Land*, pp.230-231.

to lack understanding to support our continued unilateral control.

This interim conclusion, however, posed a problem. Indigenous engagement with non-human nature includes ritual as a matter of course: ritual and labour become inseparable as the sacred is experienced as part of this world. Western societies, on the other hand, have not only all but ceased to engage with ritual, but have also grown wary of it in recent times. It was shown that this wariness can be particularly pronounced in educated circles.

Engagement with non-human nature solely through Western science, however, and our abandonment of ritual practice in favour of a reduction of non-human nature to the subset accessible through Western science alone, was the form of engagement practised in the West in the days leading up to the current climate emergency. It is therefore highly unlikely to be capable of resolving it on its own.

It is for this reason that **Part 2** of the thesis set out to explore potential new ways for the West to enter into relationships with non-human nature which continue to honour the wisdom of science while resisting the restrictions imposed by scientism.

It was helpful in this regard to bear in mind that Indigenous ritual as, for example, discussed by the PRATEC project, tends to be conceived as practical conversation and as becoming attuned. The outdated, but lingering, Western conception of Indigenous ritual as a practice of magic in order to actualise one's personal wishes was shown in **Part 1** to be largely mistaken. Instead, ritual appears to be more realistically approached as entire mind-bodied participation with the individual and collective flesh of the world while leaving awe in place. The term "spirits" is habitually used by the West for want of a more appropriate one, but has been shown by Apffel-Marglin to be imprecise in an Indigenous context due to its connotation of other-worldliness, when what is being discussed is in fact understood to be interaction with the sacred in the material.

Based on this adjusted view, and on engagement with Vine Deloria's initially surprising stance on evolutionary theory at the beginning of **Part 2**, it was then possible to identify the interrelatedness of the two Indigenous non-binary dualisms of the individual and the whole, and of the sacred and the material, as being at the heart of a conception of respectful interaction in the world that now quite naturally chimed with the aspects of Spinoza's thinking first touched upon in **Part 1**. The relationship between contemporary mainstream evolutionary theory and Deloria's thinking was used to exemplify the

potential for wisdom to emerge through engagement with those aspects of the “other” that we may initially find least agreeable, thus also casting light on Indigenous conceptions of the importance of welcoming questions as much as answers, and of disagreement as progress.

In relation to Spinoza’s thought, the **Part 1** topic of potential transformation of the mainstream (then explored through the experience of feminist and intersectional thinkers) was revisited in light of Genevieve Lloyd’s call, amplifying Spinoza’s, for a wider conception of rationality. Possible readings of Spinoza’s work as egoistic, as anthropocentric, and as deterministic were examined, to yield a new understanding of the potential to form non-binary, as opposed to binary, conceptions of the dualisms involved.

With these non-binary dualisms now available as stepping stones, it was then possible to approach an Indigenous conception of performative knowledge processes in greater depth, in order to explore the possibility of its forming a Western path to more-than-scientific engagement with non-human nature and with the sacred therein. Performative knowledge was first shown to be more than embodied cognition, and John Dewey’s and William James’s work was subsequently contrasted with Jacques Ellul’s *The Technological Society* to demonstrate the difference between performative knowledge processes and mere “knowing how”. Case studies of contemporary, Western interactions between humans were first drawn upon to illustrate the practice or otherwise of conducting relationships open to performative knowledge processes conceived as shared learning and creation, and thus open to meaning-making and to potential interaction with the sacred in the material.

In deference to William James’s conception of the sacred as being more than one individual or group can be capable of defining or controlling, no definition of the sacred was attempted. Instead, a sketch of a family resemblance was drawn up, based on the work of the Indigenous and Western authors cited. The human case studies were then first held up against the yardstick of this family resemblance.

Subsequently, following an examination of some currently existing, Western scientific ways of interacting with non-human nature, the above question regarding the presence or otherwise of openness to shared learning and creation in relationship, and thus to meaning-making and to interaction with the sacred in the material, was then also asked

of these.

While the overall picture was, perhaps predictably, less than encouraging, a promising example was located in Robin Wall Kimmerer's work: a postgraduate student's scientific study of the plant of sweetgrass, developing from the student's and a group of Indigenous basket makers' relationship with the plant, was found – alongside its formal Western, scientific research output – to have attuned to the wisdom contained in an ancient relationship between non-human species existing long before the arrival of humans. The case study was found to extend, rather than to supersede, currently available, mainstream understandings of evolutionary theory, and also to exemplify the findings at the beginning of **Part 2** of the potential for wisdom to emerge from engagement with those dimensions of a perceived "other" that we may initially find most uncomfortable.

The overall picture that emerged was, as first touched upon by Brian Burkhardt in **Part 1**, one of there being potential for the West to re-engage in relationships with non-human nature which are open to interaction with the sacred in the material. Martin Buber's conception of *I-thou* relationships, as well as Raimond Gaita's work, were identified as possible stepping stones on our journey towards this. Research in the field of neuroplasticity, as well as consideration of the participationalist elements inherent in the shared learning and creation of an Indigenous conception of performative knowledge processes, both suggest that our recent reluctance to engage in the form of conversation with non-human nature described, for example, by PRATEC, need not imply our inability to re-engage in the future.

The specific situation with regards to the West learning from an Indigenous paradigm thus revealed a further dynamic to successful knowledge transfer, in addition to the generalised prerequisites of expert involvement and of respectful dialogue identified at the beginning of the thesis for knowledge already in existence. Based on the same respectful attitude, it was found that knowledge transfer may now move away from occurring exclusively between interlocutors, and instead, through practice of a richer conception of rationality supported by verbal and non-verbal forms of sharing story, equip the receiver to enter into their own, responsive relationships, and to live their own performative knowledge processes involving shared learning and creation. Both with their interlocutor and with the wider, human and more-than-human world, learners could now be understood to be involved in Dewey's doings and undergoings as entire creatures,

practising PRATEC's conversation and regeneration. Drawing on existing story shared as they engaged in learning and creating anew, and feeling their way towards their own, ever-shifting balance where individual *conatus* and the *conatus* of the whole may play Burkhart's jazz in harmony with each other, their participation could now be shown also to entail weaving their own thread back into the story in return.

Reassuringly, none of the above turned out to predict similarity of experience once we become capable of regenerating this form of engagement: if it had, concerns of this thesis validating (as opposed to approaching attunement to) Indigenous worldviews would have had to be raised. We may find ourselves meeting *huacas*, or befriending ravens who allow us to merge our senses with theirs, but nothing suggests that we will. The Indigenous conception of locality, as well as William James's comments on the magnitude of the sacred and on the resulting, inevitable gap in our understanding, suggest that we are more likely to find ourselves as surprised by the entirely unexpected as the Rio 2016 women's eight will have been by the rhythm they could not have known how to create before they created it.

Uncomfortably, however, it also became evident that significant parallels exist between our Western treatment of Indigenous humans and our Western treatment of non-humans. Arising as they are from a worldview based on a conception of non-humans as "less-than", these practices are indefensible on the grounds of decency alone. In addition, their continuation would prevent not only the elimination of epistemic injustice in both cases (thus preventing Western learning *from* both groups), but would also prevent our entering into Buber's *I-thou* relationships, thus preventing Western engagement in the shared learning and creation of performative knowledge processes *with* these groups. Thus, in order for sustainable shared learning and creation with either to emerge, the dignity of both, with Gaita, must first be recognised as the matter of course that it is.

Questions of our practice of this conclusion may, at least initially, appear to run aground on the hard rock of the established processes of our nation states which currently, in light of Apffel-Marglin's, Dussel's, and Ellul's thought, seem to be in binary opposition to the feasibility of leaving an opening in the circle for the Indigenous Trickster to enter.

Examination of the works cited in this context, however, shows that the practice of openness to the dignity of the "other", and to the resulting potential for shared learning and creation in the relationships that may then evolve, need not undermine the efficacy

of our legislative commitments, nor vice versa, much as some roadblocks discussed and some reasons for these might, at first glance, appear to suggest it. The work that would be involved in reframing this remaining binary dualism into a future non-binary one is not an endeavour that has ever been proven to be impossible. It is simply an endeavour that appears to have fallen off the end of our list as the restrictions of scientism worked their way towards the top.

We are free, at any time, to begin to challenge this order.

Bibliography

- Abram,D., *Becoming Animal: An Earthly Cosmology* (New York: Vintage Books, 2011).
- Ahmed,D., 'Lost And Found: Gifts, Dreams, And Sanity', in Apffel-Marglin,F., and Varese,S. (eds.), *Contemporary Voices From Anima Mundi: A Reappraisal* (New York: Peter Lang Publishing, 2020), pp.45-86.
- Alcoff,L.M., 'Philosophy And Philosophical Practice: Eurocentrism As An Epistemology Of Ignorance', in Kidd,I.J., Medina,J., Pohlhaus Jr.,G. (eds.), *The Routledge Handbook Of Epistemic Injustice* (Abingdon: Routledge 2017), pp.397-408.
- Alcoff,L.M., 'What Should White People Do?', in Narayan,U. and Harding,S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.262-282.
- Allam,L., 'Right Fire For A Right Future: How Cultural Burning Can Protect Australia From Catastrophic Blazes', *The Guardian*, 18 January 2020. Available at: https://www.theguardian.com/australia-news/2020/jan/19/right-fire-for-right-future-how-cultural-burning-can-protect-australia-from-catastrophic-blazes?CMP=Share_iOSApp_Other [Accessed: 20 March 2023].
- Ames,R.T., *The Implications Of Greek Ontology And Confucian "Zoetology" In Environmental Thinking* [Lecture] *Online Workshop Sino-Hellenic Environmental Philosophy* (Institute of Philosophy, University of Bern, 9 December 2021).
- Ansloos,J., 'Rethinking Indigenous Suicide', *International Journal Of Indigenous Health*, Vol.13(2), 2018, pp.8-28, DOI: 10.18357/ijih.v13i2.32061 [Accessed: 20 March 2023].
- Apffel-Marglin,F., 'Introduction: Knowledge And Life Revisited', in Apffel-Marglin,F. (ed.), with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998), pp.1-50.
- Apffel-Marglin,F., *Subversive Spiritualities: How Rituals Enact The World* (Oxford: Oxford University Press, 2011).
- Apffel-Marglin,F., 'Western Modernity And The Fate Of Anima Mundi', in Apffel-Marglin,F., and Varese,S. (eds.), *Contemporary Voices From Anima Mundi: A Reappraisal* (New York: Peter Lang Publishing, 2020), pp.17-44.
- Apffel-Marglin,F. (ed.), with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998).
- Apffel-Marglin,F., and Varese,S. (eds.), *Contemporary Voices From Anima Mundi: A Reappraisal* (New York: Peter Lang Publishing, 2020).
- Apffel-Marglin,F., and Varese,S., 'Introduction: Cosmic Dialogues', in Apffel-Marglin,F., and Varese,S. (eds.), *Contemporary Voices From Anima Mundi: A Reappraisal* (New York: Peter Lang Publishing, 2020), pp.1-15.
- Arkeketa,A., 'Repatriation: Religious Freedom, Equal Protection, And Institutional Racism', in Waters,A. (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004), pp.239-248.

- Attfield,R., *Environmental Ethics*, 2nd ed. (Cambridge: Polity Press, 2014).
- Attfield,R., 'Saving Nature, Feeding People, And Ethics', in *Environmental Values* Vol.7, No.3 (August 1998), pp.291-304, URL = <<https://www.jstor.org/stable/30301644>> [Accessed: 20 March 2023].
- Barad,K., 'Meeting The Universe Halfway: Realism And Social Constructivism Without Contradiction', in Nelson,L.H. and Nelson,J. (eds.), *Feminism, Science, And The Philosophy Of Science*, (Boston: Kluwer Academic Publishing, 1996), pp.161-194.
- Barad,K., 'Nature's Queer Performativity', in *Kvinder, Køn & Forskning* 1-2 (2012), pp.25-53, DOI: 10.7146/kkf.v0i1-2.28067 [Accessed: 20 March 2023].
- Barker,D.K., 'Dualisms, Discourse, And Development', in Narayan,U. and Harding,S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.177-188.
- Battiste,M., 'Indigenous Knowledge: Foundations For First Nations', *WINHEC: International Journal of Indigenous Education Scholarship*, (1) (2005), pp.1-17, URL = <https://journals.uvic.ca/index.php/winhec/article/view/19251> [Accessed: 20 March 2023].
- BBC News, *Brain Changes Seen In Cabbies Who Take 'The Knowledge'*, 8 December 2011 <URL: <https://www.bbc.co.uk/news/health-16086233>> [Accessed: 20 March 2023].
- BBC News, *Nature Reserves 'Trashed' After Lockdown Easing*, 5 June 2020 <URL: <https://www.bbc.co.uk/news/uk-england-52928561>> [Accessed: 20 March 2023].
- Bekoff,M., *The Emotional Lives Of Animals* (Novato: New World Library, 2007).
- Bekoff,M., 'The Evolution Of Animal Play, Emotions, And Social Morality: On Science, Theology, Spirituality, Personhood, And Love', in *Zygon*® 31(4), 2001, pp.615-655, URL: <https://www.wellbeingintlstudiesrepository.org/cgi/viewcontent.cgi?article=1026&context=acwp_sata> [Accessed: 20 March 2023].
- Bell,D., 'Respecting The Land: Religion, Reconciliation, And Romance – An Australian Story', in Grim,J. (ed.) *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, (Cambridge: Harvard University Press, 2001), pp.465-484.
- Berkes,F., *Sacred Ecology*, 4th ed. (Abingdon: Routledge, 2018).
- Boffey,D., 'Students given tips to stop gap year travel being "a new colonialism"', *The Guardian*, 30 July 2011. Available at: <https://www.theguardian.com/education/2011/jul/30/gap-year-volunteers-demos> [Accessed: 20 March 2023].
- Bohm, D., *Wholeness And The Implicate Order* (Abingdon: Routledge Classics, 2002).
- Bohm,D., and Peat,F.D., *Science, Order, And Creativity* (Abingdon: Routledge Classics, 2011).
- Booth,R., 'English councils refuse six in 10 requests for Covid self-isolation pay', *The Guardian*, 18 June 2021. Available at: <https://www.theguardian.com/world/2021/jun/18/english-councils-refuse-six-in-10-requests-for-covid-self-isolation-pay> [Accessed: 20 March 2023].

- Bristow,W., 'Enlightenment', in Zalta,E.N. (ed.) *The Stanford Encyclopedia of Philosophy* (Fall 2017 Edition) URL = [<https://plato.stanford.edu/archives/fall2017/entries/enlightenment/>](https://plato.stanford.edu/archives/fall2017/entries/enlightenment/) [Accessed: 20 March 2023].
- Brown,T.N., Spiess,J.K., and Corral,R. (Photographer), *Alaska Native Games And How To Play Them* (Fairbanks: University of Alaska Press, 2020).
- Buber,M., *I And Thou* (London: Bloomsbury Academic, 2013).
- Burch-Brown,J. and Baker,W., 'Religion And Reducing Prejudice', *Group Processes And Intergroup Relations* 2016, Vol.19(6), pp.784-807, DOI: 10.1177/1368430216629566 [Accessed: 20 March 2023].
- Burkhardt,R.W., *Patterns Of Behaviour: Konrad Lorenz, Niko Tinbergen, And The Founding Of Ethology* (Chicago/London: The University Of Chicago Press, 2005).
- Burkhart,B., *Indigenizing Philosophy Through The Land* (East Lansing: Michigan State University Press, 2019).
- Burkhart,B., 'Red Wisdom: Highlighting Recent Writing In Native American Philosophy', *Confluence: Journal Of World Philosophies*, Vol.1, 2014, <URL: <https://scholarworks.iu.edu/iupjournals/index.php/confluence/article/view/527/33>> [Accessed: 20 March 2023].
- Cajete,G., *Native Science: Natural Laws Of Interdependence* (Santa Fe: Clear Light Publishers, 2000).
- Cajete,G., 'Philosophy Of Native Science', in Waters,A. (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004), pp.45-57.
- Capra,F., *The Tao Of Physics* (London: Harper Collins, 1982).
- Carel,H. and Kidd,I.J., 'Epistemic Injustice In Healthcare: A Philosophical Analysis', *Medicine, Healthcare And Philosophy* (2014:17), pp.529-540, DOI: 10.1007/s11019-014-9560-2 [Accessed: 20 March 2023].
- Carson,R., *Silent Spring* (New York: Ballantine, 1962).
- Chappell,T., and Crisp,R., 'Utilitarianism', in Craig,E. (ed.), *Routledge Encyclopedia Of Philosophy*, vol. 9 (New York: Routledge, 1998), pp.551-557.
- Channel 4 News* (television programme), Channel 4, 28 February 2023. <https://www.channel4.com/news/he-wanted-to-show-the-world-homosexuals-were-not-cowards-stephen-fry-on-artists-who-resisted-the-nazis> [Accessed: 20 March 2023].
- Cockburn,D. 'Human Beings And Giant Squids', *Philosophy*, 69 (268) (1994), pp.135-150.
- Code,L., 'How To Think Globally: Stretching The Limits Of Imagination', in Narayan,U. and Harding,S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.67-79.
- Compassion In World Farming, *Farm Animals: Dairy Cows* <URL: <https://www.ciwf.org.uk/farm-animals/cows/dairy-cows/>> [Accessed: 20 March 2023].
- Compassion In World Farming, *Is The Next Pandemic On Our Plate?*, May 2020 <URL:

- <https://www.ciwf.org.uk/research/covid-19/is-the-next-pandemic-on-our-plate>> [Accessed: 20 March 2023].
- Cooke,L., *The Unexpected Truth About Animals* (London: Transworld Publishers, 2017).
- Cordova,V.F., *How It Is* (Tuscon: The University of Arizona Press, 2007).
- Cordova,V.F., *The Concept Of Monism In Navajo Thought*. (Unpublished PhD thesis, University of New Mexico, 1992). <URL: https://digitalrepository.unm.edu/phil_etds/29> [7 September 2022].
- Corlett,J.A., 'Reparations', in Edelglass,W., and Garfield,J.L. (eds.), *The Oxford Handbook Of World Philosophy* (New York: Oxford University Press, 2011), pp.596-609.
- Corsolini,S. et al., 'Occurrence of organochlorine pesticides (OCPs) and their enantiomeric signatures, and concentrations of polybrominated diphenyl ethers (PBDEs) in the Adélie penguin food web, Antarctica', *Environmental Pollution*, Vol.140(2), March 2006, pp.371-382, URL: <<https://www.sciencedirect.com/science/article/pii/S0269749105003805>> [Accessed: 20 March 2023].
- Cudd,A.E., 'Multiculturalism As A Cognitive Virtue Of Scientific Practice', in Narayan,U. and Harding,S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.299-317.
- Curley,E., 'Note On The Text', in Spinoza, B. de, *Ethics* (London: Penguin Classics, 1996), pp.xviii-xix.
- Curry, A.B. (ed.), *APA Studies on Native American And Indigenous Philosophy*, URL = https://www.apaonline.org/page/native_american_apastudies [Accessed: 20 March 2023].
- Damasio,A., *Looking For Spinoza* (London: Vintage, 2004).
- Dancy,J., 'Moral Particularism', in Zalta,E.N. (ed.) *The Stanford Encyclopedia of Philosophy*, (Winter 2017), <URL= <https://plato.stanford.edu/archives/win2017/entries/moral-particularism/>>, [Accessed: 20 March 2023].
- Dancy,J., 'What Are The Options?' in Dancy,J. (ed.), *Ethics Without Principles* (Oxford: Clarendon Press, 2004).
- Daston,L., 'Intelligences: Angelic, Animal, Human' in Daston,L., and Mitman,G. (eds.), *Thinking With Animals: New Perspectives On Anthropomorphism* (New York/Chichester: Columbia University Press, 2005), pp.37-58.
- Daston,L., and Mitman,G., 'Introduction' in Daston,L., and Mitman,G. (eds.), *Thinking With Animals: New Perspectives On Anthropomorphism* (New York/Chichester: Columbia University Press, 2005), pp.1-14.
- De Freitas, M.H., *Religious Experiences And Mental Health [Lecture] Interdisciplinary Approaches To The Study Of Religious And Spiritual Experiences* (Alister Hardy Religious Experience Research Centre, University of Wales, Trinity St. David, 10 July 2021).
- De Waal, F., *Are We Smart Enough To Know How Smart Animals Are?* (London: Granta Publications, 2017).

- Deloria,V., *God Is Red: A Native View Of Religion* (Golden: Fulcrum Publishing, 1994).
- Deloria,V., *The Metaphysics Of Modern Existence* (Golden: Fulcrum Publishing, 2012).
- Deloria,V.; Deloria,P.J. and Bernstein,J.S. (eds.), *C.G.Jung And The Sioux Traditions* (Wheat Ridge: Fulcrum Publishing, 2022).
- Deloria,V., and Wildcat,D., *Power And Place: Indian Education In America* (Golden: Fulcrum Publishing, 2001).
- Department of Health and Social Care, *New Campaign To Prevent The Spread Of Coronavirus Indoors This Winter* (9 September 2020), <URL = <https://www.gov.uk/government/news/new-campaign-to-prevent-spread-of-coronavirus-indoors-this-winter>> [Accessed: 20 March 2023].
- Dewey,J., *Art As Experience* (New York: The Berkley Publishing Group, 2005).
- Dussel,E., 'Eurocentrism And Modernity (Introduction To The Frankfurt Lectures)', *boundary 2*, Autumn 1993, Vo.20, No.3, pp.65-76, <URL = www.jstor.com/stable/303341> [Accessed: 20 March 2023].
- Elfenbein,A.H., and Ambady,N., 'Cultural Similarity's Consequences: A Distance Perspective on Cross-Cultural Differences in Emotion Recognition', *Journal Of Cross-Cultural Psychology*, Vol. 34 No. 1, (2003) pp.92-110, DOI: 10.1177/0022022102239157, [Accessed: 20 March 2023].
- Ellul,J., *The Technological Society* (London: Jonathan Cape, 1965).
- Encyclopedia Britannica, *Cathy Freeman*, <<https://www.britannica.com/biography/Cathy-Freeman>> [Accessed: 20 March 2023].
- Equality and Human Rights Commission, *Equality Act Guidance*, <<https://www.equalityhumanrights.com/en/advice-and-guidance/equality-act-guidance>> [Accessed: 20 March 2023].
- Feit,H.A., 'Hunting, Nature, And Metaphor: Political And Discursive Strategies In James Bay Cree Resistance And Autonomy', in Grim,J. (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community* (Cambridge: Harvard University Press, 2001), pp.411-452.
- Ferguson,A., 'Resisting The Veil Of Privilege', in Narayan,U. and Harding,S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.189-207.
- Fienup-Riordan,A. 'A Guest On The Table: Ecology From The Yup'ik Eskimo Point Of View', in Grim,J. (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community* (Cambridge: Harvard University Press, 2001), pp.541-558.
- Fisher,R., 'Preventing Nuclear War', *Bulletin Of The Atomic Scientists*, March 1981, available at https://books.google.co.uk/books?id=ygoAAAAAMBAJ&lpg=PA16&ots=oVkrzABnMr&pg=PA11&redir_esc=y#v=onepage&q&f=false , [Accessed: 20 March 2023].
- Fleming,A., 'The Secret Life Of Plants: How They Memorise, Communicate, Problem Solve, And Socialise', *The Guardian*, 5 April 2020. Available at: <https://www.theguardian.com/environment/2020/apr/05/smarty-plants-are-our-vegetable-cousins-more-intelligent-than-we-realise> [Accessed: 20 March 2023].

- Forbes, J.D., 'Nature And Culture: Problematic Concepts For Native Americans', in Grim, J. (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community* (Cambridge: Harvard University Press, 2001), pp.103-124.
- Fricker, M., 'Epistemic Contribution As A Central Human Capability', in Hull, G. (ed.), *The Equal Society* (London: Lexington Books, 2015), pp.73-90.
- Fricker, M., 'Evolving Concepts Of Epistemic Injustice' in Kidd, I.J., Medina, J., Pohlhaus Jr., G. (eds), *The Routledge Handbook Of Epistemic Injustice* (Abingdon: Routledge 2017), pp.53-60.
- Gaita, R., *A Common Humanity: Thinking About Love And Truth And Justice* (New York: Routledge, 2002).
- Gaita, R., *The Philosopher's Dog* (Abingdon: Routledge Classics, 2017).
- Garner, R., 'Animal Rights And The Deliberative Turn In Democratic Theory', *European Journal Of Political Theory*, Vol.18, issue 3, pp.309-329, DOI: 10.1177/1474885116630937 [Accessed: 20 March 2023].
- Glover, J., *Humanity: A Moral History Of The Twentieth Century* (New Haven: Yale University Press, 2000).
- Godfery, M., 'In Five Momentous Years Jacinda Ardern Became New Zealand's Most Important Postwar Prime Minister', *The Guardian*, 19 January 2023. Available at: <https://www.theguardian.com/commentisfree/2023/jan/19/in-five-momentous-years-jacinda-ardern-became-new-zealands-most-important-postwar-prime-minister> [Accessed: 20 March 2023].
- Gonzales, T.A. and Nelson, M.K., 'Contemporary Native American Responses To Environmental Threats In Indian Country', in Grim (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community* (Cambridge: Harvard University Press, 2001), pp.495-538.
- Goodpaster, K., 'On Being Morally Considerable' in M.Zimmerman et al. (eds), *Environmental Philosophy* (Upper Saddle River: Prentice-Hall, 1998), pp.56-70.
- Govindrajan, R., 'The Goat That Died For The Family: Animal Sacrifice And Interspecies Kinship In India's Central Himalayas', *American Ethnologist*, Vol.42, No.3 (August 2015), pp.504-519, DOI: 10.1111/amet.12144 [Accessed: 20 March 2023].
- Graham, D.W., 'Heraclitus', in Zalta, E.N. (ed.) *The Stanford Encyclopedia of Philosophy* (Summer 2021 Edition), URL = <<https://plato.stanford.edu/archives/sum2021/entries/heraclitus/>> [Accessed: 20 March 2023].
- Grainger, K., *The Autobiography*, 2nd ed. (London: Andre Deutsch, 2016).
- Greaves, T., 'Contextualising The Environmental Struggle', in Grim (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community* (Cambridge: Harvard University Press, 2001), pp.25-46.
- Grillo, E., 'Development Or Cultural Affirmation In The Andes?' in Apffel-Marglin, F. (ed.), with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998), pp.124-145.
- Grillo, E., 'Development Or Decolonisation In The Andes?' in Apffel-Marglin, F. (ed.), with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998), pp.193-243.

- Grim, J. (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community* (Cambridge: Harvard University Press, 2001).
- Hampshire, S., 'Introduction', in Spinoza, B. de, *Ethics*, (London: Penguin Classics, 1996), pp.vii-xvi.
- Hanfling, O., *Wittgenstein's Later Philosophy* (New York: SUNY, 1989).
- Hanson, N.I., 'Foreword: The Value Of Playing Games', in Brown, T.N., Spiess, J.K., and Corral, R. (Photographer), *Alaska Native Games And How To Play Them* (Fairbanks: University of Alaska Press, 2020), pp.ii-iii.
- Hardin, G., 'The Tragedy Of The Commons', in Benson, J. (ed.), *Environmental Ethics* (London: Routledge, 2000), pp.185-196.
- Harding, S., 'Gender, Development, And Post-Enlightenment Philosophies Of Science', in Narayan, U. and Harding, S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.240-261.
- Harvey, G., *Animism: Respecting The Living World* (London: C.Hurst & Co., 2017).
- Hester, T.L., 'On Philosophical Discourse: Some Intercultural Musings', in A.Waters (ed.), *American Indian Thought: Philosophical Essays* A.Waters (Oxford: Blackwell Publishing Ltd., 2004), pp.263-267.
- Hogan, L., 'Foreword: Viola Cordova', in Cordova, V.F., *How It Is* (Tucson: The University of Arizona Press, 2007), pp.vii-xi.
- Holder, J.J., 'James And The Neuroscience Of Buddhist Meditation', in *William James Studies*, Vol.10 (2013), pp.1-11, URL = <https://www.jstor.org/stable/10.2307/26203772> [Accessed: 20 March 2023].
- Houghton, F., MBE, *Creating Performance: Learnings From Five Olympic Games* (London: Independent Publishing Network, 2020).
- Humphreys, R. and Attfield, R., 'Justice And Non-Human Beings, Part I', in *Bangladesh Journal Of Bioethics* (7:3), 2016, <URL: <https://repository.uwtsd.ac.uk/883/>> pp.1-11, and Humphreys and Attfield, 'Justice And Non-Human Beings, Part II', in *Bangladesh Journal Of Bioethics* (7:4), 2017, <URL: <https://repository.uwtsd.ac.uk/884/>> pp.44-57. [Accessed: 20 March 2023].
- Hurtado, A., 'Chicanas Theorise Feminisms', in Narayan, U. and Harding, S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.128-155.
- Hylton, P. and Kemp, G., 'Willard Van Orman Quine', in E.N.Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Spring 2020 Edition), URL = <<https://plato.stanford.edu/archives/spr2020/entries/quine/>> [Accessed: 20 March 2023].
- International Olympic Committee, *Olympic Values*, <<https://olympics.com/ioc/olympic-values>> [Accessed: 20 March 2023].
- International Whaling Commission, *Conservation Management: Whaling*, <<https://iwc.int/whaling>> [Accessed: 20 March 2023].
- Ishizawa, J., 'Community-Based Learning In The Peruvian Andes: Decolonising The Academic Disciplines', *Modernity, Frameworks Of Knowledge, And The Ecological*

- Survival Of Plurality*, 7 November 2014, <URL: <http://www.pratec.org/wpress/pdfs-pratec/modernity-frameworks-of-knowledge-and-the-ecological-survival-of-plurality.pdf>> [Accessed: 20 March 2023].
- James,W., *The Varieties Of Religious Experience* (London: Penguin Books Ltd., 1985).
- Jasini,A., De Leersnyder,J., Phalet,K., & Gomes de Mesquita,B., 'Tuning in emotionally: Associations of cultural exposure with distal and proximal fit in acculturating youth', *European Journal of Social Psychology*, (2018), DOI: 10.1002/ejsp.2516, [Accessed: 20 March 2023].
- Jimenez Sardon,G., 'The Aymara Couple In The Community, in Apffel-Marglin,F. (ed.), with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998), pp.146-171.
- Johnson,J.T., Howitt,R., G.Cajete,G., Berkes,F., Louis,R.P., and Kliskey,A., 'Weaving Indigenous And Sustainability Sciences To Diversify Our Methods', *Sustain Sci* (2016) 11:1-11, <DOI 10.1007/s11625-015-0349-x>, p.8 [Accessed: 20 March 2023].
- Johnson,M., 'Imagination In Moral Judgment', in *Philosophy And Phenomenological Research*, Vol.46, No.2 (Dec.1985), p.265, <URL = www.jstor.org/stable/2107356> [Accessed: 20 March 2023].
- Johnson,S. (ed.), *Indigenous Knowledge* (Cambridge: The White Horse Press, 2012).
- Kelbessa,W., 'Indigenous Environmental Philosophy', in Edelglass,W., and Garfield,J.L. (eds.), *The Oxford Handbook Of World Philosophy* (New York: Oxford University Press, 2011), pp.574-581.
- Kimmerer,R.W., *Braiding Sweetgrass* (London: Penguin Books, 2020).
- Kimmerer,R.W., *Gathering Moss: A Natural And Cultural History Of Mosses* (London: Penguin Books, 2021).
- Kinsley,D., *Ecology And Religion* (Upper Saddle River: Prentice Hall, 1995).
- Ko,S.J., Sadler,M.S., and Galinsky,A.D., 'The Sound Of Power: Conveying And Detecting Hierarchical Rank Through Voice', *Psychological Science* 26(1) (2015), pp.3-14, DOI: 10.1177/0956797614553009 [Accessed: 20 March 2023].
- Kramer,C., 'Digital Beasts As Virtual Esperanto: Getty Images And The Colonisation Of Sight' in Daston,L., and Mitman,G. (eds.), *Thinking With Animals: New Perspectives On Anthropomorphism* (New York/Chichester: Columbia University Press, 2005), pp.137-171.
- Kraut,R., 'Aristotle's Ethics', in Zalta,E.N. (ed.) *The Stanford Encyclopedia of Philosophy* (Summer 2018 Edition), URL = <<https://plato.stanford.edu/archives/sum2018/entries/aristotle-ethics/>>. [Accessed: 20 March 2023].
- Kymlicka,W., *Multicultural Citizenship* (Oxford: Oxford University Press, 1996).
- Kymlicka,W., and Donaldson,S., 'Animals And The Frontiers Of Citizenship', *Oxford Journal Of Legal Studies*, Vol.34, No.2 (2014), pp.201-219, DOI: 10.1093/ojls/gqu001 [Accessed: 20 March 2023].
- Lakoff,G. and Johnson,M., *Metaphors We Live By* (Chicago/London: The University of

Chicago Press, 1981).

- Lange, L., 'Burnt Offerings To Rationality: A Feminist Reading Of The Construction Of Indigenous Peoples In Enrique Dussel's Theory Of Modernity', in Narayan, U. and Harding, S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.226-239.
- Leopold, A., 'The Land Ethic' in M. Zimmerman et al. (eds), *Environmental Philosophy* (Upper Saddle River: Prentice-Hall, 1998), pp.87-100.
- Little Bear, L., 'Foreword', in Cajete, G., *Native Science: Natural Laws Of Interdependence* (Santa Fe: Clear Light Publishers, 2000), pp.ix-xii.
- Lloyd, G., *Routledge Philosophy Guidebook To Spinoza And The Ethics* (London: Routledge, 1996).
- Lloyd, G., 'The Man Of Reason', in *Metaphilosophy*, Vol.10, No.1 (January 1979), pp.18-37, URL: <<https://www.jstor.org/stable/24435599>> [Accessed: 20 March 2023].
- Low, C., 'Different Histories Of Buchu: Euro-American Appropriation Of San And Khoekhoe Knowledge Of Buchu Plants', in Johnson, S. (ed.), *Indigenous Knowledge* (Cambridge: The White Horse Press, 2012), pp.247-274.
- Lozano, R., 'Collaboration As A Pathway For Sustainability', *Sustainable Development* 15, pp.370-381 (2007), DOI <10.1002/sd.322>, [Accessed: 20 March 2023].
- Mabit, J., 'The Sorcerer, The Madman, And Grace', in Apffel-Marglin, F., and Varese, S. (eds.), *Contemporary Voices From Anima Mundi: A Reappraisal* (New York: Peter Lang Publishing, 2020), pp.113-154.
- Machamer, P., 'Galileo Galilei', in *The Stanford Encyclopedia of Philosophy* (Summer 2021 Edition), ed. by Zalta, E.N., URL = <<https://plato.stanford.edu/archives/sum2021/entries/galileo/>> [Accessed: 20 March 2023].
- McPherson, D.H., and Rabb, J.D., *Indian From The Inside: Native American Philosophy And Cultural Renewal* (Jefferson: McFarland & Co., 2011).
- Meijer, E., *Animal Languages* (London: John Murray, 2019).
- Merleau-Ponty, M., *Nature: Course Notes From The Collège de France* (Evanston: Northwestern University Press, 2003).
- Merton, R.K., 'Foreword', in Ellul, J., *The Technological Society* (London: Jonathan Cape, 1965), pp.ix-xii.
- Midgley, M., *Animals And Why They Matter* (Athens, GA: University of Georgia Press, 1983).
- Midgley, M., *Beast And Man* (Abingdon: Routledge Classics, 2002).
- Midgley, M., *Heart And Mind* (London: Routledge Classics, 2003).
- Milton, K., *Loving Nature: Towards An Ecology Of Emotion* (London: Routledge, 2002).
- Mitman, G., 'Pachyderm Personalities: The Media Of Science, Politics, And Conservation' in Daston, L., and Mitman, G. (eds.), *Thinking With Animals: New Perspectives On Anthropomorphism* (New York/Chichester: Columbia University Press, 2005), pp.175-195.

- Montaigne, M., *Essays, Book 2, Chapter 12: Apology For Raimond Sebond* (Urbana, Illinois: Project Gutenberg, 2004), URL: < <https://www.gutenberg.org/files/3600/3600-h/3600-h.htm#chap12>> [Accessed: 20 March 2023].
- Moore, K.D., 'Introduction', in V. Cordova, *How It Is*, pp. xiii-xiv.
- Murdoch, I., *The Sovereignty Of Good* (Abingdon: Routledge, 1970).
- Naess, A., 'Identification, Oneness, Wholeness And Self-Realisation', in Benson, J. (ed.), *Environmental Philosophy* (London: Routledge, 2000), pp. 243-252.
- Nagel, T., 'What Is It Like To Be A Bat?', *The Philosophical Review*, Vol. 83, No. 4 (1974), pp. 435-450, URL: <https://www.jstor.org/stable/2183914> [Accessed: 20 March 2023].
- Namunu, S.B., 'Melanesian Religion, Ecology, and Modernization in Papua New Guinea', in Grim, J. (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community*, (Cambridge: Harvard University Press, 2001), pp. 249-280.
- Narayan, U. and Harding, S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000).
- Narayan, U. and Harding, S., 'Introduction', in Narayan, U. and Harding, S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp. vii-xvi.
- NASA, *Global Climate Change*, <<https://climate.nasa.gov/vital-signs/carbon-dioxide/>> [Accessed: 20 March 2023].
- Neihardt, J.G., *Black Elk Speaks* (Lincoln: Board of Regents of the University of Nebraska, 2014).
- Norton-Smith, T.M., *The Dance Of Person And Place: One Interpretation Of American Indian Philosophy* (Albany: State University of New York Press, 2010).
- Nussbaum, M.C., 'Compassion: Human And Animal', in Ann Davis, N., Keshen, R., and McMahan, J., *Ethics And Humanity: Themes From The Philosophy Of Jonathan Glover* (Oxford Scholarship Online: 2010), DOI: 10.1093/acprof:oso/9780195325195.001.0001 [Accessed: 20 March 2023].
- Nussbaum, M.C., *Frontiers Of Justice: Disability, Nationality, Species Membership* (Cambridge: Harvard University Press, 2007).
- Nye, A., 'It's Not Philosophy', in Narayan, U. and Harding, S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp. 101-109.
- Office for National Statistics, *Coronavirus (COVID-19) related deaths by occupation, England and Wales: deaths registered between 9 March and 28 December 2020*, <URL: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand28december2020>> [Accessed: 20 March 2023].
- Østerud, K.J., 'Disability Discrimination: Employer Considerations Of Disabled Jobseekers

- In Light Of The Ideal Worker', *Work, Employment, And Society* 00(0) (2021), pp.1-17, DOI: 10.1177/09500170211041303 [Accessed: 20 March 2023].
- Parry,G.A., *Original Thinking* (Berkeley: North Atlantic Books, 2015).
- Parry,G.A., *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue* (Unpublished PhD thesis, California Institute of Integral Studies, 2008). <URL: <https://originalthinking.us/pdfs/original-model-of-education.pdf>> [Accessed: 20 March 2023].
- Peat,F.D., *Blackfoot Physics* (York Beach: Red Wheel/Weiser, 2005).
- Peat,F.D., *Synchronicity: The Bridge Between Matter And Mind* (New York: Bantam, 1987).
- Peat,F.D., *Synchronicity: The Marriage Of Matter And Psyche* (Pari: Pari Publishing Sas, 2015).
- Peels,R., 'The Fundamental Argument Against Scientism', in Boudry,M. and M.Pigliucci (eds.) *Science Unlimited? The Challenges Of Scientism* (Chicago: Chicago University Press, 2017), pp.165-184.
- Plain English Campaign, *How To Write In Plain English*, URL: <<https://www.plainenglish.co.uk/files/howto.pdf>> [Accessed: 20 March 2023].
- Plumwood,V., 'Nature, Self, And Gender: Feminism, Environmental Philosophy, And The Critique Of Rationalism', in Benson,J. (ed.), *Environmental Philosophy* (London: Routledge, 2000), pp.263-271.
- Polkinghorne,J., *Quantum Physics And Theology: An Unexpected Kinship* (London: SPCK, 2007).
- Polkinghorne,J., *Quantum Theory: A Very Short Introduction* (Oxford: Oxford University Press, 2002).
- PRATEC, *Climate Change In Andean Communities*, March 2009 <URL: <http://www.pratec.org/wpress/pdfs-pratec/climatechange.pdf>> [Accessed: 20 March 2023].
- Pratt,S., 'Persons In Place: The Agent Ontology Of Vine Deloria' in *APA Newsletter On American Indians In Philosophy*, Vol.06, No.1 (Fall 2006), URL: <https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/v06n1American_Indians.pdf>, pp.4-9 [Accessed: 20 March 2023].
- Purcell,S., 'Truth, Rootedness, And The Good Life In Aztec Ethical Philosophy' in *APA Newsletter On Native American And Indigenous Philosophy*, Vol.21, No.1 (Fall 2021), URL: <<https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/NativeAmericanV21n1.pdf>>, pp.4-11 [Accessed: 20 March 2023].
- 'Radio 4 In Four: Identical Twins', *Shared Experience*, BBC Radio 4, 29 November 2016, URL: <<https://www.bbc.co.uk/sounds/play/p04jcpm9>> [Accessed: 20 March 2023].

- Rengifo,G., 'Education In The Modern West And In Andean Culture', in Apffel-Marglin,F. (ed.), with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998), pp.172-192.
- Rengifo,G., 'The Ayllu', in Apffel-Marglin,F. (ed.), with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998), pp.89-123.
- Romero,R., MBE, *Rebecca Romero MBE*, <URL: <https://www.rebeccaromero.co.uk/about>> [Accessed: 20 March 2023].
- Rowlands,M., *Can Animals Be Persons?* (New York: Oxford University Press, 2019).
- Roy,E.A., 'New Zealand River Granted Same Legal Rights As Human Being', *The Guardian*, 16 March 2017. Available at: <https://www.theguardian.com/world/2017/mar/16/new-zealand-river-granted-same-legal-rights-as-human-being> [Accessed: 20 March 2023].
- Sakakibara,C., *Whale Snow: Iñupiat, Climate Change, And Multispecies Resilience In Arctic Alaska* (Tucson: University of Arizona Press, 2020).
- Schmidtz,D., 'When Preservationism Doesn't Preserve', *Environmental Values*, Vol.6, No.3 (August 1997), pp.327-339, <URL = <https://www.jstor.org/stable/30301587>> , [Accessed: 20 March 2023].
- Schutte,O., 'Cultural Alterity: Cross-Cultural Communication And Feminist Theory In North-South Contexts', in Narayan,U. and Harding,S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.47-66.
- Shapiro,L., and Spaulding,S., 'Embodied Cognition' in Zalta,E.N. (ed.) *The Stanford Encyclopedia of Philosophy* (Winter 2021 Edition), URL = <<https://plato.stanford.edu/archives/win2021/entries/embodied-cognition/>> [Accessed: 20 March 2023].
- Shiva,V., *Staying Alive: Women, Ecology And Survival In India* (London: Zed Books, 1988), ch.1, <URL: www.arvindguptatoys.com/arvindgupta/stayingalive.pdf>, [Accessed: 20 March 2023].
- Singer, P., 'All Animals Are Equal', *Philosophical Exchange* Vol. 1 (1974), pp. 103-116.
- Smith,D., 'Coronavirus: Medical Experts Denounce Trump's Theory Of Disinfectant Injection', *The Guardian*, 18 January 2020. Available at: <https://www.theguardian.com/world/2020/apr/23/trump-coronavirus-treatment-disinfectant> [Accessed: 20 March 2023].
- Smith,L.T., *Decolonising Methodologies* , 2nd ed. (London: Zed Books Ltd., 2012).
- Smith,M.E., 'Crippling The Spirit, Wounding The Soul: Native American Spiritual And Religious Oppression', in Waters,A. (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004), pp.116-129.
- Sollereeder,B.N., *Animal Suffering In An Unfallen World: A Theodicy Of Non-Human Evolution* (Unpublished PhD thesis, University of Exeter, 2014). URL = <<https://core.ac.uk/download/pdf/43094125.pdf>> [Accessed: 20 March 2023].
- Spinoza, B. de, *Ethics* (London: Penguin Classics, 1996).

- Steinbeck, J., *East Of Eden* (New York: Penguin, 2002).
- Sullivan-Clarke, A., 'A Case Of Epistemic Injustice', in *APA Newsletter On Native American And Indigenous Philosophy*, Vol.21, No.1 (Fall 2021), URL: <<https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/NativeAmericanV21n1.pdf>>, pp.3-4 [Accessed: 20 March 2023].
- Suzuki, D., and Knudtson, P., *Wisdom Of The Elders: Sacred Native Stories Of Nature* (New York: Bantam, 1993).
- Taylor, L., 'Welsh-Indigenous Relationships In Nineteenth Century Patagonia: "Friendship" And The Coloniality Of Power', *Journal Of Latin American Studies*, Vol.49 (2016), pp.143-168, DOI: 10.1017/S0022216X16000353 [Accessed: 20 March 2023].
- Taylor, P., 'The Ethics Of Respect For Nature' in M. Zimmerman et al. (eds), *Environmental Philosophy* (Upper Saddle River: Prentice-Hall, 1998), pp.71-86.
- The British Association For Shooting And Conservation, *Quarry Species And Shooting Seasons* <<https://basc.org.uk/advice/quarry-species-shooting-seasons/>> [Accessed: 20 March 2023].
- Toadvine, T., 'Maurice Merleau-Ponty' in Zalta, E. (ed.), *The Stanford Encyclopedia of Philosophy* (Spring 2019 Edition), URL = <<https://plato.stanford.edu/archives/spr2019/entries/merleau-ponty/>> [Accessed: 20 March 2023].
- Tuckness, A., 'Locke's Political Philosophy', in Zalta, E. (ed.) *The Stanford Encyclopedia of Philosophy* (Winter 2020 Edition), URL = <<https://plato.stanford.edu/archives/win2020/entries/locke-political/>> [Accessed: 20 March 2023].
- Turner, D., 'Oral Traditions And The Politics Of (Mis)Recognition', in Waters, A. (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004), pp.229-238.
- Tutu, D. *No Future Without Forgiveness* (London: Random House, 2000).
- UN Environment Programme, *State Of The Climate – Climate Action Note: Data You Need To Know*, <URL = <https://www.unep.org/explore-topics/climate-action/what-we-do/climate-action-note>> [Accessed: 20 March 2023].
- United States Department of Agriculture, *USDA Animal Care: Animal Welfare Act And Animal Welfare Regulations*, July 2020, available at: <https://www.aphis.usda.gov/animal_welfare/downloads/AC_BlueBook_AWA_508_comp_version.pdf> [Accessed: 20 March 2023].
- University of California Santa Cruz, *Karen Barad*, <URL: <https://humanities.ucsc.edu/academics/faculty/index.php?uid=kbarad>> [Accessed: 20 March 2023].
- University of Colorado Boulder, *Vine Deloria Jr.*, <URL: <https://www.colorado.edu/law/vine-deloria-jr>> [Accessed: 20 March 2023].
- Valladolid, J., 'Andean Peasant Agriculture: Nurturing A Diversity Of Life In The Chacra', in Apffel-Marglin, F. (ed.), with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* (London/New York: Zed Books, 1998), pp.51-88.

- Valladolid, J. and Appfel-Marglin, F., 'Andean Cosmology And The Nurturing Of Biodiversity', in Grim, J. (ed.), *Indigenous Traditions And Ecology: The Interbeing Of Cosmology And Community* (Cambridge: Harvard University Press, 2001), pp.639-670.
- Van der Kolk, B., *The Body Keeps The Score* (London: Penguin Books, 2015).
- Vitebsky, P., *Reindeer People* (London: Harper Collins, 2005).
- Wallis, V., *Raising Ourselves: A Gwich'in coming Of Age Story From The Yukon River* (Kenmore: Epicenter Press, 2002).
- Wallis, V., *Two Old Women* (New York: HarperPerennial, 1994).
- Walzer, M., 'Political Action: The Problem Of Dirty Hands', in *Philosophy & Public Affairs*, Vol.2, No.2 (Winter 1973), pp.160-180. Available at: <URL=<https://www.jstor.org/stable/2265139>> [Accessed: 20 March 2023].
- Waters, A., 'Comments From Chair Of The APA Committee On American Indians In Philosophy', *APA Newsletter On American Indians In Philosophy*, Vol.01, No.1 (Fall 2001), pp.2-3, URL: <<https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/v01n1AmericanIndians.pdf>> [Accessed: 20 March 2023].
- Waters, A., 'Language Matters: Nondiscrete, Nonbinary Dualism', in Waters, A. (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004), pp.97-115.
- Waters, A., 'Sacred Metaphysics And Core Philosophical Tenets Of Native American Thought: Identity (Place, Space), Shared History (Place, Time), And Personality (Sacred Emergence Of Relations)' in *APA Newsletter On Native American And Indigenous Philosophy*, Vol.21, No.1 (Fall 2021), URL: <<https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/NativeAmericanV21n1.pdf>>, pp.11-15 [Accessed: 20 March 2023].
- Waters, A. (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004).
- Welch, S., 'Assignment Description: Native American Philosophy, Spring 2022', *APA Studies On Native American And Indigenous Philosophy*, Vol.22, No.1, Fall 2022, pp.12-13, URL: <https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/APA_Studies_on_Native_American_and_Indigenous_Philosophy_V22_n1.pdf> [Accessed: 20 March 2023].
- Welch, S., *The Phenomenology Of A Performative Knowledge System: Dancing With Native American Epistemology* (Cham: Palgrave Macmillan, 2019).
- Westling, L., *The Logos of the Living World: Merleau-Ponty, Animals, and Language* (New York: Fordham University Press, 2013).
- Westminster Abbey, *St. Maximilian Kolbe*, <URL: <https://www.westminster-abbey.org/abbey-commemorations/commemorations/st-maximilian-kolbe>> [Accessed: 20 March 2023].

- Whitt,L.A., 'Biocolonialism And The Commodification Of Knowledge', in Waters,A. (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004), pp.188-213.
- Whyte,K., 'An Ethic Of Kinship' in van Horn,G., Kimmerer,R.W., Hausdoerffer,J. (eds.), *Kinship: Belonging In A World Of Relations, Vol.05: Practice*, (Libertyville: Center for Humans and Nature Press, 2021), pp.30-38.
- Whyte,K., 'Indigenous Research And Professional Philosophy In The U.S.', 3 February 2017, *Philosopher* blog, 3 February 2017, <<https://politicalphilosopher.net/2017/02/03/featured-philosopher-kyle-whyte/>> [Accessed: 20 March 2023].
- Wilkins,D.E., 'Afterword', in Deloria,V., *The Metaphysics Of Modern Existence* (Golden: Fulcrum Publishing, 2012), pp.283-291.
- Williamson,V. et al., Moral injury: the effect on mental health and implications for treatment, *The Lancet / Psychiatry*, Vol.8, June 2021, pp.453-455, <DOI:[https://doi.org/10.1016/S2215-0366\(21\)00113-9](https://doi.org/10.1016/S2215-0366(21)00113-9)> [Accessed: 20 March 2023].
- Wilshire,B., *Fashionable Nihilism: A Critique Of Analytic Philosophy* (Albany: State University of New York Press, 2002).
- Wilshire,B., *The Primal Roots Of American Philosophy: Pragmatism, Phenomenology, And Native American Thought* (University Park: The Pennsylvania State University Press, 2000.)
- Wilson,R. and Barker,M., 'Biological Individuals', in Zalta,E. (ed.) *The Stanford Encyclopedia of Philosophy* (Fall 2019 Edition), URL = <<https://plato.stanford.edu/archives/fall2019/entries/biology-individual/>> , [Accessed: 20 March 2023].
- Wittgenstein,L., *Philosophical Investigations*, edited by Hacker, P.M.S., and Schulte, Joachim (John Wiley & Sons, Incorporated, 2010), ProQuest Ebook Central, <https://ebookcentral.proquest.com/lib/trinity/detail.action?docID=514408> [Accessed: 20 March 2023].
- Wright,M., 'Maquiladora Mestizas And A Feminist Border Politics: Revisiting Anzaldúa', in Narayan,U. and Harding,S. (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World* (Bloomington: Indiana University Press, 2000), pp.208-225.

Appendices

Appendix A – Christopher Low’s case study of the buchu plant

Christopher Low relates events following the removal of the buchu plant, originally used as part of personalised diagnostic and treatment plans in an Indigenous medical setting, from its accustomed context by Western entrepreneurs, to be marketed in the West as an allopathic remedy.¹ In its new context, buchu was found to be less effective than it had been in its original one. At the heart of the issue, for Low, is the “persistent failure by Europeans to recognise that they are dealing with a Khoisan category of use, not a Western one.”² Low goes on to explain that as well as misunderstandings regarding the significance of smell (which can only inadequately be described by the categories available, for example, through Western aromatherapy), problems included Western failure to understand the context-dependent use of buchu. The plant’s original use was predicated on an integrated understanding of ill health in a particular person as a manifestation of a combination of physical, emotional, spiritual, and social causation. When the plant was exported to the West, it was extracted from this context, and placed into a new context that almost exclusively relies on the depersonalised categorisation of illness by measurement of physical symptoms. The marketing and use of buchu in Europe, according to the author, has thoroughly missed the point: as well as the plant having been removed from its context of a holistic, Indigenous treatment plan, the physical symptom of disease has also been removed from its emotional, spiritual, and social context as experienced by the patient.

These doubts regarding the exclusive validity of a predominantly measurement-driven approach to healthcare are mirrored in a Western setting, for example, by Havi Carel’s work, advocating a phenomenological approach to working with ill people’s experience, in order to shift “from the disease entity to the way in which it is given.”³ Extraction of the measurable, physical symptom from its original context of a human being capable of being a participant in interpretation, as opposed to a source of data or, at best, an

¹ Low, ‘Different Histories Of Buchu: Euro-American Appropriation Of San And Khoekhoe Knowledge Of Buchu Plants’, p.247.

² Ibid., p.248.

³ H.Carel, and I.J.Kidd, ‘Epistemic Injustice In Healthcare: A Philosophical Analysis’, *Medicine, Healthcare And Philosophy* (2014:17), pp.529-540. DOI: 10.1007/s11019-014-9560-2 [Accessed: 20 March 2023].

informant,⁴ is a practice that is by no means unanimously accepted even in the West.

There is much in Carel's toolkit that an Indigenous medical practitioner might agree with. Comparison of Carel's toolkit with, for example, Cajete's discussion of an Indigenous conception of ill health and wellbeing⁵ shows that it is conceivable that the use of a phenomenological toolkit, such as Carel's, to work with a particular person experiencing ill health, may well point to the use of a medicinal plant such as buchu, for that particular person, in that particular situation, as part of a personalised treatment plan. This would be likely to involve rationales not typically considered in a context of largely depersonalised, standardised Western medical processes.

So far, the case of the appropriation of buchu illustrates the loss of Indigenous wisdom, as well as the unfairness of Western profit being made from Indigenous expertise, that both take place in cases of cultural appropriation. It is, so far, roughly summed up by the first half of Schutte's assessment in the main body of this thesis of both sides in a long-standing conflict being prone to "othering" each other⁶ – i.e., in this case, of the West being prone to "othering" the rest.

What has not, so far, been discussed in relation to the case of the appropriation of buchu, is its relevance to the second half of Schutte's assessment, whereby Western knowledge systems may be misappropriated, too – and, therefore, its relevance also to Polkinghorne's above reservations regarding the potential misappropriation of Western science: the buchu example, besides exemplifying deplorable disrespect for Indigenous knowledge, also represents precisely the same type of disrespect for Western science as Polkinghorne's "quantum hype" does.

The buchu example not only unsuccessfully appropriates Indigenous knowledge by attempting to use buchu without retaining its Indigenous medical context of situationally tailored use, thereby rendering it largely defunct. It also unsuccessfully appropriates knowledge taken from the business and marketing practices of the Western pharmaceutical industry, and removes it from the context of Western medical research and regulatory processes involving mass clinical trials as a prerequisite prior to mass marketing for generic use that would have provided coherence, as it will, for example, in

⁴ Ibid.

⁵ Cajete, *Native Science*, pp.118-127.

⁶ Schutte, 'Cultural Alterity: Cross-Cultural Communication And Feminist Theory In North-South Contexts', p.58.

cases such as those of Paracetamol or of a new vaccine.

What has happened in Low's example is, in fact, a double dose of disrespect: the plant has been removed from the context of its Indigenous knowledge system where it makes sense, and the Indigenous knowledge system has thereby been disrespected, and has had its wisdom rendered defunct. The business and marketing practices employed by the Western pharmaceutical industry, too, have been removed from their context of Western medical research and regulatory processes where they might have made sense – as they did, for example, in the cases of Paracetamol and of the new Covid-19 vaccines – and the branches of Western science usually involved in these processes, too, have been disrespected, and have had their wisdom thus rendered defunct.

The elements of Western context that have now been lost would have involved anonymised mass clinical trials, in order to assess whether or not the remedy is suitable for mass marketing to an anonymous mass audience in a situation where there is no prior knowledge of individual cases, and where there is no personalised treatment plan involving, for example, preparation of the person involved before drug administration.

The outcome, in the case of the buchu example, is not only a medicinal plant removed from its context of personalised intervention that is now no longer able to fulfil its purpose as a result. It is also a succession of mass shipments, and mass marketing initiatives, of a chemical substance that was never conceived, trialled, or approved for generic use. With now two counts of misappropriation to their name, it is hardly surprising that the perpetrators have ended up with a product not only disowned by its Indigenous, original intellectual owners, but also likely to be classed as snake oil by Western regulatory bodies such as NICE.

Appendix B – Karen Barad’s work on quantum theory and beyond: an overarching stepping stone in both parts of this thesis

Section a. The context

Karen Barad’s thinking is first discussed in **Part 1** of this thesis, in the context of Frédérique Apffel-Marglin’s work citing Barad’s regarding some aspects of quantum theory: Barad’s conception of a dynamic universe initially serves as a Western stepping stone when approaching Indigenous conceptions of responsibility as exemplified by Viola Cordova’s work in **section 4.a.** ¹ As Barad’s thinking is increasingly shown to have similarities with Indigenous conceptions of an interrelated and dynamic world, which all living beings continuously co-participate in creating, further parallels are subsequently drawn between Barad’s thought and Brian Burkhardt’s (for example, in **section 5.f.vii**)², Maurice Merleau-Ponty’s (for example, in **section 6.c.**³), PRATEC’s (for example, in **section 6.e.**⁴), and, especially at the beginning of **Part 2**, Spinoza’s (**chapter 11**)⁵.

¹ For example, Apffel-Marglin, *Subversive Spiritualities*, pp.55-56. Karen Barad’s argument cited here is based on the ability of quantum theory to demonstrate that human involvement in the world includes participation alongside representation: our role cannot realistically be reduced to one of solely being witnesses, but our actions contribute to influencing the shape of emerging reality, as Niels Bohr’s experimental setup of the double-slit experiment discussed in **chapter 4** is shown to have contributed to the manifestation of the entities in question as waves rather than as particles. The point made here, however, is not one of supreme human authority to create any reality of our choosing: rather, the point is that our actions are capable of constraining the range of potentialities contained in a situation (ibid., p.58). The responsibility which is entailed by this is mirrored in Viola Cordova’s portrayal of her Indigenous (Navajo) worldview: Cordova’s conception of human responsibility in our relationships with non-human nature is not one of domination or even of stewardship, but of respectful, mutually responsive participation (for example, Cordova, *How It Is*, p.212).

² Burkhardt, *Indigenizing Philosophy Through The Land* : Burkhardt stresses the importance of understanding phenomena in their localised context, and relates this to the wider context of some points of unity in diversity between Indigenous worldviews.

³ Merleau-Ponty, *Nature: Course Notes From The Collège de France* . The development of Merleau-Ponty’s thinking over the three-year period of his *Nature* lectures is traced here as progressing from acknowledgement of a participationalist understanding to the implications of this with regards to the existence of acausal events alongside causal ones.

⁴ A selection of contributions to the following anthology are cited: Apffel-Marglin (ed.) with PRATEC, *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development* . The thrust of the argument at this point of the thesis is the non-binary relationship between the conception of locality introduced by Burkhardt above on the one hand, and the overarching conception, across different localities, of the relationship between humans and non-human nature as one of whole-bodied conversation as opposed to domination. The relationship between these conceptions is non-binary due to the former emerging from the latter: in the absence of any domination by a perceived centre, mutually responsive – and thus unique – relationships are able to form in locality.

⁵ Reference is made here to B. de Spinoza, *Ethics* , as well as to G.Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics* . In particular, in relation to Karen Barad’s thought and to Indigenous worldviews exemplified by Vine Deloria’s work, Spinoza’s non-binary treatment of the relationship between the *conatus* of the individual and that of the whole is explored.

In a more detailed exploration of Indigenous conceptions of performative knowledge processes as a possible approach to understanding our participation in the world, Karen Barad's thinking then once again proves relevant throughout **Part 2**, with the focus now shifting from predominantly considering parallels between quantum theory and related examples of larger-scale phenomena, to predominantly exploring the relationship between epistemology and ontology as the two intertwine in Indigenous as well as in some Western conceptions of shared learning and creation. It is not only the immediately obvious, participationalist kinship between Shay Welch's thinking and Barad's that becomes apparent in **section 12.b.**⁶ but, in addition and through this, shared ground with John Dewey's ideas in **section 12.a.ii**⁷ and with Martin Buber's in **section 14.d.**⁸, as both join Jacques Ellul in criticising the replacement of responsiveness with standardisation which Ellul refers to in **section 12.a.ii** as the spread of *technique*.⁹

Each of the references to Karen Barad's thinking above, taken on its own, appears complete without further detail being supplied on Barad's work. Considered in each other's context, however, they warrant a closer look at this author in a dedicated piece considering the contribution of Barad's thinking to the argument as a whole, alongside some aspects of Indigenous worldviews discussed in this thesis where Barad's work, on its own, must remain a stepping stone as opposed to being able to be understood as an exhaustive explanation.

Section b. Karen Barad's academic career: outlier or emerging trans-disciplinary trend?

Karen Barad's career appears unusual at first glance. Having completed a PhD in theoretical particle physics and quantum field theory, and having secured tenure as a

⁶ Welch, *The Phenomenology Of A Performative Knowledge System: Dancing With Native American Epistemology*. The work explores Indigenous conceptions of performative knowledge processes in the context of dance, and situates these within a participationalist paradigm sharing similarities with Barad's. Shared ground is also acknowledged with enactivism, as well as with George Lakoff's and Mark Johnson's thinking with regards to metaphor, before both are shown to be insufficient to be regarded as wholly explanatory of related Indigenous concepts.

⁷ Dewey, *Art As Experience*. Dewey differentiates between the artful and the mechanical not by relegating each to its respective academic discipline, but by making a case for the artful, in any field, being distinguished from the mechanical by the mutually responsive engagement of those involved.

⁸ Buber, *I And Thou*. While acknowledging the necessity of our interactions *in part* being based on practices derived from prior experience (*I-It*), Buber stresses the importance of our allowing this to continue to be informed by respectful and responsive participation with each other in the present moment as it is lived in relationship (*I-thou*).

⁹ Ellul, *The Technological Society*. It is important to note Ellul's idiosyncrasy here of referring to *any* spread of standardisation as *technique*. Although the term might at first glance suggest it, Ellul is not criticising the use of technology: he is criticising the subordination of other aspects of life to an increasing standardisation of procedure, resulting in the elimination of scope for responsiveness.

lecturer in physics (which suggests that no external drivers are likely to have existed for her subsequent change of focus), Barad proceeded increasingly to engage in interdisciplinary work. She is now Professor of Feminist Studies, Philosophy, and History of Consciousness at the University of California Santa Cruz.¹⁰

At second glance, and in light of the contributions made by the feminist and intersectional authors referenced in **section 3.b.**¹¹, Barad can be understood to be one of a number of authors with an interest in embracing richer conceptions of rationality and applying these to disciplines of science and beyond. For example, one of the editors (Sandra Harding) of the anthology that the section is largely based on is cited by Barad in this regard.¹² Considering this thesis beyond the above-mentioned section, it then also becomes apparent that Barad is far from alone in taking an interdisciplinary approach: not only is there a recurring theme throughout this thesis of Indigenous academics tending to take a more comprehensive view of higher education than exclusive focus on one discipline in isolation would typically allow (for example, Gregory Cajete in **section 5.a.**¹³), but Barad herself cites the Western example of Niels Bohr in this regard, making reference to Bohr's "philosophy-physics".¹⁴ John Polkinghorne, who became an Anglican priest after a distinguished career as a theoretical physicist at Cambridge, and who is referenced extensively in **sections 4.b and 4.c.**¹⁵ of this thesis, may still be far from being the norm at this stage. However, it is also becoming increasingly apparent that the forays into wider conceptions of rationality exemplified by cases such as these, and, relatedly, the

¹⁰ University of California Santa Cruz, *Karen Barad*, <URL: <https://humanities.ucsc.edu/academics/faculty/index.php?uid=kbarad>> [Accessed: 20 March 2023].

¹¹ The section makes reference to a selection of contributions to the following anthology: Narayan and Harding (eds.), *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*.

¹² K.Barad, 'Meeting The Universe Halfway: Realism And Social Constructivism Without Contradiction', in *Feminism, Science, And The Philosophy Of Science*, ed. by L.H.Nelson and J.Nelson (Boston: Kluwer Academic Publishing, 1996), pp.161-194, p.182.

¹³ Cajete, *Native Science*.

¹⁴ Barad, 'Meeting The Universe Halfway', p.165.

¹⁵ John Polkinghorne is initially quoted in his capacity as an expert on quantum theory (mostly from Polkinghorne, *Quantum Theory: A Very Short Introduction*). In addition, his work then proves to be of interest as a Western example of a religious group (in his case, Christianity, and now mostly cited from Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*) developing an interest in the glimpse beyond the limitations of a purely Newtonian, clockwork universe that is offered by the findings of quantum theory. The chapter then discusses the fact that similar interest in quantum theory has been shown by other groups reluctant to accept Newtonian physics as an exhaustive explanation of all that there may be. This includes additional world faiths besides Christianity on the one hand and, as subsequently explored throughout the rest of the thesis, Indigenous worldviews on the other.

questions raised by these forays with regards to scientific approaches to science, may be finding their way into a mainstream on the cusp of allowing itself to transform.

Section c. Barad's thinking in the context of *Part 1*

In relation to the points discussed in *Part 1* of this thesis, Karen Barad provides a multitude of examples showing that experiences whose scientific validity the contemporary Western mainstream would be likely to question (and whose scientific validity it does tend to question when they arise in an Indigenous context, as shown, for example, in *section 3.c.*¹⁶) are, in fact, freely available to those prepared to look. A key stumbling block is shown to involve contemporary Western conceptions of binary dualisms, and its corollary of (at least initial) disbelief when encountering richer conceptions of logic as exemplified by the aspects of quantum theory discussed, for example, in *section 4.b.*¹⁷.

The helpfulness of Karen Barad's work with regards to our approaching the issues discussed at the Dialogues (as outlined in *Part 1*)¹⁸ mainly consists in making the evidence more tangible. Besides providing additional detail with regards to the findings of quantum theory discussed in *section 4.b.*, and besides pointing out, as does Polkinghorne in *section 4.b.*, the implications of this with regards to binary dualisms requiring a complement of richer approaches to logic in order to avoid science being reduced to mere scientism, Barad makes the point that similarly non-binary experiences are available outside quantum physics laboratories, and on a macroscopic scale as well as on the minuscule scale characterised by Planck's constant. Barad is clearly aware of our tendency to be reluctant to accept evidence that appears to contradict our existing

¹⁶ The section, for example, discusses a case study of an Indigenous plant remedy being removed from its original context, marketed in a context of allopathic medicine despite its never having been intended for this, and subsequently dismissed as ineffective due to its lack of efficacy in its new, inappropriate context. The case study is taken from Christopher Low's 'Different Histories Of Buchu: Euro-American Appropriation Of San And Khoekhoe Knowledge Of Buchu Plants'.

¹⁷ For example, the phenomenon of superposition (whereby, in Niels Bohr's double slit experiment, one and the same entity appears to have travelled through both slits on its way to the photographic plate placed behind these) has been described as "a middle term undreamed of by Aristotle." (Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.37.) The unaccustomed nature of the findings of quantum theory initially posed a challenge to those involved, as amply demonstrated by the disagreement between Niels Bohr and Albert Einstein regarding the acausal nature of quantum entanglement – a disagreement which was only to be resolved in the 1980s. (Ibid., p.98.)

¹⁸ The Dialogues were a series of academic conferences held over a period of ten years from the early 1990s to the early 2000s and attended by Indigenous academics and Western quantum physicists, with the purpose of discussing shared ground between Indigenous worldviews and the findings of quantum theory.

beliefs about the world: she refers to such evidence as behaviours “refusing to be civilised by the laws of classical physics,”¹⁹ and makes reference to colleagues’ experience of their accounts being “persistently denied any empirical purchase, as though the thought of allowing nature such a radical degree of ontological complexity is too much to bear.”²⁰ In the same vein, Barad finds it necessary in her earlier paper to make it explicit that her aim is not to romanticise or mysticise quantum theory, but to engage in rigorous debate.²¹ Barad’s frustration with contemporary tendencies in the culture of Western science to disregard observations initially incompatible with accepted paradigms is shown to be mirrored in Indigenous worldviews, as, for example, articulated by Deloria and Wildcat in **section 16.c.iv**²² .

Macroscopic-scale examples provided by Barad include that of lightning, which, in the process of finding its target, appears to defy the logic of classical physics by relying on a form of communication between sender and recipient taking place before sender and recipient can be understood as such.²³ The process – as yet only partially understood – therefore appears to show more kinship with conceptions of acausal events discussed in **sections 6.b. and 6.c.**²⁴ than it does with classical applications of causality as a sole explanation of events.

Section d. Barad’s thinking in relation to the overarching theme of the thesis

d.i. The example of Pfiesteria piscicida as it relates to both parts of the thesis

¹⁹ K.Barad, ‘Nature’s Queer Performativity’, *Kvinder, Køn & Forskning*, 1-2, 2012, pp.25-53 (p.45), DOI: 10.7146/kkf.v0i1-2.28067 [Accessed: 20 March 2023].

²⁰ Ibid., p.36.

²¹ Barad, ‘Meeting The Universe Halfway’, p.166.

²² Deloria and Wildcat, *Power And Place: Indian Education In America*. Deloria and Wildcat make the point that a model of reality that excludes certain aspects of reality without having made explicit that it has done so is subsequently in danger of assuming that these aspects cannot have been important – only to be surprised when this turns out to be an error at a later date. Interestingly, in another context, Deloria cites Werner Heisenberg in this regard. (Deloria, *The Metaphysics Of Modern Existence*, p.51.)

²³ Barad, ‘Nature’s Queer Performativity’, p.35.

²⁴ The concepts discussed in these sections are intricate, but for the present discussion it may well suffice to make a brief return to David Bohm’s illustration of a fish tank (Bohm, *Wholeness And The Implicate Order*, pp.236-238): an acausal relationship may be viewed in terms of two events being related without either being caused by the other, in a similar way to two related images appearing on two television screens linked to cameras placed at right angles to observe a fish tank. The images are related without either being caused by the other. Importantly, as pointed out by David Peat in the context of synchronicities in **section 6.c.** , the relationships introduced by Bohm and Peat here are not to be seen in a deterministic light. Rather, they are to be conceived as examples of the observer being included in the experiment, and thus in contact with the balance of the forces at play, and able to respond creatively and responsibly. (Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.140.)

With regards to the issue spanning both parts of this thesis (the issue of our insights gained from the parallels between Indigenous worldviews and quantum theory found at the Dialogues, and discussed in **Part 1**, then having implications for our participation in shared learning and creation in the world as explored in **Part 2**), it is particularly Barad's example of *Pfiesteria piscicida*²⁵ which seems helpful in providing an easily accessible bridge between the two.

Pfiesteria is an organism which can act as either plant or animal without being capable of being classified as one or the other. The organism's plant/animal duality is not only a further example, besides wave/particle duality, of there being situations where premature categorisation may prevent understanding as opposed to facilitating it. It is also a further example, besides wave/particle duality, of our participation with the world being capable of being co-creative. The potentialities contained in *Pfiesteria's* physiology include its capability of manifesting either as a fairly harmless inhabitant of its surroundings, or alternatively as a highly malignant one responsible for fish death and estuary damage.²⁶ Crucially – for the points made in this thesis as well as for any fish or estuaries potentially on the receiving end of *Pfiesteria's* participation with the world – reductive, laboratory-bound attempts to cultivate *Pfiesteria* are only capable of producing its harmless manifestation.²⁷ *Pfiesteria* cultivation in a laboratory will, every time, result in a laboratory report stating that *Pfiesteria* is harmless, unless events outside the laboratory are taken into account as well: it is only through its development in a habitat containing fish that *Pfiesteria's* fish-killing potentialities are capable of manifesting. A laboratory-grown manifestation of it will continue to be the type of manifestation harmless to fish even when fish are later present.²⁸ And yet, it would clearly be a mistake to extend any Newtonian assumption of context-independence of identity (the universal applicability of which Barad already refutes based on the findings of quantum theory in her earlier paper,²⁹ as did John Polkinghorne in **Part 1** of this thesis) to the phenomenon here observed.

²⁵ Barad, 'Nature's Queer Performativity', pp.37-39.

²⁶ Ibid., p.37.

²⁷ Ibid., p.38.

²⁸ Ibid..

²⁹ Barad, 'Meeting The Universe Halfway', p.169.

d.ii. *Pfiesteria* and its participationalist significance to bus drivers

Barad provides her examples of parallels between quantum theory and macroscopic phenomena, consistent with the points made in **Part 1** of this thesis, with the express purpose of sensitising her readers to the possibility that a wider conception of logic than its reduction to binary dualisms alone “might be appreciated across divisions of scale and familiarity”.³⁰ Relatedly, she is interested in the implications of her examples regarding responsible ways of practising science. If we grow harmless *Pfiesteria* in a laboratory, and then conclude that all *Pfiesteria* must therefore be incapable of killing fish and damaging estuaries, then we are guilty of excluding those aspects of reality that did not easily fit with our existing model of the part of the world that we were designing our experiment to explore. If we exclude some aspects of the question under consideration from the beginning, then we cannot expect our results to be representative of the reality under consideration in its entirety – a flaw in the logic of the more scientific schools of Western science much criticised not only by Indigenous authors throughout this thesis, but also by Bruce Wilshire in **section 4.c.**³¹ . In fact, Barad’s *Pfiesteria* example not only has implications with regards to representation: the laboratory cultivation of *Pfiesteria* described also means that we have participated in *creating* a manifestation of a piece of reality without taking into account the circumstances which were relevant to this creation. We have not only failed to represent all relevant aspects of the subset of reality addressed by our laboratory report. We have also ignored the fact of our participation being relevant to the process – an observation which is also made in **section 4.d.** with regards to the conception of verisimilitude on its own being incapable of doing justice to our participation in the world.³² It is not only in the quantum physics laboratory that the human involved is co-creator as well as observer of waves and particles, nor is it an exclusive feature of other scientific endeavours such as our cultivation of *Pfiesteria* . It is

³⁰ Barad, ‘Nature’s Queer Performativity’, p.45.

³¹ For example, Wilshire, *Fashionable Nihilism: A Critique Of Analytic Philosophy*, p.104, and Wilshire, *The Primal Roots Of American Philosophy*, p.166.

³² **Chapter 4** uses Polkinghorne’s definition of verisimilitude as “an accurate account of a wide but circumscribed range of phenomena” (Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.84.) It is shown that the term “circumscribed” is already justified when arguing exclusively from within a representationalist paradigm (since the continuing emergence of new scientific discovery alone demonstrates that we cannot claim omniscience even with regards to those phenomena that are already observable in the world). In addition, once a participationalist paradigm is considered alongside this, the added dimension of our co-creative activity emerges, and with it the need to consider additional phenomena that may currently be in a nascent state (as well as additional potentialities beyond this).

also a feature of our everyday weaving of Merleau-Ponty's network that carries our existence, as first introduced in **section 4.a.**³³, and further exemplified in a case study briefly outlined in **section 6.f.ii**, which is then considered in detail in **Part 2**.

Barad's theory of agential realism aims to provide a theoretical framework for the dynamic of our participation, and in doing so overcomes the exclusive relationship of binary dualism often attributed to social constructivism on the one hand and traditional realism on the other.³⁴

Scientific results are not reproducible because we are able to measure the observer-independent properties of an independent reality. Reproducibility is possible because scientific investigations are embodied, grounded in experience, in praxis. Reproducibility means the possibility of the reproduction of phenomena, and phenomena are written on the "body"; phenomena are the place where matter and meaning meet. Reproducibility of phenomena does not require or serve as proof for access to the transcendent.³⁵

The **section 6.f.ii.** and **Part 2** case study cited in this regard involves no laboratory, but bus drivers, and it exemplifies Barad's thinking here as accurately as Niels Bohr's waves and particles do in **section 4.b.**. Just as waves or particles manifest in relation to circumstance, statistics showing disproportionate numbers of deaths among bus drivers in the early days of the Covid-19 pandemic manifested in relation to circumstance.³⁶

There is nothing intrinsic about bus drivers that causes them to die of Covid-19, any more than there is anything intrinsic about a wave going through Bohr's double slits that makes it a wave rather than a particle. It goes through the slits and manifests as one. Similarly, the proportion of Covid-19 deaths among bus drivers is dependent on their exposure to the virus, just as Bohr's waves are dependent on being shot through Bohr's double slits. As demonstrated in **section 6.f.ii**, it was our failure as a society to reliably support those who were infectious to self-isolate that resulted in many of them being unable to afford to stay away from work and, as a corollary, from the bus drivers taking them to work, just as it was Bohr's experimental setup in **section 4.b.** that manifested waves rather than particles from the potentialities contained in the situation.

³³ Merleau-Ponty, *Nature: Course Notes From The Collège de France*, p.176.

³⁴ Barad, 'Meeting The Universe Halfway', p.162.

³⁵ *Ibid.*, p.185.

³⁶ Office for National Statistics, *Coronavirus (COVID-19) related deaths by occupation, England and Wales: deaths registered between 9 March and 28 December 2020*, <URL: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand28december2020>> [Accessed: 20 March 2023].

Karen Barad's agential realism accounts for this dynamic without thereby collapsing into relativism. Barad explicitly states this,³⁷ presumably for the same reason as Indigenous philosophers tend to, as outlined in **section 6.f.iii**³⁸ : it can be difficult for a Western audience (often accustomed to the assumption that a relationship of binary dualism between universalism and relativism is capable of encompassing all aspects of the question) to appreciate that creation of different circumstances may contribute to the manifestation of different realities. A society that provides reliable self-isolation payments for those infected with a potentially deadly virus is going to mourn fewer of its bus drivers. This fact is then going to be represented by different proportions of bus driver deaths in their respective statistics.

Barad's agential realism demands the inclusion of relevant circumstances in any description of a phenomenon, so that those participating in creating it and subsequently describing it become accountable for their "agential cuts" (or separations of objects and observers thus effected).³⁹ A scientific paper reporting on successful cultivation of *Pfiesteria* in its harmless manifestation is only a realistic representation of reality to the extent that it includes the nature of the scientist's participation, which consisted, in the case cited by Barad, in conducting the experiment in an environment that excluded the presence of fish.⁴⁰ A statistic on bus driver deaths in a pandemic is only a realistic representation of reality to the extent that it includes societal factors in relation to their exposure to the pathogen in question.

Section e. Glimpses of understanding beyond Barad's treatment of quantum theory and responsibility, and the necessity of embracing a conception of responsibility based on humility

It is in an area just beyond the above stage in Barad's argument that it becomes evident that Indigenous worldviews take the points made by Barad further than Barad herself does. The point where it does become apparent is likely to be visible only at second glance: at first, there is ample shared ground that remains relevant. Barad acknowledges an "open-ended becoming of the world",⁴¹ and also, consistent with what is said in

³⁷ Barad, 'Meeting The Universe Halfway', p.186.

³⁸ For example, McPherson and Rabb, *Indian From The Inside*, pp.14-17, Burkhart, *Indigenizing Philosophy Through The Land*, pp.177-302, and Deloria and Wildcat, *Power And Place*, p.137.

³⁹ Barad, 'Meeting The Universe Halfway', p.187.

⁴⁰ Barad, 'Nature's Queer Performativity', p.38.

⁴¹ *Ibid.*, p.40.

section 4.a. regarding the overlap between Barad’s and Viola Cordova’s work,⁴² that our participation in this process of becoming implies “irreducible relations of responsibility”.⁴³ Barad’s conception of responsibility is demanding: for example, her nuanced treatment of the quantum eraser experiment⁴⁴ makes her theory appear capable of accommodating Indigenous conceptions of time as involving complexities beyond an exclusively linear dimension, such as those touched upon in **sections 4.d.**⁴⁵, **5.e.**⁴⁶, and **6.a.**, and discussed in context in **chapter 18**⁴⁷. Her comments on the implications of our actions

⁴² A cluster of three analogies is used by Viola Cordova to illustrate our responsible, co-creative participation with the world. Firstly (and perhaps most accessibly), Cordova likens this co-creative activity to our rolling of a snowball, whereby today’s shape of its inner layers influences how easy it is going to be tomorrow to give its outer layers a particular shape (Cordova, *How It Is*, p.175). Secondly, she points out that our actions cannot solely be understood as ripples in a pond, moving outwards in neat and predictable concentric circles, but that our ripples interact with everyone else’s in a process of vastly greater complexity (Moore, ‘Introduction’, in Cordova, *How It Is*, pp.xiii-xiv). Cordova’s third analogy can be understood on the basis of our co-participation as portrayed in the first two: she conceives our quest to find balance in the world not as a static form of balance, but as our balancing on a board across a barrel on shifting sand (Cordova, *The Concept Of Monism In Navajo Thought*, p.99).

⁴³ Barad, ‘Nature’s Queer Performativity’, p.46.

⁴⁴ *Ibid.*, pp.43-44 and p.48. The quantum eraser experiment involves introduction of a “which-slit detector” permitting monitoring of which of the two slits a particular entity travels through in Bohr’s double slit experiment. With the “which-slit” in place, entities manifest as particles; without the “which-slit” in place, as waves. The experiment has been touted as evidence of our ability to erase the past because once any “which-slit” information is erased after the event, a diffraction pattern emerges, so that entities which manifested as particles are now seen to have manifested – during an experiment that is now in the past – as waves. However, Barad points out that an interpretation of this as erasure of the past is inaccurate: the diffraction pattern that emerges with erasure of the “which-slit” information is different from that observed when there is no “which-slit detector” in place in the first place. The past has thus not been erased, although it has, undeniably and at least to date inexplicably, been changed. Barad therefore concludes that past and future are more realistically understood to be in an iterative relationship and, again, stresses the implications of this with regards to responsibility.

⁴⁵ Besides Norton-Smith’s and McPherson and Rabb’s assertions of circularity in **section 6.a.**, Cajete’s (**4.d.**) thoughts on time include eternal as well as sequential aspects (Cajete, *Native Science*, p.74).

⁴⁶ An account provided by the PRATEC project of the relationships between different forms of life in the Andes, too, discusses time as having circular elements alongside linear ones: for example, new life forms are understood as already being contained in existing ones, which dovetails with a conception of death as transition to another form of being alive (G.Rengifo, ‘The Ayllu’, in *The Spirit Of Regeneration: Andean Culture Confronting Western Notions Of Development*, ed. by F.Apffel-Marglin with PRATEC, pp.89-123 (p.76).

⁴⁷ **Chapter 18** contextualises our struggles with a selection of contemporary challenges not only in terms of the previously discussed richer conception of rationality being capable of opening a door to shared learning and creation of meanings, but also to such shared learning and creation potentially being subject to what Shay Welch describes (in the context of dance) as a pull on the unconscious (Welch, *The Phenomenology Of A Performative Knowledge System: Dancing With Native American Epistemology*, p.104). The dynamic described by Welch is also brought to life in Robin Wall Kimmerer’s case study of her postgraduate student’s reconnection with some ancient wisdom retained by the land and by those who have been sharing in it since a time before the arrival of humans (Kimmerer, *Braiding Sweetgrass*, pp.158-166). The layered meanings of the word “original” as “innovative” as well as “initial” (Parry, *Original Thinking*, p.3) are linked to Indigenous understandings (for example, PRATEC’s) of ritual as responsive conversation in relationship, with its focus being on custom as opposed to habit (for example, Rengifo, ‘The Ayllu’, pp.116-118).

for “the flesh of the world”,⁴⁸ made at a time when Barad’s interdisciplinary and philosophical work had already been underway for several decades, and made in the context of her reflections on our participation in the world, are likely to be an allusion to Maurice Merleau-Ponty’s thinking as discussed, for example, in **section 5.b.**⁴⁹, and referenced by several of the emerging generation of Indigenous philosophers cited in this thesis.

Barad’s work thus remains highly relevant to Western attempts to approach understanding of Indigenous worldviews. Frédérique Apffel-Marglin’s choice to draw on Barad’s work to the extent that she does, as shown throughout **Part 1** of this thesis, thus goes a long way towards explaining her ability (despite initially having been socialised in the West, as outlined in **section 5.c.**⁵⁰), not only to develop shared understandings with her Indigenous colleagues at PRATEC and beyond, but also to convey these in a way that then proves accessible to a Western audience.

What Barad’s work to date does not seem to be able to accommodate fully, however, are the implications of our participation in the “open-ended becoming of the world”⁵¹ she makes reference to, and this is something that the Indigenous authors cited would be likely to take issue with for a cluster of reasons I am going to outline in the remainder of this appendix.

As stated above, Barad derives an ethic of accountability from the fact of our participation in the world being relevant to any assertions we may make about the world, including those made as part of our scientific studies.⁵² From this, she derives our responsibility of designing our methods of enquiry so that no relevant aspects of our participation are excluded from our description of our agential cut thus made.⁵³ She includes mutually responsive relationships in her account: for example, by stating that “Responsible laboratory practice must take account of the *agential* performances of the organism (...)”.⁵⁴ What does not seem to be addressed at this point, however, is the

⁴⁸ Barad, ‘Nature’s Queer Performativity’, p.47.

⁴⁹ **Section 5.b.** contextualises Frédérique Apffel-Marglin’s thinking regarding the impact of our loss of (partially ritualised) forms of communication and gift exchange between humans and non-humans, which were previously also practised in *Western* localities, with participationalist ideas supported, for example, by Maurice Merleau-Ponty and by Viola Cordova as well as by Karen Barad.

⁵⁰ Apffel-Marglin, ‘Western Modernity And The Fate Of Anima Mundi’, pp.38-45.

⁵¹ Barad, ‘Nature’s Queer Performativity’, p.40.

⁵² Barad, ‘Meeting The Universe Halfway’, p.187.

⁵³ Barad, ‘Nature’s Queer Performativity’, p.38.

⁵⁴ Ibid.. (Italics mine.)

inability of any unilateral, human choice we may make to ensure that no relevant factors are *inadvertently* excluded.

A cluster of three scenarios is used in this thesis to cast light on the dynamics contributing to this inability. Firstly, the point is illustrated by the journey of Team GB's women's eight in the run-up to the Rio 2016 Olympic regatta introduced briefly in **Part 1**, and described in detail in **section 12.b.** at the beginning of **Part 2**, to then be revisited throughout the remainder of **Part 2** as a case study providing a Western stepping stone helpful in approaching Indigenous conceptions of performative knowledge processes. Secondly, the implications are then further explored through the case study of Robin Wall Kimmerer's postgraduate student's interaction with the plant of sweetgrass introduced in **section 16.b.**⁵⁵, and through the role that this interaction plays in the student's journey of reconnection with ancient processes and meanings likely to have been learnt from non-human to non-human relationships in existence before humans existed. Thirdly, the above journey is then revisited in section **section 18.c.**, to be further explored through a Western scientist's innovative approach to blending Western science with his openness to re-admitting the Indigenous Trickster to enter the equation:⁵⁶ a microscope lamp is left on overnight in recognition of a previously existing, localised kinship relationship between humans and salmon, brought to an end by unilateral human intervention, which rendered the area uninhabitable for salmon as it was made suitable for the mass production of cattle. Kimmerer's account ends in the scientist's remaining open to any response from the salmon.

Consideration of the three scenarios above shows that it is highly unlikely to be possible to meet Barad's requirement of responsibility in enacting and accounting for agential cuts through unilateral decision-making alone. There appear to be two reasons for this.

Firstly, as the case study of the Rio 2016 women's eight illustrates particularly vividly, we may be capable of verbalising a process, albeit often only partially, which *has* already taken place, but we are unlikely to be capable of verbalising its ongoing becoming. This is, at least in part, already recognised. John Dewey is cited in **section 12.b.**⁵⁷ on the insufficiency of human language alone when it comes to expressing emotions, and, in an

⁵⁵ Kimmerer, *Braiding Sweetgrass*, pp.158-166.

⁵⁶ *Ibid.*, pp.251-253.

⁵⁷ Dewey, *Art As Experience*, p.70.

extension of this, McPherson and Rabb are cited in **chapter 9**⁵⁸ with regards to any form of human language alone being incapable of doing justice to the interaction between those who share in the land that is part of the relationships human language may be attempting to portray. The women's eight's training notes do, undeniably, prove useful as a communication tool between those involved in creating them, as shown in **section 12.b.**⁵⁹. What they demonstrably fail to do, however, is to prove sufficient as a communication tool with those not involved in creating them as they prepare to join the following day's outing.

A nascent experience may turn out to be located beyond previously created categories available to human language. (Descartes and his contemporaries, for example, would not have required, nor had, a word for quantum entanglement. It is likely that Bohr and his contemporaries had to coin their own suitable one.) – Even in cases where the categories already available may well prove sufficient, the example of the women's eight shows that participation in nascent experience is likely to be non-verbal in its initial stages. **Section 12.b.** demonstrates that the eight's actual shared learning and creation took place on the water, and that it was only in retrospect that lessons learnt and rhythms created then sedimented out sufficiently to become capable of being verbalised.⁶⁰

The importance of Karen Barad's point with regards to our responsibility in describing our agential cuts comprehensively cannot be overstated, as the above case study involving bus drivers shows. What our responsibility must also include, however, is our humility in acknowledging that it cannot be discharged in the absence of continued responsiveness in our relationships with those around us as we co-participate in the world's ongoing creation. PRATEC's insistence on the importance of whole-bodied conversation and, relatedly, their prioritisation of custom over habit, introduced in **section 5.e.**⁶¹, is not solely a matter of cultural preference: it is also the humility of recognition of the limitations placed on our understanding by the fact of our participation in the creation of the as yet incomplete and unknown.

Secondly, and leaving aside for a moment the implications of our above participation in the world's continued becoming, we are unlikely to grasp in its entirety even any *present*

⁵⁸ For example, McPherson and Rabb, *Indian From The Inside*, p.177-179.

⁵⁹ Houghton, *Creating Performance: Learnings From Five Olympic Games*, pp.57-58.

⁶⁰ *Ibid.*, p.57.

⁶¹ For example, Rengifo, 'The Ayllu', pp.118-120.

state of what our laboratory report may be aiming to capture. Tacit assumptions prevented John Steinbeck's Lee from being seen in **section 5.b.**⁶², and a simple thought experiment shows that the problem will frequently go deeper than this: Lee *could* have been seen by other humans, but for the tacit assumptions that prevented this. A dog whistle's sound waves entering a laboratory through an open window, conversely, may well go unnoticed as humans are unequipped to perceive them, and yet they may later turn out to have been relevant to what went on inside. Considering this further, it becomes clear that dog whistles are by no means the final stage in this thought process: we know what dog whistles are, and this means we may choose to install equipment to detect sounds we are unequipped to hear. This type of precaution, however, is not always going to be available to us: we cannot anticipate any factors that we have had no previous experience of. As pointed out by Bruce Wilshire in **section 5.d.**⁶³, extraterrestrials may well have capacities too unaccustomed for us even to perceive, let alone anticipate or fully account for.

We would be unwise to apply Wilshire's comments only to extraterrestrials here. Karen Barad's *Pfiesteria* above had already been exercising its intractable capacities for a considerable amount of time before we even noticed. The very nature of the example implies that there are likely to be more, and that we are unlikely to know (at least, as yet) what these are going to be.

It is therefore unlikely (even as we argue from an exclusively representationalist vantage point for a moment) that our laboratory reports capture even the present state of what they are aiming to represent, for the simple reason that we are incapable of perceiving it in its entirety. While it is impossible to overstate the importance of our responsibility as outlined by Barad here, it is equally important to note that this responsibility must include our humility of acknowledging our limitations. This not only applies once we take into account a participationalist view of the world's continued becoming, although its implications clearly become wider through this. It already applies when arguing from an exclusively Western, representationalist point of view, in which case it requires the humility of joining John Polkinghorne in **section 4.c.**⁶⁴ in acknowledging the difference between verisimilitude and comprehensive understanding.

⁶² Steinbeck, *East Of Eden*, p.161.

⁶³ Wilshire, *The Primal Roots Of American Philosophy*, p.76.

⁶⁴ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.84.

It is through the above case study of Kimmerer's postgraduate student's interaction with the plant of sweetgrass introduced in **section 16.b.**⁶⁵ that the above thought experiment is not only illustrated, but that glimpses of a potential way forward begin to appear. It becomes clear that it is not through those elements of the student's experimental setup which are verbalised in her laboratory report that she finds herself reconnecting with some ancient evolutionary as well as mythical wisdom of relationships between buffalo and grass predating the arrival of humans. It is through her emotional and embodied engagement with the process of her research and with the humans and non-humans involved in it, or, as pointed out by John Dewey in **section 12.a.ii**⁶⁶, through her engagement as an entire live creature. Her reconnection with the ancient wisdom found was beyond her intellectual control: it would not have been possible to plan for it because its distinguishing feature was that she could not previously have known what she was looking for. The only way that the reconnection was able to materialise was in the form of a surprise, and in order for the surprise to be able to materialise, the student had to open her heart to the unexpected. This is also why the scientist in **chapter 18.c.**⁶⁷ leaves his microscope lamp on overnight.

The responsibility demanded by Karen Barad in her work is, at least explicitly, a form of responsibility that demands discipline and rigour.⁶⁸ These are indisputably of importance, in the laboratory as exemplified by Barad's *Pfiesteria* example, as well as outside the laboratory, as amply demonstrated by the above case study involving bus drivers.

It is Barad's next statement following her demand which moves in the direction of providing a key to unlocking what is, above all, at stake here: "Responsibility entails providing opportunities for the organism to respond."⁶⁹ The statement acknowledges a responsive form of relationship. The difficulty, however, lies in Barad's choice of verb here: if we solely "provide" opportunities for the organism to respond, then the process becomes reliant on our prior knowledge of what we are looking for, thus enabling us to

⁶⁵ Kimmerer, *Braiding Sweetgrass*, pp.158-166.

⁶⁶ Dewey, *Art As Experience*, pp.51-52.

⁶⁷ Kimmerer, *Braiding Sweetgrass*, pp.251-253.

⁶⁸ For example, Barad states that "(...) responsible laboratory practices must take account of the agential performances of the organism in making the specific nature of causal relations evident." (Barad, 'Nature's Queer Performativity', p.38). This appears to be based on the assumptions that firstly, only causal relations are expected (which is, however, not Barad's final conclusion: *ibid.*, p.39) and, secondly, that the practitioner is going to know what to look for. It has been demonstrated above that the latter cannot reliably be assumed to be the case.

⁶⁹ Barad, 'Nature's Queer Performativity', p.38.

discern what opportunities to provide. This is undeniably useful where such prior knowledge exists: without it, there would be no Covid-19 tests; these are possible because we know that we are looking for the Covid-19 virus. However, since it has been demonstrated above that our prior knowledge cannot be relied upon to be complete in every case, something else is required in addition: it is only to the extent that we also “remain open” to our interlocutors responding in their own way that our process of enquiry ceases to be reliant on our prior knowledge of what we are looking for being complete. It is the difference discussed in **chapter 9** between exclusively communicating with Kanzi through the use of symbols based on already existing categories derived from human language on the one hand,⁷⁰ and remaining open to Kanzi’s potentially communicating, in his own way, intelligence beyond the realm accessible through these, on the other.

We are, at this point, reminded of the relevance of Vine Deloria’s assertion in **section 12.a.** that human aspiration to unilateral control may well constitute the original sin.⁷¹ We are, relatedly, reminded of the relevance of Spinoza’s thinking (and of its shared ground with that of, for example, PRATEC, of Viola Cordova, and of Brian Burkhart) as discussed in **chapter 11**⁷². It is shown in **chapter 11** that it is impossible for us to attain Spinoza’s adequate ideas of the entire network of relationships that constitutes the whole: in other words, it is shown that we must remain incurably fallible.

Implied in our ability, however, to attain adequate ideas of subsets of the network, combined with the fact of its *being* a network, there is yet hope of wisdom being able to be obtained from our engagement in relationships. It is particularly this sentiment that constitutes the affinity between Indigenous worldviews as considered throughout the

⁷⁰ **Chapter 9** makes reference to Frans de Waal’s account of Sue Savage-Rumbaugh’s work with Kanzi, a bonobo who learnt to communicate with humans by using symbols on a keyboard: de Waal, *Are We Smart Enough To Know How Smart Animals Are?*, pp.110-111.

⁷¹ Deloria, *The Metaphysics Of Modern Existence*, p.203.

⁷² **Chapter 11** discusses the relevance of the ideas put forward in Spinoza’s *Ethics* to the issues at stake in this thesis with regards to Indigenous worldviews. Above all, it is argued that the necessity of our fallibility that follows from the impossibility of our attaining adequate ideas of the entire network of relationships that we are part of (and therefore, the necessity of our incapability of reliably making successful unilateral choices about the world, irrespective of whether this is done in a spirit of stewardship or not) in turn calls for our mutually responsive engagement in relationships with others. This sentiment is echoed in PRATEC’s conception of whole-bodied conversation with the human and non-human world (for example, Rengifo, ‘The Ayllu’, pp.118-120), in Viola Cordova’s cluster of three analogies as outlined at the beginning of **section e.** of this appendix, and in Brian Burkhart’s jazz analogy, which he uses to illustrate his conception of ethics as arising from relationships between those sharing in the land in locality, and which is going to be revisited below (Burkhart, *Indigenizing Philosophy Through The Land*, p.292).

thesis and Spinoza's – especially due to the parallel found between Spinoza's location of the sacred in a worldly network of relationships as opposed to beyond it on the one hand, and in Indigenous conceptions of the sacred being located in this world on the other.

The latter is exemplified particularly by Anne Waters describing the sacred as our “maturing in relationship” in **section 13.a**.⁷³ This proves particularly pertinent in its ability to contextualise what first becomes apparent through some aspects of Vine Deloria's thinking in **chapter 10**⁷⁴: it is particularly Deloria's thinking which opens the door to a new conception of two previously separate dualisms, each previously perceived as a binary one, now becoming capable of merging into one, with its need to remain binary simultaneously also being dissolved. The Indigenous conception of a dynamic form of balance on the one hand (with its parallel in Spinoza's non-binary understanding of the relationship between the *conatus* of the individual and that of the whole, whereby the two may become mutually attuned in a similar way to the above jazz players and band first invoked by Brian Burkhart in **section 6.f.iv**), and the Indigenous conception of the sacred being in the material on the other (with its parallel in Spinoza's understanding of the sacred being located in the network of relationships in this world as opposed to beyond it), are now capable of growing into one, and the resulting one is now capable of ceasing to be binary. To the extent that we accept Anne Waters' above conception of sacredness as maturing in relationship as a key part of the family resemblance of sacredness attempted in **section 14.a**)⁷⁵, we may conclude that a path to our connection with the sacred in the material may lie in our shared learning and creation of ways of allowing our individual *conatus* to play jazz in harmony with the *conatus* of the band,

⁷³ Waters, 'Sacred Metaphysics And Core Philosophical Tenets Of Native American Thought: Identity (Place, Space), Shared History (Place, Time), And Personality (Sacred Emergence Of Relations)', pp.13-14.

⁷⁴ **Chapter 10** discusses some initially unpalatable aspects of Vine Deloria's thinking: unusually for an Indigenous philosopher, Deloria is critical of evolutionary theory. In-depth engagement with Deloria's rationale, however, shows that his criticism could not be further from the ill-informed attempts at placing science in opposition to the sacred that this might initially appear to associate him with. Rather, his criticism centres on the absence in evolutionary theory (at least to date) of a coherent treatment of any potential relationship between the two. His thinking thus becomes highly relevant to the above-mentioned case study of Robin Wall Kimmerer's postgraduate student who, by embracing a richer form of rationality in her engagement with contemporary Western science, finds herself reconnecting with some mythical as well as scientific wisdom contained in evolutionary relationships between non-humans which predate humanity.

⁷⁵ In deference to William James's assertion (which appears to echo the aspects of Spinoza's thinking considered above) of the sacred being *more* than one person or group can grasp (for example, James, *The Varieties Of Religious Experience*, pp.332-333), no definition of the sacred is attempted in **section 14.a**. Instead, the section attempts a sketch of a family resemblance based on the Indigenous and Western works considered up to this point. The point made by Anne Waters plays a key part in this.

simultaneously contributing to the harmony of the band and being buoyed by the band's harmony in return.

Karen Barad's thinking alone, although helpful as a stepping stone to our understanding of Indigenous worldviews, cannot be understood to be fully explanatory of this dynamic, as it does not similarly engage with the relinquishment of control that is thus going to be required if we are to exercise the responsibility that she rightly demands. Indigenous rejection of any attempted reduction of isolated aspects of Indigenous worldviews to isolated aspects of Western science alone – shown, for example, by the rejection of the reduction of *nilch'i* to a quantum field as cited in **chapter 10**⁷⁶ (as opposed to Indigenous endorsement of Western treatment of quantum fields as a stepping stone to understanding of the concept) – is echoed in understandings of the relationship between the wider contexts of both paradigms.

It is especially in light of Indigenous worldviews' – and Merleau-Ponty's, as well as Barad's – above conception of our engagement in relationships as a creative as well as a receptive activity⁷⁷ that it becomes apparent that there is not only wisdom to be *obtained* from our engagement in relationships, but that there is also wisdom – and world – to be *brought into being* through these.

It is here that we are most likely to be required to relinquish control, and to replace our contemporary Western conception of responsibility that assumes humans to be in unilateral charge with a new definition of responsibility that is prepared to learn from Indigenous conceptions of respectful responsiveness and humility, whereby we acknowledge the implications of our inherent, incurable fallibility as demonstrated above by Spinoza. Indigenous conceptions of parallels between quantum theory and Indigenous worldviews are shown in **section 12.b.**⁷⁸ to be as relevant to this point as they are to those previously made. Our creative contribution is inextricably intertwined with the contributions of those around us. William James's element of surrender alongside volition

⁷⁶ Deloria and Wildcat, *Power And Place*, p.140.

⁷⁷ For example, Merleau-Ponty, *Nature: Course Notes From The Collège de France*, p.176.

⁷⁸ Shay Welch, for example, joins Deloria in his above assertion of there being shared ground between Indigenous conceptions of winds such as *usen* or *nilch'i* and the energy of quantum fields (Welch, *The Phenomenology Of A Performative Knowledge System*, pp.63-65). She then extends this initial perception of a relationship of kinship between the two to include Deloria's above conception of the interwovenness of the previously separate dualisms of sacred/material and individual/whole and, within this, conceives dance – her example of choice of creative involvement in a relationship of meaning-making with the world – as “becoming” (ibid., p.160).

in **chapter 13**⁷⁹ is found to chime with Vine Deloria's conception of truth as respectful success⁸⁰ – and, relatedly, with Deloria's assertion of human aspirations to unilateral control constituting the original sin⁸¹ and his recommendation of Jacques Ellul for further reading⁸² – in **section 12.d.** . The mutual attunement of our own *conatus* and the *conatus* of the band of the world around us is, with the exception of a subset reducible to propositional statements about the world, likely to require our trust in and surrender to processes incapable of being captured by our minds alone.

As Raimond Gaita points out in **chapter 19**, and as renewed consideration of Mary Midgley's method for approaching the previously unfamiliar in light of Gaita's thinking demonstrates in the same chapter,⁸³ what is required of us is first our assumption of the inherent dignity of the "other", and then, in a subsequent step, our responsiveness in what Martin Buber refers to as an *I-thou* relationship in **section 14.d.**⁸⁴ . The impossibility of attaining adequate ideas of the entire network (even as we hold the network static for a brief moment while arguing from a representationalist point of view, and more so once a participationalist point of view is taken into account as the women's eight takes to the water the morning after communication of their training notes, and continues to engage in their process of shared learning and creation) implies that our assumption of this inherent dignity of the "other", and our acting upon this by engaging in mutually responsive relationships, are not solely a matter of decency, much as this alone would be enough to require us to reform. They are also a matter of practicality. This is

⁷⁹ James, *The Varieties Of Religious Experience*, pp.205-210.

⁸⁰ For example, Welch, *The Phenomenology Of A Performative Knowledge System*, p.39.

⁸¹ Deloria, *The Metaphysics Of Modern Existence*, p.203.

⁸² Deloria and Wildcat, *Power And Place*, p.163.

⁸³ Raimond Gaita is cited as requiring us first to acknowledge the inherent dignity of the "other", which will then lead to our perception of *some* aspect of similarity capable of serving as a starting point for the – from this point onwards unpredictable – development of relationship. (Gaita, *The Philosopher's Dog*, (for example) p.193, and – in relation to human to human relationships – Gaita, *A Common Humanity: Thinking About Love And Truth And Justice*). In light of the participationalist findings of quantum theory and beyond, this entails the existence of a dimension to Mary Midgley's method of approaching the initially unfamiliar (Midgley, *Animals And Why They Matter*, p.127) that would otherwise be easy to overlook when exclusively arguing from within the largely representationalist Western scientific paradigm: once the starting point of perceived similarity is left behind and the journey of attunement is embarked upon, there is, in light of the above thinking, no reason at all to assume that all our increasingly well-informed questions asked must be propositional, or indeed verbal. The case study of the Rio 2016 women's eight alone shows that once participationalist thinking is added into the mix, the propositional and the verbal are likely to be the exception rather than the rule in processes of shared learning and creation.

⁸⁴ Buber, *I And Thou*, pp.9-10.

shown, for example, in **chapter 18**⁸⁵ to apply to our relationships with humans voicing initially unpalatable views as much as to relationships with non-humans, and it is shown there to encompass our shared learning and creation as we move towards learning and creation of tomorrow's rhythms while simultaneously yielding to the pull of unconscious ties to evolutionary relationships and stories millennia old.

Indigenous worldviews, and the stepping stones provided by Spinoza's thought, as well as by the above thought experiment involving Wilshire's extraterrestrials and other non-humans, demonstrate that there must necessarily be pieces missing in our understanding of the network as it is and as it may be about to become, and that these pieces can only be added by inclusion of resources beyond the purely propositional, and of resources beyond our own. Inclusion of our own, non-propositional resources as part of our embracing a richer conception of rationality was shown above to play a part in this. Above all, however, it has become clear that our engagement in shared learning and creation with the world must imply inclusion of those with capacities different from our own, and this, in turn, entails that we cannot know what to expect. The humility which Gaita demands of us as a matter of decency above, and which Indigenous authors have been shown to demand of us as a matter of kinship and respect, has now also been shown by contemporary Western science quite simply to be a matter of common sense. Karen Barad's treatment of human responsibility stops short of engaging with this thought process as comprehensively as Indigenous worldviews do.

Section f. Nascent wisdom, grown and harvested in the living

It is time to return to looking beyond Barad's above treatment of human responsibility through the lens of quantum theory, and to return to considering Barad's, and others', treatment of quantum theory itself, as cited, for example, in **section 4.b.**⁸⁶. It was shown that this is relevant to the argument both with regards to the parallels found between microscopic and macroscopic phenomena we may observe, and with regards to its implications of epistemology and ontology being capable of being intertwined as soon as we engage with complexities beyond the triviality of, for example, the billiard balls cited

⁸⁵ An explanatory note contextualising **chapter 18** as a journey of nuanced engagement with a selection of contemporary challenges is provided near the beginning of **section e.** of this appendix.

⁸⁶ Additional authors, besides Barad, cited with regards to quantum theory include, for example, John Polkinghorne, David Peat, and David Bohm.

by David Peat in **section 6.c.**⁸⁷ : quantum theory has been shown to share ample common ground with Indigenous conceptions of our participation with the world.

It has also been shown, however, that some of its limitations with regards to providing a full explanation of Indigenous concepts are already inherent in the very findings it cites: in a world that is continuously becoming,⁸⁸ which (with Spinoza in **chapter 11**⁸⁹ , and with Leroy Little Bear in **section 4.d.**⁹⁰) contains the manifesting as well as the manifest, and where we (with Indigenous philosophers⁹¹ as well as with American Pragmatists⁹² alongside Merleau-Ponty, as shown especially throughout **Part 2**), are participants in the shared learning and creation of this continued becoming, our understanding cannot come from the already existing written word alone any more than the Rio 2016 women's eight could have found themselves rowing mechanically to the metronome of the previous day's training notes. The already existing written word, written about quantum theory or indeed about Indigenous worldviews, can only carry us part of the way.

⁸⁷ David Peat points out that our tendency to rely on causality as a sole explanation of phenomena may in fact only be justified in a small subset of these, i.e., the subset which exclusively involves entirely separate bodies with a clear flow of influence from one to another, and which is subject to an exclusively linear flow of time (Peat, *Synchronicity: The Bridge Between Matter And Mind*, p.41). **Section 6.c.** shows, for example, that even within an exclusively representationalist paradigm, phenomena such as the slime mould already struggle to meet these criteria, whereas once an Indigenous, participationalist paradigm is considered, relationships such as those cited by Apffel-Marglin between different types of fluids in the Andes (Apffel-Marglin, *Subversive Spiritualities*, p.141) are shown to lie beyond this subset altogether. Examples from quantum theory include the above-mentioned phenomenon of quantum entanglement.

⁸⁸ Barad, 'Nature's Queer Performativity', p.40.

⁸⁹ I find it useful in the context of this appendix to note that Genevieve Lloyd, in relation to Spinoza's conception of *Natura Naturata* and *Natura Naturans* (Spinoza, *Ethics*, pp.20-21 / E1P29-E1P31), asserts that "God as *Natura Naturans* is creative, productive thought – not a mind that strives, as the human mind does, to bring itself into relation with a pre-existing truth." (Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.43.)

⁹⁰ One of the participants at the first of the above series of academic conferences now known as the Dialogues, G.A.Parry, cites Leroy Little Bear as summarising the unity in diversity between Indigenous world views under the following three headings: 1. of nature being alive and imbued with spirit, 2. of there being human co-participation in a nature that shows patterns as opposed to merely obeying laws, 3. of the manifesting existing alongside the manifest, with some overlap existing between the manifesting and the spiritual (Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue*, p.89).

⁹¹ Indigenous authors cited are first and foremost those who regularly contribute to the Indigenous branch of the American Philosophical Association (roughly equivalent to the Royal Institute of Philosophy here in the UK), alongside seminal works from other parts of the world, such as, for example, Linda Tuhiwai Smith's, as well as international contributors to John Grim's related project at Harvard. Additional detail is available in the **Methodology** section of this thesis and in the **Bibliography** , as well as in **Appendix I** .

⁹² In particular, reference is made to John Dewey's *Art As Experience* and William James's *The Varieties Of Religious Experience* , as well as to Bruce Wilshire's *The Primal Roots Of American Philosophy* and *Fashionable Nihilism: A Critique Of Analytic Philosophy*.

This need not deter us from making use of the written word in this context: Indigenous philosophers would not write books if they believed the written word to be ineffective. It is thus evident from the bibliography of this thesis alone that this cannot be their view. However, it has become equally clear from the work based on this bibliography, and summarised in this appendix insofar as it relates to Karen Barad's, that the remainder of our emerging understanding must be found in the living. As McPherson and Rabb are cited as stating throughout the latter half of their work (referenced, for example, in **section 7.c.**⁹³), it is through the renewal of our own responsive relationships with non-human nature that we may also learn to approach Indigenous worldviews. With Robin Wall Kimmerer's scientist in **section 18.c.**⁹⁴, our task must be to find our own way of leaving our microscope lamp on.

⁹³ McPherson and Rabb, for example, point out that due to the fact of Indigenous philosophies being transformative philosophies, Indigenous reluctance to explain, where encountered, may often be entirely unrelated to secrecy, but, rather, be rooted in the fact of some understandings only being accessible through participation with the world (McPherson and Rabb, *Indian From The Inside*, p.159).

⁹⁴ Kimmerer, *Braiding Sweetgrass*, pp.251-253.

Appendix C – John Polkinghorne on quantum theory and on a realm beyond the reach of contemporary Western science

John Polkinghorne's starting point is, as outlined in the main body of this thesis, his openness to surprises,¹ which seems to carry echoes of William James.² He asserts that the outcome of scientific discovery is not omniscience, but verisimilitude: while any knowledge of the world that we have at our disposal may well be accurate, it is necessarily incomplete.³ This implies that when faced with a currently inexplicable phenomenon, the most reasonable question may not be to ask whether it is reasonable but, instead, to ask what would make someone think that it might be the case.⁴

Questioning the exclusive validity of the individualism that has been prevalent in the West, Polkinghorne supports the view that quantum theory implies the reality of holism⁵ alongside a constituent picture⁶. This idea is further endorsed by Bethany Sollereeder's more intuitive exploration of the same topic in the context of redemption: after consideration of the relevant concepts of quantum theory and of chaos theory, Sollereeder presents an accessible illustration of this point by drawing parallels to a fractal mosaic, where the whole is made up of individual pictures, and each individual picture is simultaneously understood as part of the whole.⁷

At the same time as endorsing holism alongside a constituent picture, Polkinghorne is careful to stress that the strange and surprising nature of quantum theory does not imply that "anything goes":⁸ quantum entanglement does *not* prove telepathy, as its very nature is that it involves distances too great for any signal to have travelled in the time

¹ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.87.

² Wilshire, *The Primal Roots Of American Philosophy*, p.130. Wilshire provides a brief summary of James's thinking in this regard; William James's own work is considered in greater depth in **Part 2** of this thesis.

³ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.84.

⁴ *Ibid.*, p.87.

⁵ The term *holism* is used in the sense of the universe not solely operating as a collection of individuals, but also as a coherent whole.

⁶ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.90, and Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.103.

⁷ B.N.Sollereeder, *Animal Suffering In An Unfallen World: A Theodicy Of Non-Human Evolution* (Unpublished PhD thesis, University of Exeter, 2014), p.288. URL = <<https://core.ac.uk/download/pdf/43094125.pdf>> [Accessed: 20 March 2023]. It is going to become evident in later chapters of this thesis that Sollereeder's pixel mosaic not only chimes with Indigenous conceptions of our participation in the world and with the findings of quantum theory, but also with Merleau-Ponty's conception of our participation in weaving the network that sustains us (for example, **chapters 5.d. and 7**) and with Spinoza's thinking.

⁸ Polkinghorne, *Quantum Theory: A Very Short Introduction*, p.92.

available. Equally, wave/particle duality does *not* imply that *all* dualisms are wrong.⁹ (In this context, according to Niels Bohr, there are two kinds of truth: trivialities, “where to embrace both opposites would obviously be absurd,” and profound truth, “recognised by the fact that the opposite is also a profound truth.”)¹⁰

The fact of Polkinghorne’s argument being made from a Christian point of view entails its resting on a distinction being made between the sacred and the material. This entails his acceptance of physics and religion being treated as separate disciplines – an acceptance that is, however, anything but a given outside a Western paradigm.¹¹

When Polkinghorne endorses Christianity alongside theoretical physics, he does so on the basis of his exploration of the similar epistemologies of both: drawing on his background as an empirical scientist, he requires theology, too, to “appeal to motivated belief arising from interpreted experience”.¹² It is the nature of the experience in question that marks the difference between physical science and, for example, theology, as well as between scientism and science: not all experiences considered are necessarily going to be impersonal, or repeatable.¹³ A further difference relates to the consequences of belief: religious belief, according to Polkinghorne, carries a higher likelihood than scientific belief of involving the emotions alongside the intellect, and thus of affecting behaviour.¹⁴ Polkinghorne sees a “cousinly relationship” between the two: “(...) each pursue truth within the proper domains of their interpreted experience.”¹⁵ He concludes that the concept of critical realism is wide enough to encompass both expressions of it.

Polkinghorne exemplifies this by drawing parallels between the epistemological processes involved in the discovery of quantum physics and those involved in the development of modern-day Christology. He notes the importance of transcending Newtonian determinism in both cases, stressing the illegitimacy of any assumption that “what usually happens is what always happens.”¹⁶ It is in this context that he places his openness to the possibility of miracles, while at the same time advising the healthy scepticism of

⁹ *Ibid.*, p.92.

¹⁰ Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.91.

¹¹ For example, Cajete, *Native Science*, p.66.

¹² Polkinghorne, *Quantum Physics And Theology: An Unexpected Kinship*, p.9.

¹³ *Ibid.*.

¹⁴ *Ibid.*, p.13.

¹⁵ *Ibid.*, p.15.

¹⁶ *Ibid.*, p.29.

considering these on a case-by-case basis.¹⁷ Sollereder, while otherwise being open to the possibility of there being miracles, is more inclined to a deterministic interpretation of quantum theory, and thus more sceptical with regards to its involvement in these.¹⁸

Further parallels drawn by Polkinghorne include the softening of the previously rigid distinction between time and space by the advent of relativity theory, as well as the conception of divinity as eternal as well as temporal.

Polkinghorne's engagement with the findings of quantum theory necessarily tempers his tendency to argue from an almost exclusively representationalist point of view. However, I find it useful to bear in mind (even as this appendix is referenced from an early stage of **Part 1** of this thesis) that his comments on verisimilitude stop short of engaging fully with the dynamic aspects of the phenomena he is discussing: it is shown in **Part 2**, as well as in **Appendix B** with regards to aspects of Karen Barad's work, that the incomplete nature of our knowledge about the world not only relates to those aspects of the world which are already manifest, but even more so to those we are participating in manifesting.

¹⁷ Ibid., p.36.

¹⁸ Sollereder, p.233.

Appendix D - Fikret Berkes' notes on his own journey

Soon after gaining his PhD as a marine scientist and applied ecologist and, at that time, a firm believer in the ability of contemporary Western science to study all phenomena, Fikret Berkes became exposed to the field of philosophy of science, and subsequently developed an interest in reading works relating Western science to Eastern worldviews. He decided against taking up a prestigious postdoctoral fellowship that had been offered to him, and chose to work on a fisheries and environmental project with the James Bay Cree instead. By the time the first edition of *Sacred Ecology* was published, Berkes had had more exposure to the Cree worldview than most of us Westerners can ever hope to have.¹ The absence of any intention to discriminate is evident, too: when asked by the Cree to reciprocate for the support received over the years, and to document some of the knowledge gained so that it could be used in the education of the next generation of Cree, Berkes not only agreed to take on the work despite the fact that he did not enjoy secretarial or editorial roles, but he also went along with the Cree's suggested process of the agenda being set, and Berkes' output being checked, by a group of Cree elders, who, after a process of collaboration that took a number of years, went on to publish the work in book format in 1989.²

The second edition of *Sacred Ecology* sees Berkes becoming interested in knowledge as process as opposed to knowledge as the thing known.³

In the third edition, he acknowledges the emergence of Indigenous groups' own research output, and begins to speak of a need to view Western and Indigenous knowledge systems as complementary rather than mutually exclusive.⁴ The fourth edition gives increased visibility to the Indigenous authors he is beginning to find, and contains "major changes"⁵ to several chapters, including to the final chapter on the link between worldview and ecological practice.

¹ Berkes, *Sacred Ecology*, p.xiv.

² *Ibid.*, pp.xv-xvi.

³ *Ibid.*, p.xix.

⁴ *Ibid.*, p.xxiii.

⁵ *Ibid.*, p.xxv.

Appendix E – George Lakoff and Mark Johnson on the ability of metaphor to shape as well as to interpret

Lakoff and Johnson make several references to metaphor not only being capable of representing the already existing world more richly than a strictly prosaic use of language could, but to its also being capable of influencing the direction that a particular aspect of the world becomes likely to take next.

Within Western culture, their example of choice is US President Carter’s speech declaring the 1970s energy crisis to be “the moral equivalent of war”.¹ They argue that a two-way relationship exists between Carter’s metaphor and the world: on the one hand, Carter is, of course, making reference to a perceived state of affairs as he currently finds it. We attach importance to certain aspects of a situation, and we choose our metaphors accordingly.² On the other hand, however, Carter’s metaphor is, at the same time, laying the foundations for what is now becoming more likely to happen next: “(...) it constituted a licence for policy change and political and economic action. The very acceptance of the metaphor provided grounds for certain inferences.”³

It is useful to note here that other metaphors were, at the time, being used by other commentators. For example, the authors cite Amory Lovins’s use of the metaphor of a hard energy path involving use of fossil fuels and nuclear power plants, and a soft energy path involving use of renewable energy. They attribute the widespread acceptance of Carter’s metaphor over Lovins’s to the fact that those in power are able to impose their metaphor,⁴ and conclude that acceptance of a metaphor (in this case, of Carter’s war metaphor) then leads to our treatment of those aspects of reality that it has chosen to highlight as truth, regardless of the possibility of their only being true relative to the reality defined by the metaphor.⁵

I would add to this that even where any aspects thus highlighted *are* true, and especially in a culture with a tendency to impose binary dualisms more frequently than others, use of particular metaphors will make it easier for us to ignore other relevant aspects of the situation which are *also* true. I find another example of Lakoff and Johnson’s interesting in this regard: an Iranian student of metaphor took “the solution of my problems” to

¹ Lakoff and Johnson, *Metaphors We Live By*, p.156.

² *Ibid.*, p.10.

³ *Ibid.*, pp.156-157.

⁴ *Ibid.*, p.157.

⁵ *Ibid.*, p.158.

mean a volume of liquid, “with catalysts constantly dissolving some problems (for the time being) and precipitating out others.”⁶ The authors point out that this chemical metaphor is significantly different from the generally accepted Western metaphoric understanding of a problem as a puzzle, and its solution as the one correct way of dealing with it, which will then result in its permanent resolution.⁷

I would argue that both “solution” metaphors have the potential to ring true, and that these potentials frequently exist in relation to the same situation, at the same time. There is nothing to stop us, for example, from embracing renewable energy sources or from reducing our consumption as we navigate shortages precipitated by events in Ukraine while this thesis was being researched. We are free to proceed with a helpful idea, and to reap the benefits of proceeding, even as we apprehend our “solution” as a “chemical” one unsuited to resolving every aspect of the problem once and for all, and even in the knowledge that a “puzzle” metaphor might have been our preferred choice.

We are at least as free, too, to contribute whole-heartedly in a particular way that is open to us to the regeneration of a harmonious relationship with more-than-human nature, even as we acknowledge the complexities involved, and accept that resolution is unlikely to result from one particular course of action alone. Robin Wall Kimmerer, for example, cites Joanna Macy in this regard.⁸

With regards to the relationship between Lakoff and Johnson’s work and Welch’s, Lakoff and Johnson were cited above, in the context of US President Carter’s war metaphor, as recognising the possibility of our choice of metaphor influencing the development of reality. They caution, however, that “it is by no means an easy matter to change the metaphors we live by.”⁹ The overall focus of their work is on the role of metaphor in shaping our understanding of the world as we currently find it more than on its role in our participation in its continuing creation, although they concede the reality of there being an element of the latter:

It is reasonable enough to assume that words alone don’t change reality. But changes in our conceptual system do change what is real for us and affect how we perceive the world and act upon these perceptions.¹⁰

⁶ Ibid., p.143.

⁷ Ibid., pp.144-145.

⁸ Kimmerer, *Braiding Sweetgrass*, p.340.

⁹ Lakoff and Johnson, p.145.

¹⁰ Ibid., pp.145-146.

Lakoff and Johnson also largely restrict their observations to the field of human language in the work cited here. Shay Welch does make reference to the authors' later research also exploring, for example, the role of music.¹¹ However, as discussed in the main body of the thesis, Welch does not believe Lakoff and Johnson's work on its own to be explanatory, for example, of an Indigenous conception of meaning-making through dance.¹²

¹¹ Welch, *The Phenomenology Of A Performative Knowledge System*, pp.118-119.

¹² *Ibid.*, p.190.

Appendix F – William James, John Dewey, and a wider conception of rationality

John Dewey was asked to give the lectures which were to lay the groundwork for his *Art As Experience* in honour of William James¹. It becomes clear from the works of both authors cited in this thesis that the authors share common ground with regards to the importance of our remaining responsive to our surroundings as we interact with them, and with regards to the relationship between this and a wider conception of rationality.

James, for example, contrasts our responsive participation in the world with sole reliance on codified procedures, and favours the former.² Dewey, relatedly, identifies a link between our frequent reluctance to accept the potentially artistic quality of our everyday action (and the wider context of our frequent disdain for the material) on the one hand, and our tendency to separate the spiritual from the material on the other.³ Against the background of Dewey's conception (discussed in the main body of the thesis) of art as genuinely creative as opposed to its merely being creatively representative, it becomes clear that – had he but included non-humans alongside humans in his remarks – he would have appeared to be very close indeed to an Indigenous conception of ritual and labour as one.

Both authors discuss their preference for a wider conception of rationality, as well as their call for responsiveness, and for consideration to be given to the qualitative and to the particular as opposed to the quantitative and the universal alone, in the context of ethics.

Dewey uses the example of the Magna Carta (claiming that its importance in Anglo-Saxon cultures relates to “the meaning given it in imagination” more than it does to its literal content)⁴ to illustrate the difference between criteria on the one hand, and rules and prescriptions on the other.⁵ He has little faith in our use of quantifiable standards here, likening these to yardsticks, and pointing out that a child can use a yardstick.⁶ It is thus evident how Dewey would have responded to the scenarios outlined by Ellul in the

¹ Dewey, *Art As Experience*, p.vii.

² James, *The Varieties Of Religious Experience*, p.304.

³ Dewey, pp.4-5 and p.282.

⁴ *Ibid.*, p.340.

⁵ *Ibid.*, p.322.

⁶ *Ibid.*, p.320.

chapter discussing performative knowledge processes above. With regards to morality, Dewey deplores its “anaesthetic” quality whenever wholehearted action has been crowded out by the exclusive application of perceived duty.⁷

This means that Dewey would, for example, have been unlikely to be interested in whether due process had been followed in the case study of the day centre client introduced in **section 12.a.ii**: he would have been more inclined to ask whether a solution had been found that honoured everyone.

A similar point is made by James, describing an exclusively mechanistic morality as “dull submission” to the law, and instead calling for us to develop a “mood of welcome”, which he expects to make an “emotional and practical difference”.⁸

Showing similarities to the Indigenous authors cited in the section on ethics in **Part 1** (for example, Burkhardt), neither James nor Dewey in any way places this into a context of relativism. There *is* right and wrong: what James and Dewey are interested in is our method of discernment of these, and their method of choice reveals itself to be as responsive and as imaginative as PRATEC’s conversation with a *chacra*, but for the absence of non-humans from their rationale. Both James and Dewey advocate a form of rationality in making our ethical choices that does not rely on propositional knowledge alone, leaving scope for us as entire creatures to interact with our surroundings. With this, they also strike a similar note to Deloria, who cautions against the reduction of moral sensitivities to codes of behaviour, and against allowing an unchecked reign of abstractions to create a “social machine”.⁹

The authors’ treatment of an application of a richer version of rationality to ethical choices shows parallels with what is said by Genevieve Lloyd in relation to Spinoza’s richer conception of rationality in the main body of the thesis,¹⁰ as with Indigenous understandings of ethics, which do not support a fact-value distinction¹¹ while accommodating locality and stressing the importance of responsiveness to nuance.¹²

⁷ Ibid., p.40.

⁸ James, p.41.

⁹ Deloria, *The Metaphysics Of Modern Existence*, pp.158-160.

¹⁰ Lloyd, ‘The Man Of Reason’.

¹¹ For example, Deloria and Wildcat, p.47.

¹² For example, Rengifo, ‘The Ayllu’.

Appendix G – Lorraine Daston and anthropomorphism before the Enlightenment

Lorraine Daston distinguishes between mediaeval forms of anthropomorphism and contemporary ones,¹ pointing out that the latter involve a subject/object distinction not previously taken for granted. With this, she shares common ground with the participationalist worldviews of Indigenous thinkers discussed in **Part 1** of this thesis, as well as with the thinking of Merleau-Ponty, Spinoza, and Karen Barad shown to share similarities with these in **Part 1**.

As an example, Daston places Thomas Nagel's bat² into the contemporary category.³ She points out that mediaeval angelologists – her example of choice then to illustrate the former category – tended to infer angels' thought and emotion from what they assumed God's and humans' to be, while contemporary comparative psychologists tend to infer thought and emotion from an individual's outward behaviour. Her point is that angelologists' inferences can neither be classified as subjective nor as objective, as the distinction, at that time, did not exist. The type of Western anthropomorphism involved here, therefore, can be understood to have been entirely different from later Western forms.⁴

It is contemporary forms of Western anthropomorphism, then, that Daston takes issue with: preoccupied as we now tend to be with the language of perspective as opposed to participation, contemporary Western anthropomorphism is prone to result in the "exoticism of certain brands of anthropology"⁵ or, conversely, in universalist philosophies attempting to find "the essence of reason or justice".⁶ We expect to contemplate nature as opposed to participating in it. Then, as previously pointed out by Dewey, presumed recognition of categories we have prior knowledge of cuts short the process of

¹ Daston, 'Intelligences: Angelic, Animal, And Human', p.39.

² T.Nagel, 'What Is It Like To Be A Bat?', *The Philosophical Review*, Vol.83, No.4 (1974), pp.435-450, URL: <https://www.jstor.org/stable/2183914> [Accessed: 20 March 2023].

³ Daston, pp.40-41.

⁴ *Ibid.*, p.46.

⁵ *Ibid.*, p.52. A similar, unhelpful reduction to a binary dualism between exoticising relativism and universalism is also criticised by Lloyd, as cited in the chapter reappraising the dilemma of the **Part 1** Heyoka Ceremony (Lloyd, 'The Man Of Reason', p.35).

⁶ Daston, p.52.

interaction.⁷

The crucial point, for Daston, is that without this, there would be no automatism of transforming anthropomorphism into anthropocentrism: this only tends to result from the idea that one's own perspective is privileged over that of others. Showing shared ground with, for instance, Rengifo's **Part 1** example of a stone being recognised as a partner in conversation while remaining a stone (i.e., without any suggestion of its being conceived to be a human),⁸ Daston remarks that

It is paradoxical that empathy and sympathy, the glue of communities, should be invoked to contract communities to like minds, that is, to one's own species and contemporaries.⁹

This point made by Daston carries resounding echoes of Apffel-Marglin's thoughts cited regarding her mourning of the death of Anima Mundi,¹⁰ and of Rengifo's criticism in **Part 1** of Western conceptions of knowledge prioritising knowledge of the "other" over knowledge as empathy.¹¹

Daston concludes by joining the wide range of Indigenous and Western authors cited in both parts of this thesis in calling for a wider conception of "understanding" than that currently in mainstream use: for Daston, there is more to understanding than exclusively the question of what it is like to be in another individual's shoes. Understanding is conceived as encompassing one's own emotions as they arise in relationship: in the absence of an impenetrable subject/object divide, these form part of the story of the interaction taking place.

⁷ Dewey, pp.184-193. Again, as noted in the contexts of Kramer's upside-down bats and of Steinbeck's Lee, we are thus left with an interaction that we may not only have failed to perceive in its completeness, but that is likely to have been prevented from fulfilling its potential and becoming complete.

⁸ Rengifo, 'The Ayllu', p.97.

⁹ Daston, p.54.

¹⁰ Apffel-Marglin, 'Western Modernity And The Fate Of Anima Mundi', p31.

¹¹ Rengifo, 'Education In The Modern West And In The Andean Culture', pp.172-174.

Appendix H – The wider issue of our engagement with the “other”

The sport of the Eskimo Stick Pull¹ is arguably no less demanding than the sport of rowing. The Alaskan High Kick² is arguably no less demanding than, for example, curling. And yet, despite the mainstream Olympic movement’s explicit subscription to non-discriminatory values,³ Indigenous athletes are still being asked to prove themselves in traditionally Western disciplines in order to become accepted into the Olympic fold.⁴

Marc Bekoff’s, and other academics’, struggles to initiate discussions of non-humans’ emotional lives without first relying on an anthropocentric starting point to facilitate engagement with sceptics are introduced at the end of **section 15.a.** and discussed in **section 15.b.** of this thesis. A link between the contemporary Western mainstream’s treatment of Indigenous humans and of non-humans is made in **chapter 17** .

What is only alluded to in the main body of the thesis, however, is the broader pattern that appears to be emerging from the points made. Its full implications may lie beyond the scope of this thesis, but a brief sketch appears relevant to the points under discussion.

The pattern that appears to be emerging is one of a requirement being placed on *any* perceived “other” – irrespective of the dimension of diversity under consideration – to demonstrate its compliance with the existing norms imposed by the existing mainstream as a prerequisite to engagement. This requirement does not in the least appear to be limited to those contexts where the norm in question is relevant to the type of engagement sought (for example, a bus driver’s competence to drive a bus). Rather, the

¹ T.N.Brown, J.K.Spiess, and R.Corrall (Photographer), *Alaska Native Games And How To Play Them* (Fairbanks: University of Alaska Press, 2020), p.10.

² *Ibid.*, p.2. Both the Eskimo Stick Pull and the Alaskan High Kick feature in Brown, Spiess, and Corral’s work due to their role at the World Eskimo-Indian Olympics held annually in Fairbanks.

³ International Olympic Committee, *Olympic Values*, <<https://olympics.com/ioc/olympic-values>> [Accessed: 20 March 2023]. The example illustrates the multi-layered dynamics of discrimination: no exclusion of Native sports appears to be intended in the present day, and yet, even if an initiative were to be conceived now to campaign for the inclusion of the above disciplines in the Olympic programme, this would be unlikely to be successful due to the requirement placed on prospective Olympic sports to be played in a significant number of countries. This means that choices made by colonial powers centuries ago (in this case, the choice not to engage with locally practised sports in significant numbers) are still going to be likely to cast their shadow over the present day, even in a fictional scenario where both parties agree that, for example, the Eskimo High Kick would be an attractive addition to the Olympic programme.

⁴ For example, it was Cathy Freeman’s accomplishments as a 400-metre runner that led to her becoming the first Indigenous athlete to be asked to light the Olympic flame at the Sydney 2000 Olympics. Encyclopedia Britannica, *Cathy Freeman*, <<https://www.britannica.com/biography/Cathy-Freeman>> [Accessed: 20 March 2023].

requirement to demonstrate compliance with the existing norms imposed by the existing mainstream also appears to be in place in those contexts described, for example, by Frédérique Apffel-Marglin as the elevation of a particular to a universal for no incontrovertible reason.⁵ The universalist approach criticised, for example, by Enrique Dussel,⁶ by no means appears exclusively to have been misused to justify colonial violence. It appears to be in contemporary use as a gatekeeper's yardstick in a wide range of contexts.

Uma Narayan's and Sandra Harding's feminist stance regarding the need to transform the mainstream (as opposed to merely adding – in the case in question, admitting women – to it)⁷ is articulated against the background of a history of women being expected to demonstrate similarity to men with regards to criteria whose relevance to the role they were seeking to perform lay in a particular's elevation to a universal norm, even in the absence of the norm's intrinsic ability to contribute to fulfilment of the purpose of the role in question.⁸ Melissa Wright's paper examining issues of intersectionality, in the same anthology edited by Narayan and Harding, extends their introductory exploration by following the journey of a Mexican employee in a US American-led corporate environment, and shows that it is necessary for the employee to avoid being perceptibly Mexican in order to be considered for an administrative role.⁹ Stephen Fry speaks of Willem Arondeus's wish to "show the world that homosexual people are not cowards".¹⁰ People with disabilities, when applying for jobs, are being asked to demonstrate their conformity to an existing idea of an "ideal worker", who has, on closer examination, not only been found to be male, but also to be free of any form of disability into the

⁵ Apffel-Marglin, *Subversive Spiritualities*, pp.25-28.

⁶ Dussel, 'Eurocentrism And Modernity (Introduction To The Frankfurt Lectures)', *boundary 2*, Autumn 1993, Vo.20, No.3, pp.65-76, <URL = www.jstor.com/stable/303341> [Accessed: 20 March 2023].

⁷ Narayan and Harding, 'Introduction', p.vii.

⁸ For example, Margaret Thatcher availed herself of the services of a voice coach in order to learn to speak with a deeper voice for her role as the first female Prime Minister of the UK. (S.J.Ko, M.S.Sadler, and A.D.Galinsky, 'The Sound Of Power: Conveying And Detecting Hierarchical Rank Through Voice', *Psychological Science* 26(1) (2015), pp.3-14, DOI: 10.1177/0956797614553009 [Accessed: 20 March 2023].)

⁹ M.Wright, 'Maquiladora Mestizas And A Feminist Border Politics: Revisiting Anzaldúa', in *Decentering the Center: Philosophy For A Multicultural, Postcolonial, Feminist World*, ed. by U.Narayan and S.Harding (Bloomington: Indiana University Press, 2000), pp. 208-225.

¹⁰ *Channel 4 News* (television programme), Channel 4, 28 February 2023. <https://www.channel4.com/news/he-wanted-to-show-the-world-homosexuals-were-not-cowards-stephen-fry-on-artists-who-resisted-the-nazis> [Accessed: 20 March 2023]. The comment was made in an interview with Matt Frei introducing Stephen Fry's work on the story of Willem Arondeus' and Frieda Belinfante's role in the Dutch Resistance in the 1940s.

bargain.¹¹ Despite the Newtonian paradigm demonstrably no longer being able to be realistically understood as a sole explanation even of the phenomena considered within the discipline of physics alone,¹² David Peat reports experiencing feelings of apprehension before his decision against continued compliance with the norm of rejecting extension of this paradigm that was being imposed by his profession.¹³ PRATEC’s founders, after initially working in an academic setting, eventually saw no option but to “deprofessionalise” themselves, thus (at least temporarily) disconnecting from the contemporary Western mainstream, in order to remain true to a conception of science that acknowledges, but does not restrict itself exclusively to remain within, the boundaries imposed by the Newtonian paradigm.¹⁴

The issue at stake, as stated in **section 15.b.**, is not at all that this sequence of events – of the initial requirement of the “other’s” compliance with a norm imposed by the mainstream (which, on closer examination, frequently turns out to be an elevation of a particular to a universal even where it is without relevance to the situation at hand), and then, once the requirement of compliance has been met, of the “other” being granted licence to make its own, unique contribution – cannot work. It demonstrably can. Forty years after Margaret Thatcher learnt to speak in a deeper voice for her role as Prime Minister,¹⁵ Jacinda Ardern’s resignation triggered a flurry of tributes, none of which (to my knowledge) hailed her ability to speak in a deep voice, and many of which celebrated her contribution in terms not remotely related to those associated with traditional norms of Western masculinity.¹⁶ The initially contested PRATEC course, after incorporating a universally applicable module in addition to its focus on the development of localised nuclei fostering responsive modes of interaction with non-human nature as a basis for

¹¹ For example, K.J.Østerud, ‘Disability Discrimination: Employer Considerations Of Disabled Jobseekers In Light Of The Ideal Worker’, *Work, Employment, And Society* 00(0) (2021), pp.1-17, DOI: 10.1177/09500170211041303 [Accessed: 20 March 2023].

¹² An overview of the relevance of quantum theory to the points made throughout this thesis is available in **Appendix B.**

¹³ Peat, *Blackfoot Physics*, pp.14-15. Peat’s feelings of apprehension were far from groundless: examples of those treated with reservation by parts of the established theoretical physics community include none less than Niels Bohr (for example, Barad, ‘Meeting The Universe Halfway’, p.183).

¹⁴ Apffel-Marglin, ‘Introduction: Knowledge And Life Revisited’, pp.1-8.

¹⁵ Ko, Sadler, and Galinsky, ‘The Sound Of Power: Conveying And Detecting Hierarchical Rank Through Voice’.

¹⁶ For example, M.Godfery, ‘In Five Momentous Years Jacinda Ardern Became New Zealand’s Most Important Postwar Prime Minister’, *The Guardian*, 19 January 2023. Available at: <https://www.theguardian.com/commentisfree/2023/jan/19/in-five-momentous-years-jacinda-ardern-became-new-zealands-most-important-postwar-prime-minister> [Accessed: 20 March 2023].

agricultural projects, has now obtained accreditation as a programme at Master's level, with its nuclei still intact.¹⁷ Cathy Freeman lit the Olympic flame.¹⁸ Marc Bekoff's research on cooperative behaviour in coyotes is being cited.¹⁹

The issue at stake is, rather, that to the extent that we exclusively follow the path outlined above – of requiring compliance even with a potentially irrelevant norm before allowing the “other's” own, unique contribution – our only hope of noticing that penguins' feet are rudders lies in our prior understanding of what rudders are.²⁰ This is unjust to penguins, because it means that their only hope of not being dismissed as clumsy walkers by humans is the arbitrary fact of humans having come across rudders before. It is also detrimental to our own, human, intellectual and emotional development, because our requirement of compliance with a potentially irrelevant norm before engagement with the “other” constitutes an unnecessary barrier to our extending our comfort zone. It is for this reason that Linda Martín Alcoff refers to Eurocentrism as an epistemology of ignorance.²¹

The trouble with the path outlined above, however, by no means ends here.

The aim of this thesis has been to explore ways for the contemporary West to engage with Indigenous worldviews in order to learn to regenerate our damaged relationship with non-human nature. The process of doing so has raised questions not only in relation to an individual's or group's knowing about the world, but also – and interwovenly – in relation to an individual's and group's being in the world, and to its shared learning and creation with the world. As a corollary, the interaction between the *conatus* of the individual and that of the whole has been considered,²² and case studies provided of individuals' and wholes' varying degrees of respectful success at learning and creating

¹⁷ Ishizawa, 'Community-Based Learning In The Peruvian Andes: Decolonising The Academic Disciplines'.

¹⁸ Encyclopedia Britannica, *Cathy Freeman*, <<https://www.britannica.com/biography/Cathy-Freeman>> [Accessed: 20 March 2023].

¹⁹ For example, at the last count, Google Scholar showed 353 citations of Bekoff's 2001 study on the subject at https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=%22marc+bekoff%22+%22cooperati+on+fairness+trust%22&btnG= [Accessed: 20 March 2023].

²⁰ The significance of penguins' feet to the points made in this thesis is discussed in **chapter 17**.

²¹ Alcoff, 'Philosophy And Philosophical Practice: Eurocentrism As An Epistemology Of Ignorance'.

²² The terminology used here relates to the elements of Benedict de Spinoza's thought discussed in **chapter 11**.

their harmonies, in Brian Burkhardt's jazz analogy,²³ where their relationships become capable of honouring both.

And herein lies a third damaging implication of our propensity for imposing conditions before engagement with the "other": besides precipitating the above injustice to penguins, and besides being detrimental to our own intellectual and emotional development, its third damaging implication lies in its capacity to prevent the development of relationships of shared learning and creation, and thus the potential severance of connections between members of Burkhardt's jazz band, between nodes in Spinoza's ever-evolving network of the whole.

If we are to take seriously the ideas of Viola Cordova's cluster of three analogies²⁴ and, relatedly, of Lloyd's and Spinoza's thinking discussed throughout **Part 2** of this thesis with regards to a wider conception of rationality and to the impossibility of our understanding the network of relationships that constitutes the whole in its entirety, then it is going to be of utmost importance that we resist the temptation of persisting in a mentality of grudgingly allowing a few more individuals into a perceived fold, on condition that they meet certain criteria, while continuing in our "othering" of the remainder. The focus of this thesis has been on non-humans and on Indigenous humans, but this does not mean that the message emerging through this focus can be understood exclusively to relate to these, and that other groups can reasonably continue to be conceived as "other". If we are to take the message of this thesis seriously, alongside our engagement with its focus, then it becomes clear that we cannot be content with the creation of a larger perceived lifeboat that now accommodates non-humans and Indigenous humans alongside those tacitly included in the contemporary, Western, perceived mainstream. If we are to take the message of this thesis seriously, alongside our engagement with its focus, then it is not going to be a lifeboat that is needed,

²³ Burkhardt, *Indigenizing Philosophy Through The Land*, p.292.

²⁴ Viola Cordova's cluster of three analogies is used as a recurring theme throughout this thesis to illustrate our responsible, co-creative participation with the world. The first likens this co-creative activity to a snowball being rolled, with the shaping of outer layers being influenced by that of inner layers previously rolled (Cordova, *How It Is*, p.175). The second likens our actions not simply to ripples in a pond (which would mean that they were going to form predictable, concentric circles), but points out the complexity introduced by the interaction of our ripples with everyone else's ripples (Moore, 'Introduction', in Cordova, *How It Is*, pp.xiii-xiv). The third may be understood through our co-participation as illustrated by the first two: Cordova conceives our quest to find balance not as a static balance which, once attained, remains stable in the same position, but as our balancing on a board placed across a barrel on shifting sand (Cordova, *The Concept Of Monism In Navajo Thought*, p.99).

whatever its size may be, but the shared learning and creation of a floating network that includes everything and everyone in Louise Westling's dynamics of a horse and rider's shared learning and creation of their joint movement,²⁵ as we welcome the joy and bear the inherent pain of our capacity to create shared meanings alongside our capacity to cause each other's deaths.²⁶ If we are to take the message of this thesis seriously, alongside our engagement with its focus, then we will not only learn to eat Cordova's onion with respect,²⁷ but we will also engage in shared learning and creation, which we have learnt from Shay Welch is only possible where there is mutual respect,²⁸ and we will seek to do this with Cordova's onion and with any other perceived "other" that may currently be in danger of being left bobbing in the sea for no other reason than its perceived or actual lack of compliance with what may turn out to be an entirely irrelevant norm.

It is shown at the end of **section 16.c.i.** how easily a vicious cycle develops, whereby "othering" supports subjecting the "other" to the faceless treatment dictated by Ellul's technique,²⁹ and whereby subjecting the "other" to the faceless treatment dictated by Ellul's technique, in turn, supports its "othering". An initial circuit breaker is offered in the form of Kimmerer's comment regarding the transformative role of our responsive engagement with the perceived "other"³⁰ (in Kimmerer's case, with non-human nature), and later contextualised: a virtuous cycle of an assumption of inherent dignity, with Gaita,³¹ with Buber,³² and with Indigenous worldviews,³³ supporting engagement in relationships allowing shared learning and creation, and of this relationship of shared learning and creation, in turn, supporting increasing perception of the inherent indignity

²⁵ Westling, *The Logos of the Living World: Merleau-Ponty, Animals, and Language*, p.140.

²⁶ *Ibid.*, pp.49-60.

²⁷ Cordova, *How It Is*, p.173.

²⁸ Welch, *The Phenomenology Of A Performative Knowledge System: Dancing With Native American Epistemology*, p.45.

²⁹ The term "technique" is used here to refer to the self-perpetuating spread of standardisation discussed in Ellul's *The Technological Society*. Ellul's idiosyncratic use of the terms "technique" and "technological" reflects the fact that he is able to show the phenomenon to be an overarching one, as opposed to one restricted to the discipline of mechanical engineering.

³⁰ Kimmerer, *Braiding Sweetgrass*, pp.339-340.

³¹ For example, Gaita, *A Common Humanity*, p.104.

³² For example, Buber, *I And Thou*, p.9.

³³ For example, Burkhart, *Indigenizing Philosophy Through The Land*, p.200. Shared ground with the findings of quantum theory as discussed throughout this thesis, and as summarised in **Appendix B**, is also evident once again: Karen Barad, for example, concludes from her findings that all bodies matter through the world's performativity, and therefore cautions that *any* prioritisation "echoes the problem it seeks to address". (Barad, 'Nature's Queer Performativity', pp.31-32.)

initially assumed, offers hope of everyone's contribution being welcomed into the ever-evolving harmony of the band.

Being Westerners, and accustomed at least in the last few centuries to locating the sacred outside the material (or, alternatively, to choosing not to engage with any question of its existence), we may, at least initially, find it easier to shore up our learning and conclude our journey at this point. Robin Wall Kimmerer's postgraduate student (whose scientific journey into a relationship based on a wider conception of rationality with non-human nature is discussed in **chapter 16**) has, up to this point, only taken the above advice and made an assumption of inherent dignity being located in the plant of sweetgrass. She has only, relatedly, refrained from placing any requirement on the plant of sweetgrass to comply with any norms she may otherwise have wished to impose on it prior to allowing a relationship to develop. She has been rewarded with a glimpse of the wisdom contained in an ancient evolutionary relationship carried forward into the present by the plant of sweetgrass and by its Indigenous harvesters, which is the wisdom of honourable harvest most likely originating in the tribe's prior attunement to Gaita's family dog of, in this case, buffalo and grass as discussed in **section 16.b.**³⁴. Had the postgraduate student adopted an attitude of already established understanding, and restricted her enquiry to those questions that she already had the knowledge to ask, it would have been impossible for her to discern the rudder in this particular penguin's feet. It is due to her humility of placing attunement before direct enquiry, of placing relationship before adherence to preconceived requirements, that she was rewarded with the wisdom she found.³⁵

³⁴ Raimond Gaita makes the point that a sizeable proportion of our family customs may have developed from our relationships not only with our human family members, but also from our relationships with our non-human ones. (Gaita, *The Philosopher's Dog*, pp.49-50.) **Section 16.b.**, as part of its discussion of Kimmerer's postgraduate's journey, shows that (since early members of the Indigenous group now sharing the story of honourable harvest in the context of sweetgrass would have been more likely to live in close proximity to the buffalo and grass in question than they would have been to share their lives with a family dog) the story is highly likely to constitute relational, evolutionary wisdom of non-human origin, and that the humans involved were "only" recipients, albeit recipients with the humility to be attentive.

³⁵ With this, she has, as also pointed out in **section 16.b.**, at the same time provided an additional example of the value of our engagement with those we may disagree with, as her case study relates to Vine Deloria's initially unpalatable criticism of evolutionary theory discussed at the beginning of **Part 2**: since one of the very founding fathers of the related discipline of ethology freely admitted to their initially having failed to take feedback into account in their research (Burkhardt, *Patterns Of Behaviour*, p.431), it is no more than to be expected that their resulting research output deals inadequately with the aspect of the wisdom contained in the development of inter-species relationships as revealed through the postgraduate's findings. And yet, without prior engagement with Deloria's thinking, this aspect of the significance of their omission could well have remained hidden from our view.

What has become discernible, through the above, is a two-way relationship between our stories and the continuing becoming of the world: firstly, we have learnt from Kimmerer's strawberries and children that the stories we live by can have adaptive consequences.³⁶ Secondly, we have learnt from Robin Wall Kimmerer's postgraduate student that the reverse can also be true, and that evolutionary adaptations, such as buffalo and grass attuning their respective biochemistries to each other's presence in the world, can provide sources of wisdom carried forward in stories, such as those of honourable harvest, and that the stories may persist long after the buffalo involved have been shot from the windows of chartered trains,³⁷ and that the stories, in many cases, may make no continued explicit reference to any of this.³⁸ We have learnt from Lloyd and Spinoza,³⁹ and from others,⁴⁰ that it is impossible for any one individual or group to understand the web of such relationships in its entirety. We have drawn the conclusion that, both as a matter of mutual respect and as a matter of scientific rigour, it is therefore a more promising approach to make an assumption of inherent dignity in the "other" – in *any* "other" – than to require it to conform to any norms imposed by our accustomed paradigm before allowing ourselves to engage with it, since it has been shown that it is these very norms that may lead us to overlook the wisdom offered by the "other" in question.⁴¹

The learning from Robin Wall Kimmerer's postgraduate's journey shored up thus far is available to us whether or not we wish to consider any question of sacredness here. We may, if we wish to, accept Spinoza's observation regarding the complexity of the web without engaging with his view regarding its meaning at all. We may even, at least for the moment, think of it as lying on the near side of any perceived boundary between science

³⁶ Kimmerer, *Braiding Sweetgrass*, p.30.

³⁷ Peat, *Blackfoot Physics*, p.26.

³⁸ Kimmerer, *Braiding Sweetgrass*, pp.128-140. Here, the Three Sisters of corn, beans, and squash provide an example of a story of honourable harvesting from each other without any human involvement at all; in addition to their relationships with each other, the Sisters then enter into a similar relationship of mutual nurture with humans.

³⁹ For example, Lloyd, *Routledge Philosophy Guidebook To Spinoza And The Ethics*, p.89. Further discussion of this point is available in **chapter 11**.

⁴⁰ For example, McPherson and Rabb, *Indian From The Inside*, p.74.

⁴¹ This point is discussed in greater depth in the context of Karen Barad's thinking in **Appendix B**. It is also shown in **Appendix B** that while quantum theory provides a useful stepping stone for our understanding in this regard, the points made with regards to quantum theory are only able to carry us part of the way to engagement with the richer appreciation of the issue offered by Indigenous worldviews.

and ethics (on the question of which, for the moment, we may also wish to say that our jury is still out).

Beyond this point, however, and since the aim of this thesis is to explore ways of learning from Indigenous worldviews, the sacred cannot help but appear on our horizon, for the simple reason that in the shared learning and creation with the world which Indigenous societies have been engaging in, and which we are now attempting to learn from and with, the sacred is already there, hidden, if that, in plain sight. It is in the relationship between Cordova and her onion,⁴² and in the relationship between Frédérique Apffel-Marglin's friends and the water taking the lead,⁴³ because it is present in the material, and the material is more than the nouns I have been using to refer to it as I write in the noun-based language of English: the material is comprised of the manifesting as well as of the manifest,⁴⁴ and it appears to be particularly in the manifesting that we may experience the presence of the sacred.⁴⁵

Considering the thesis in its entirety, we can see that it is far from exclusively Leroy Little Bear who has made his link between the sacred and the shared act of becoming in relationship: an attempt at a sketch of a family resemblance of the sacred in **section 14.a.** shows that this point appears to constitute significant shared ground between a diversity of approaches. It is shown that while the majority of these approaches do appear to be Indigenous, Western stepping stones are available to support our approach to understanding.

If William James's gap in our apprehension of the state longed for⁴⁶ is in any way connected to our individual *conatus*' ever-evolving quest for mutual attunement with the *conatus* of the band, if James's doorway in our unconscious to the realm beyond that is impossible for any one person or group to grasp in its magnitude⁴⁷ is in any way connected to our sharing in the living world in its continued becoming – whether it be

⁴² Cordova, *How It Is*, p.173.

⁴³ Apffel-Marglin, *Subversive Spiritualities*, p.134.

⁴⁴ For example, Cordova, *The Concept Of Monism In Navajo Thought*, pp.89-91.

⁴⁵ Leroy Little Bear's three areas of philosophical unity in diversity between Indigenous worldviews discussed in **section 4.d.** are the first of a number of examples of this understanding cited. A sketch of a family resemblance of the sacred is attempted in **section 14.a.** of this thesis. The section offers a summary of those examples considered most pertinent, in particular the point made by Anne Waters regarding our maturing in relationship. (Waters, 'Sacred Metaphysics And Core Philosophical Tenets Of Native American Thought: Identity (Place, Space), Shared History (Place, Time), And Personality (Sacred Emergence Of Relations)', pp.13-14.

⁴⁶ James, *The Varieties Of Religious Experience*, pp.205-210.

⁴⁷ *Ibid.*, pp.332-333 and p.512.

nilch'i, *usen*,⁴⁸ or Robin Wall Kimmerer's *puhpowee* of a mushroom pushing above ground while remaining connected to all that lies beneath⁴⁹ – then it becomes intelligible that the link made in **section 6.c.** between Jung's and Pauli's interaction of individual and collective experience and unconscious and Indigenous understandings of the sacred aspects of story relates to everything and everyone. Why *would* we require wisdom to be expressed in propositional form in human language before being prepared to accept it as wisdom, when we have just seen the story of honourable harvest emerging from the non-propositional, non-linguistic, evolutionary relationship of buffalo and grass, and when we have just learnt from William James that our doorway to our interaction with the sacred may well lie in the non-propositional, non-linguistic realm of our unconscious?⁵⁰ Why *would* we continue to insist that what we refer to as instinct must be inferior to our human, "rational" method of seeking mutual attunement as we weave Merleau-Ponty's network which carries our existence,⁵¹ when we have just seen buffalo and grass attuning in a manner which, were we to learn from it, could demonstrably have a positive impact on the continued thriving of plant populations which we would otherwise have reason to feel concerned about,⁵² and which are dignified, as we have just learnt from Indigenous worldviews and from Spinoza, by their status of being fellow nodes in the sacred network of relationships that constitutes the whole? If we are trying to contribute to creating conditions for the planet, ourselves included, to continue, would it not be no more than rational, with Anne Waters, to think of our maturing in relationship with the network around us as sacred, as we now catch a glimpse of a meaning the fullness of which must remain beyond our grasp? And if so, would it not be as rational to extend this understanding of meaning and of sacredness to *all* our relationships with the perceived "other", and not only to eat Cordova's onion with respect, but also to resist the temptation to require those humans who are different from us to meet our universalised requirements before we accept their inherent dignity and thus eligibility for a relationship of potential shared learning and creation?

⁴⁸ Cordova explains that the concept of *nilch'i*, known in her own (Navajo) tradition as an all-suffusing force best translated as "wind", is known in related forms in a variety of traditions under a variety of names, amongst them *usen*. (Cordova, *The Concept Of Monism In Navajo Thought*, pp.56-57.) *Nilch'i* is first introduced in **chapter 6** of this thesis.

⁴⁹ Kimmerer, *Gathering Moss: A Natural And Cultural History Of Mosses*, p.30.

⁵⁰ James, *The Varieties Of Religious Experience*, p.512.

⁵¹ Merleau-Ponty, *Nature: Course Notes From The Collège de France*, p.176.

⁵² Kimmerer, *Braiding Sweetgrass*, p.166.

Miranda Fricker's thoughts, from the very beginning of this thesis, show epistemic injustice not only to be a form of injustice, but also to result in corruption of the knowledge base.⁵³ Considering the thesis in its entirety, we can then appreciate, with Welch⁵⁴ and throughout the thought processes of **Part 2**, the role of respect in Indigenous conceptions of the performative knowledge processes of shared learning and creation. If we synthesise the two, it appears to be no more than logical even when argued from within an exclusively Western conception of logic that the above thoughts on the sacredness and meaning of our relationships in the network that constitutes the whole cannot be restricted to any selection of individuals or groups. It is counterproductive because it is unethical, and it is unethical because it is counterproductive, to persist in any form of the above-mentioned lifeboat mentality. The focus of this thesis is on Indigenous humans and on non-humans, but if epistemic injustice as defined by Fricker⁵⁵ – which names two behaviours both deriving from disrespect – corrupts the knowledge base, and if knowledge processes exist which participate in the shared learning and creation of the network that constitutes the whole in its continuing becoming, then the message of this thesis must apply to all.

As outlined at the beginning of this appendix, it appears to be universalism, in Dussel's sense of the term,⁵⁶ that lies at the heart of our difficulty with this. To the extent that the contemporary Western paradigm is prepared to understand societal development in terms of progress towards alignment with contemporary Western norms, our continued operation within this paradigm is likely to pose a constant danger not only of our introducing the above forty-year time lag between Thatcher's deep Prime Minister's voice and our appreciation of Ardern's responsive leadership style. It is also likely to pose a constant danger of our continued suppression of those contributions which continue to lie outside the realm already accessible to us, with all the unintended consequences for

⁵³ Fricker, 'Epistemic Contribution As A Central Human Capability'.

⁵⁴ Welch, *The Phenomenology Of A Performative Knowledge System*, p.45.

⁵⁵ Fricker discusses two types of epistemic injustice, whereby an individual is prevented from making their epistemic contribution either (type 1) based on who they are, or (type 2) due to having been denied access to concepts that they would require to be familiar with in order for their communication to be understood by the mainstream. (Fricker, 'Evolving Concepts Of Epistemic Injustice'.) The concepts are discussed in **Part 1** of the thesis in the context of some first, general points made on the potential challenges involved in knowledge transfer between paradigms.

⁵⁶ Dussel points out the error of, and the danger inherent in, the normalisation and subsequent treatment as universals even of those ideas and phenomena that are in fact, on closer examination, better understood as particular and/or as localised. (Dussel, 'Eurocentrism And Modernity (Introduction To The Frankfurt Lectures)'. Dussel's thinking regarding this issue is first introduced in **Part 1** of this thesis, and revisited in **Part 2** in the context of Jacques Ellul's work.

the *conatus* of the whole that the severance of the connections concerned may entail. It was merely the sheer luck of our existing familiarity with rudders that allowed us to appreciate the penguins' feet in **chapter 17** for what they are. Karen Barad's thinking, as outlined in **Appendix B**, shows that it is impossible for us always to be this lucky. So does William James: his doorway to the "More" was shown above to lie in our acknowledgement of the necessary incompleteness of our conscious reasoning.

Three points are worth noting to conclude these thoughts. The first of these, also discussed in **Appendix B**, is that Indigenous conceptions of shared learning and creation open up a wider realm of possibility even than that articulated by Barad, if only we allow ourselves to engage in shared learning and creation with those we initially deem "other", and to leave an opening in the circle for the Trickster to enter. We cannot know in advance all that we may find ourselves participating in creating: our task, with Kimmerer, is to remain responsive as we plant our own garden.⁵⁷

The second, with Welch,⁵⁸ is that this process of shared learning and creation, which is no more than that, for example, described by Cajete as part of his wider conception of science,⁵⁹ is only possible with respect for the "other" we may encounter. It has been shown that the humility of exercising this respect, due to the inevitable gap in our own understanding, is a matter of scientific rigour.

The third, with Gaita,⁶⁰ is that this very same respect is a matter of decency in any case, and it is at this point that the interwovenness of science and ethics, and, with it, the meaning of that which we may well now wish to join Indigenous philosophers in experiencing as an all-inclusive, sacred network of shared becoming, comes into view with utmost clarity. A Western approach to understanding of Brian Burkhart's assertion in **section 6.f.iv.** that *everything* has all the value there is,⁶¹ after encountering some stumbling blocks of our own making, has yet also been found to be able to be aided by some of our own, familiar stepping stones to ease our journey.

⁵⁷ Kimmerer, *Braiding Sweetgrass*, pp.126-127.

⁵⁸ Welch, *The Phenomenology Of A Performative Knowledge System*, p.45.

⁵⁹ Cajete, *Native Science*, pp.28-31.

⁶⁰ Gaita, *A Common Humanity*, pp.2-3.

⁶¹ Burkhart, *Indigenizing Philosophy Through The Land*, p.200.

Appendix I – A glance back over the territory

For a brief moment, this appendix was going to be a map. The purpose of the map was going to be to illustrate that although the majority of the Indigenous voices cited in this thesis are from the Americas, voices from a wide range of other parts of the world have been included to complement these.

It quickly became apparent that in the case of this endeavour, as in many others discussed throughout this thesis, the map would not have been the territory. At first glance, a map, being an attractive form of visualisation, would have appeared to be an obvious choice for the task at hand. However, it would have had to assume a 1:1 relationship between any author's thinking cited and a particular geographical location that it relates to. Initially, this might seem appropriate, given the centrality of Burkhart's conception of locality first introduced in **section 4.d** : it is only Western worldviews which are criticised, for example, by Enrique Dussel for making an assumption of universalisability of what, on closer examination, tend to turn out to be more accurately characterised as particulars.¹ Indigenous worldviews, conversely, tend to understand themselves as being tied to the land.² As a corollary, at first glance, a viable way forward might have appeared to be to place each Indigenous author's work into the location on the map which represents the land in question.

With some authors' work, this might initially appear to be a viable way forward even on reflection: for example, a great proportion of the points made in relation to the PRATEC project are made by authors whose Indigenous enculturation took place in the region concerned (in this case, in the Peruvian Andes), and they relate to concepts which are local to the region concerned (for example, the conceptions of *runa* , *huaca* , and *sallqa* discussed in **section 5.e**.³).

However, on closer examination, even an initially straightforward case such as the PRATEC project's output raises questions. The above conceptions of *runa* , *huaca* , and *sallqa* did not find their way into the thesis as examples of sociocultural developments pertaining to a particular location: they found their way into the thesis as examples of the philosophical points made by Leroy Little Bear in relation to elements of unity in diversity

¹ Dussel, 'Eurocentrism And Modernity (Introduction To The Frankfurt Lectures)', p.75.

² Burkhart, *Indigenizing Philosophy Through The Land*, p.xii.

³ Rengifo, 'The Ayllu', p.89.

between Indigenous worldviews in **section 4.d.**⁴. *Runa*, *huaca*, and *sallqa* are discussed because they illustrate the interwovenness of Leroy Little Bear's three elements of unity in diversity – of nature being alive and imbued with spirit, of human co-participation in a non-deterministic world, and of the relationship between the manifesting and the manifest. It is true that, considered both from the points of view of where the terms are in use, and of where the authors were enculturated who introduce these, *runa*, *huaca*, and *sallqa* undoubtedly belong to the Peruvian Andes. It is equally true, however, that considered from the point of view of the elements of philosophical unity in diversity between Indigenous worldviews that these concepts are being cited to illustrate, *runa*, *huaca*, and *sallqa* would need to be placed into every location on the map that may have contributed to Leroy Little Bear's above assertion. A list of such locations would almost certainly be extensive: it is clear from Leroy Little Bear's involvement in the series of academic conferences now known as the Dialogues⁵ that even at the time that his assertion was made (i.e., near the beginning of what was to become Leroy Little Bear's distinguished academic career), his contacts were international.

The above complication arises from the fact that the thesis, in order to explore potential Western strategies for attempting to learn from Indigenous worldviews especially in relation to our damaged relationship with more-than-human nature, first and foremost adopts a philosophical approach based on the above elements of unity in diversity. This is a different approach from an anthropological one of studying any one particular Indigenous society's customs, or of engaging in a comparative study of several of these: in order to find possible ways forward with regards to the research question, the matter of whether, for example, an Indigenous Trickster is a spider or a raven in the relationships as they have developed in a particular locality, is of secondary importance to the question of how we Westerners can learn to be appreciative of the necessity of remaining open to the potentially unexpected developments emerging in processes of shared learning and creation in mutually respectful and responsive relationships as we attempt to approach the balance of our individual *conatus* playing jazz with the band of the *conatus* of the

⁴ Parry, *SEED Graduate Institute: An Original Model Of Transdisciplinary Education Informed By Indigenous Ways Of Knowing And Dialogue*, p.89.

⁵ For example, Peat, *Blackfoot Physics*, pp.14-15.

whole.⁶ The conception of locality introduced by Burkhart – and indeed by others, including PRATEC – is not itself introduced as a localised conception: it is, rather, an overarching tendency to aim for mutually respectful responsiveness in the lived relationships between those who share in the same land, and it is this responsiveness, then, which in turn entails the necessity of locality of the ensuing processes of shared learning and creation taking place, on and with the land, in each locality.⁷

Since Leroy Little Bear's (and other Indigenous philosophers', cited and contextualised with Little Bear's in **section 6.a.**) elements of unity in diversity between Indigenous worldviews form the basis of almost all points made throughout the thesis, the above complication – of an example arguably being capable of being placed in many locations on the map due to its being cited as an illustration of an element of unity in diversity asserted – would therefore be likely to arise with almost any example included in the thesis.

Even before the above, overarching complication is considered, however, individual complexities emerge on consideration of the vast majority of authors' work cited. Their presence would turn a map into more of a hindrance than an aid to understanding.

Before any thought is even given to the question of whether an assertion made by a particular author has been included as an illustration of an element of unity in diversity between a variety of Indigenous worldviews or not, a sizeable proportion of the authors cited will already be misrepresented, as individuals, if their contributions are placed exclusively into one particular location on a map. Bearing in mind the Creek elder's explanation of Indigenous belonging relating to participation⁸ rather than to an essentialising conception of identity based on a blood sample,⁹ multi-faceted and layered identities are quick to emerge as soon as an author's own account of their background is considered. Brian Burkhart, for example, as well as being a citizen of the Cherokee Nation of Oklahoma, cites multiple affiliations to other Indigenous groups, before going on to credit his teacher and mentor, Vine Deloria, whose background is given as Standing Rock

⁶ The terms relate to Spinoza's thinking as discussed in **chapter 11** of this thesis. The related jazz analogy is Brian Burkhart's (Burkhart, *Indigenizing Philosophy Through The Land*, p.292).

⁷ For example, Rengifo, 'The Ayllu', pp.118-120, and Burkhart, *Indigenizing Philosophy Through The Land*, p.121.

⁸ Hester, 'On Philosophical Discourse: Some Intercultural Musings', p.264.

⁹ One of many examples of this dehumanising conception of identity being applied in relation to Indigenous populations is provided by McPherson and Rabb, *Indian From The Inside*, p.57.

Sioux (Dakota).¹⁰ To place Burkhart's ideas neatly into the state of Oklahoma on a map would thus clearly prevent rather than help understanding.

A further point of complexity appears, ironically, to arise from an unintended consequence of Indigenous individuals' exposure to the residential school system: in their attempt to enforce pupils' assimilation into Western cultures, colonial powers, besides inflicting inexcusable and well-documented damage on the Indigenous individuals and societies thus abused,¹¹ inadvertently also appear to have fostered intellectual exchange between Indigenous worldviews which might otherwise not have taken place in every case.¹² When an Indigenous student has emerged from such abuse and attempted erasure of their own previously existing Indigenous identity, experienced alongside the environment's inadvertent facilitation of their intellectual exchange with a diverse Indigenous peer group, and when the student in question has then progressed, for example, to qualify as a lawyer, and to challenge incommensurable mainstream legislation resulting in unliveable outcomes for Indigenous populations, whereabouts on the map could the points made by them be placed, without the map becoming hopelessly reductive? And without (to my knowledge) any involvement of the residential school system, but now focusing on the emerging landscape of Indigenous-led Higher Education provision, whereabouts on a map could an Indigenous academic's work such as Shay Welch's be placed, who demonstrably values her Oklahoma Cherokee heritage,¹³ but who makes clear that, for example, her book on dance as a performative knowledge system argues not from a Cherokee point of view, but from a worldview formed through extensive engagement with Native American Studies and Native Philosophy programmes in a Higher Education setting?¹⁴

It is for the above reasons that this appendix has become an appendix as opposed to a map: the points made thus far would otherwise almost certainly have been lost. It is only with these caveats in place that I now consider it as safe as it is feasible for it to be to give

¹⁰ Burkhart, *Indigenizing Philosophy Through The Land*, pp.xi-xiii.

¹¹ For example, Smith, 'Crippling The Spirit, Wounding The Soul', pp.122-123.

¹² Sakakibara, *Whale Snow*, p.87.

¹³ A recent example is Welch's practice-based integration of an Indigenous conception of creative engagement into a Higher Education programme in Native Philosophy: S.Welch, 'Assignment Description: Native American Philosophy, Spring 2022', *APA Studies On Native American And Indigenous Philosophy*, Vol.22, No.1, Fall 2022, pp.12-13, URL: <https://cdn.ymaws.com/www.apaonline.org/resource/collection/13B1F8E6-0142-45FD-A626-9C4271DC6F62/APA_Studies_on_Native_American_and_Indigenous_Philosophy_V22_n1.pdf> [Accessed: 20 March 2023].

¹⁴ Welch, *The Phenomenology Of A Performative Knowledge System*, p.4.

a brief summary of whereabouts in the world some of the illustrations of the elements of unity in diversity discussed in this thesis have come from.

As previously stated, the vast majority are from a range of locations in the Americas: the PRATEC project in the Peruvian Andes features strongly, particularly in **Part 1** of the thesis, as do a variety of North American ideas, both from the part of North America covered by the nation state of Canada and from that covered by the nation state of the United States. This is largely due to the prominent parts played by the discussion of the Dialogues, and by David Peat's related engagement with Blackfoot thinking, as well as to the insight provided by the pioneers of Indigenous philosophy in a previously exclusively Western academic setting: those featured in Anne Waters' anthology, in particular, on the one hand,¹⁵ as well as those contributing to the APA's Newsletter on Indigenous Philosophy,¹⁶ continuously published for in excess of 20 years now, and introducing a multitude of Native American philosophical points of view.

Beyond the Americas, Linda Tuhiwai Smith writes from a Maori academic's perspective, and her case studies with regards to the frequently inappropriate approaches taken by contemporary mainstream Western researchers in their engagement with Indigenous groups relate to Indigenous experience in New Zealand. However, the importance of Smith's work internationally cannot be overstated: not only is her work internationally cited (for example, by Brian Burkhart),¹⁷ but it is clear from a variety of authors' contributions that the concerns raised by Smith are relevant to relationships between Western researchers and Indigenous groups beyond New Zealand alone.¹⁸ Nearer the end

¹⁵ A.Waters (ed.), *American Indian Thought: Philosophical Essays* (Oxford: Blackwell Publishing Ltd., 2004).

¹⁶ A.B.Curry (ed.), *APA Studies on Native American And Indigenous Philosophy*, URL = https://www.apaonline.org/page/indigenous_newsletter [Accessed: 20 March 2023]. The Newsletter has been renamed several times since its inaugural issue in 2001 and, as a result, appears under several titles with slightly different wordings in this thesis as papers from different issues are cited.

¹⁷ Burkhart, *Indigenizing Philosophy Through The Land*, p.7.

¹⁸ For example, the inability of contemporary mainstream Western research methodologies to relate appropriately to Indigenous experience is also discussed in relation to Indigenous contexts in Canada by Jeffrey Ansloos (Ansloos, 'Rethinking Indigenous Suicide'). A summary of conceptual reasons for this fundamental mismatch is, for example, provided by Marie Battiste (M.Battiste, 'Indigenous Knowledge: Foundations For First Nations', *WINHEC: International Journal of Indigenous Education Scholarship*, (1) (2005), pp.1-17, URL = <https://journals.uvic.ca/index.php/winhec/article/view/19251> [Accessed: 20 March 2023]. Battiste's cluster of three reductive practices of Western interpretation of Indigenous ideas shares much common ground with Smith's thinking with regards to a tendency for contemporary mainstream Western research practices to assume interpretative control over research findings in Indigenous contexts, and to treat their Indigenous interlocutors as mere suppliers of data. (For example, Smith, *Decolonising Methodologies*, p.1.)

of the thesis, Maori experience is again included as part of a wider discussion of Vine Deloria's thinking with regards to legal personhood of non-humans in **section 18.a.**¹⁹ Diane Bell's example of the forced removal of children in **section 5.f.iii.**²⁰, and her thinking with regards to the frequent inability of a Western legal system to relate to the lived experience of Indigenous populations resident in the nation state it was devised for,²¹ discussed in **section 7.a.**, are both taken from an Australian context, as are David Kinsley's example of the interwovenness of physical and spiritual content in a situation cited in **chapter 9**²² and the case study of Indigenous knowledge failing to be treated as relevant by the Western mainstream in relation to the 2020 bush fires cited at the very beginning of the thesis.²³ Simeon Namunu's example of ritual and labour being conceived as one, introduced in **section 4.d.** to illustrate a conception of the sacred being present in the material, draws on his experience of Indigenous relationships with more-than-human nature in Papua New Guinea.²⁴

Desmond Tutu's work on the South African Truth and Reconciliation Commission, referenced in **chapter 19** as an example to illustrate responsive interaction with legal processes,²⁵ draws on elements of his own Xhosa and Motswana heritage alongside his Christian orientation. Sub-Saharan Africa is also the site of Christopher Low's *buchu* case study,²⁶ first introduced as an example of additional complexities involved in a case of cultural appropriation in **section 3.a.**, and further discussed in **section 3.c.**

David Abram's apprenticeship with a shaman, culminating in Abram's experiencing himself as a raven and cited in **section 5.e.** as an illustration of the potentially fluid boundaries involved in inter-species relationships, as well as of the malleability of our neurophysiological capacities in response to intensive training,²⁷ took place in Nepal. Radhika Govindrajan's case study of a symbiotic, sacrificial relationship between goats and humans cited in **section 18.b.** as part of a discussion of questions relating to animal

¹⁹ Roy, 'New Zealand River Granted Same Legal Rights As Human Being'.

²⁰ Bell, 'Respecting The Land: Religion, Reconciliation, And Romance – An Australian Story', p.470.

²¹ Ibid., p.477.

²² Kinsley, *Ecology And Religion* (Upper Saddle River: Prentice Hall, 1995), p.25.

²³ Allam, 'Right Fire For A Right Future: How Cultural Burning Can Protect Australia From Catastrophic Blazes'.

²⁴ Namunu, 'Melanesian Religion, Ecology, and Modernization in Papua New Guinea'.

²⁵ Tutu, *No Future Without Forgiveness*.

²⁶ Low, 'Different Histories Of Buchu: Euro-American Appropriation Of San And Khoekhoe Knowledge Of Buchu Plants'.

²⁷ Abram, *Becoming Animal*, pp.201-258.

sacrifice, as well as of the possibility of sharing performative knowledge processes in the face of disagreement, also relates to a community in the Himalayas.²⁸

David Peat, in his introduction to the Indigenous as well as Jungian and quantum physical conception of the existence of acausal relationships alongside causal ones (discussed in **section 6.b.**)²⁹ makes reference to the ancient Chinese civilisation of the Shang, and it is also an ancient Chinese conception (in this case, a Confucian one) of a “process cosmology” that is used in **section 12.b.** to contextualise our non-teleological, yet intentional, interaction as we engage in shared learning and creation under an Indigenous conception of performative knowledge processes within a participationalist paradigm.³⁰

Piers Vitebsky’s work with the Even in Siberia is cited in relation to the damaging influence of colonialism under a communist as well as under a capitalist political system in diminishing Indigenous self-sufficiency and replacing it with Indigenous embeddedness in the workings of a largely faceless machinery of external standardisation,³¹ lending support to Ellul’s and Dussel’s thinking, for example in **chapter 17**, with regards to the detrimental effects of the elevation of particulars to allegedly universal norms. The Even are further referenced in relation to the experience of Indigenous children at a non-Indigenous school,³² illustrating the difficulties described by Burkhart in **section 5.f.vii.** with regards to the influence of inadequate translation between languages and paradigms on perceptions of coherence (or otherwise) of thought.³³

²⁸ Govindrajan, ‘The Goat That Died For The Family: Animal Sacrifice And Interspecies Kinship In India’s Central Himalayas’.

²⁹ Peat, *Synchronicity: The Bridge Between Matter And Mind*, pp.122-145.

³⁰ Ames, *The Implications Of Greek Ontology And Confucian “Zoetology” In Environmental Thinking*.

³¹ Vitebsky, *Reindeer People*, pp.193-194.

³² *Ibid.*, p.263.

³³ Burkhart, *Indigenizing Philosophy Through The Land*, p.60.