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# THE FLESH OF THE WORLD AND INDIGENOUS THOUGHT: AN INTER-SPECIES ART OF NOT KNOWING IT ALL IN THE AGE OF CLIMATE EMERGENCY

## *La chair du monde et la pensée indigène : un art inter-espèces de ne pas tout savoir à l'ère de l'urgence climatique*

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**Abstract:** Maurice Merleau-Ponty, at his Collège de France lectures, asserted our sharing in the flesh of the world. His comment has implications beyond those commonly discussed in the post-Enlightenment West, and we are yet to learn how to interact with some of these. Incommensurabilities between Indigenous and Western paradigms require our openness to methodologies of allowing methodology to emerge where familiar categories prove insufficient.

An intersection of contemporary Western science, Western phenomenological thought, and Indigenous philosophies, which was first explored during a series of trans-disciplinary academic conferences known as the "Dialogues", offers initial shared ground as a starting point for subsequent Western interaction with Indigenous philosophies on their own terms.

Indigenous conceptions of participationalist paradigms, when granted space to emerge beyond the boundaries imposed by previously familiar categories, extend our comfort zone in their engagement with co-creative processes of inter-species, shared becoming. Unilateral human control of such processes reveals itself to be a questionable quest, not least when the climate emergency is contextualised with the necessity of our inability to preconceive all that we may be co-creating.

An alternative of mutually responsive forms of inter-species relationship is explored against a background of Indigenous philosophies embracing the embodied as an element of rationality alongside those accessible to linguistic expression. A case study involving an ancient evolutionary relationship and its role in Indigenous story is offered as a seed we may wish to grow into our own, original, post-Enlightenment Western forms of inter-species interaction in our own, Western localities.

**Keywords**: Indigenous philosophies; Philosophy of Science; Phenomenology; American Pragmatism; Environmental philosophy.

**Résumé:** Maurice Merleau-Ponty, lors de ses Cours du Collège de France, a affirmé que nous partagions la chair du monde. Son commentaire a des implications qui vont au-delà de celles qui sont généralement discutées dans l'Occident post-Lumières, et nous devons encore apprendre à interagir avec certaines d'entre elles. Les incommensurabilités entre les paradigmes indigènes et occidentaux requièrent notre ouverture à des méthodologies permettant l'émergence de méthodes là où les catégories familières s'avèrent insuffisantes.

L'intersection de la science occidentale contemporaine, de la pensée phénoménologique occidentale et des philosophies indigènes, qui a été explorée pour la première fois lors d'une série de conférences universitaires transdisciplinaires connues sous le nom de "Dialogues", offre un terrain commun initial comme point de départ pour une interaction ultérieure de l'Occident avec les philosophies indigènes selon leurs propres termes.

Les conceptions indigènes des paradigmes participatifs, lorsqu'elles ont la possibilité d'émerger au-delà des limites imposées par les catégories précédemment familières, élargissent notre zone de confort en s'engageant dans des processus de co-création d'un devenir partagé entre espèces. Le contrôle unilatéral de ces processus par l'homme se révèle être une quête discutable, notamment lorsque l'urgence climatique est mise en contexte avec la nécessité de notre incapacité à préconcevoir tout ce que nous pourrions être en train de co-créer.

Une alternative de formes de relations inter-espèces mutuellement réactives est explorée dans le contexte des philosophies indigènes qui considèrent l'interaction corporelle comme un élément de rationalité au même titre que les éléments accessibles à l'expression linguistique. Une étude de cas portant sur une ancienne relation évolutive et son rôle dans un conte indigène est proposée comme une graine que nous pourrions souhaiter faire pousser dans nos propres localités occidentales.

**Mots clés**: Philosophies indigènes; Philosophie des sciences; Phénoménologie; Pragmatisme américain; Philosophie de l'environnement.

## INTRODUCTION

Indigenous philosophies,[i] as yet, tend not to be widely discussed in Western academic circles (for example Pratt 2002, p. 1). A first generation of Indigenous holders of Western PhDs in Philosophy did not emerge, for example, in the United States and Canada until shortly before the turn of the millennium (Waters, 2004). Indigenous voices appear to have been, and continue to be, almost inaudible due to a combination of factors in academic settings. On the one hand, gatekeeping and discrimination have played a part (for example Hester, 2004, p. 267), as have research methodologies obstructing the emergence of Indigenous thinking on its own terms (Smith, [1999] 2012). Alongside such instances of epistemic injustice arising from discrimination (for example Fricker, 2017),

however, it is equally important to consider miscommunications between paradigms developing due to the impossibility of a complete phenomenological reduction (Toadvine, 2019). The latter dynamic is exacerbated once philosophy is conceived from within a participationalist paradigm as an integral part of embodied world-making (Pratt, 2002, p. 17-19).

It might appear at this point as if Indigenous philosophies were about to be treated as a monolith in this paper – and, in addition, as a monolith which was going to be placed in opposition to another perceived monolith of contemporary Western thought. However, it is going to become clear from the paper's "Methodology" section onwards that this cannot be the case: firstly, Indigenous philosophies, due to their inalienable intertwinement in relationships on and with their respective land (for example Burkhart, 2019), cannot but be diverse.[ii] Secondly, it is going to become evident – particularly from ***section 2*** onwards – that conceptions of binary dualisms are going to be far from the only way of approaching what may, to those of us enculturated to largely Cartesian-based, contemporary Western paradigms, initially appear to be unaccustomed ways of being in the world.[iii]

This paper is going to explore some potential avenues to fruitful Western engagement with Indigenous philosophies. Elements of contemporary Western scientific and philosophical thought – in particular, in relation to shared ground identified between aspects of the findings of quantum theory and Maurice Merleau-Ponty's Collège de France lectures – are going to be offered as starting points for what is then going to become a journey towards interaction with Indigenous philosophies on their own terms.

***Section 1*** of this paper, to this end, introduces a methodology of allowing methodology to emerge, as familiar categories are found to be insufficient for engagement with the Indigenous paradigms encountered. ***Section 2*** explores the relevance of a participationalist paradigm, initially introduced through shared ground between contemporary Western scientific and phenomenological thought, to Western approaches to learning from Indigenous philosophies. ***Section 3***, in a discussion of inter-species relationships, challenges the position of human language as a near-exclusive medium of scientific and philosophical exchange. Indigenous ritual practice is de-exoticised as embodied inter-species relationship where the sacred is experienced as part of the material. A Western scientific case study is offered as an – albeit almost certainly only partial – approach to Indigenous understandings of wisdom being contained in the land. It is particularly through engagement with this case study that a potential pathway to our

forging of new forms of mutually responsive, co-creative Western forms of inter-species relationship is able to emerge.

## 1.0. Methodology

The majority of Indigenous philosophers cited are going to be based in various parts of the Americas. This does not, however, mean that they are necessarily speaking *for* , or even *from* , any part of the Americas.

First and foremost, and especially as a decade's collaboration between Indigenous academics and Western quantum physicists is traced,[iv] it is not individual Indigenous worldviews in their diversity which are at stake here: rather, it is a cluster of elements of philosophical unity in diversity initially put forward by Leroy Little Bear at the inaugural meeting of a series of academic conferences known as the Dialogues (Parry, 2008, p. 89), and debated by additional authors since (for example Norton-Smith 2010, p. 1, and McPherson and Rabb, 2011, p. 12).

Secondly, the majority of authors cited are not only *cited as* examples of points of philosophical unity in diversity proposed; they also expressly state that this is their purpose as they write (for example Welch, 2019, p. 4). Thirdly, for reasons inherent in the way that colonialism operated in the societies where the authors' education took place, most would be reluctant to claim their thinking to be emerging from one Indigenous worldview alone.[v]

With regards to a Western author such as myself attempting to approach the philosophical unity in diversity expressed, and interested readers then embarking on a similar journey, the incommensurabilities referred to in the ***Introduction*** entail that our familiar categorisations will not necessarily apply. Western philosophers can, for example, be found – understandably, in a quest to engage their anticipated Western audience – to be applying criteria for personhood previously attributed to humans when attempting to categorise a non-human as a person (for example Rowlands, 2019, p. and 3). The non-universalisability of such criteria, then, for example, becomes clear from a founder member of the PRATEC project's[vi] discussion of a conversation with a stone in no way entailing humanisation of the stone (Rengifo, 1998, p. 97).[vii]

It is Mary Midgley who offers a Western stepping stone to engagement with McPherson and Rabb's (2011, p. 63-64) understanding of allowing the initially incommensurable to emerge on its own terms. Midgley points out that although we have

no other option but to begin from a familiar place as we acquaint ourselves with the unfamiliar (Midgley, 1983, p. 127), a crucial next step lies in our willingness to leave the familiar behind in an iterative process of asking increasingly well-informed questions – questions which we could not have known to ask from the beginning. It is a methodology of allowing methodology to emerge, as opposed to imposing it from the beginning, because our attempt to control the process could only be grounded in the hubris of believing ourselves capable of knowing in advance what may or may not emerge.

The following approach to Western engagement with Indigenous philosophies through an intersection of contemporary Western scientific and phenomenological thought is going to exemplify the wisdom of Indigenous conceptions of leaving an opening in the circle for the Trickster to enter (Peat, [1995] 2005, p. 177).[viii] The humility of allowing the perceived "other" to extend our comfort zone in initially unexpected ways, besides being a matter of dignity and respect, is going to be shown at the same time to be one of academic rigour (for example Cajete, 2000, p. 28-31).

## 2.0. Science and philosophy in a participationalist paradigm: quantum theory, Merleau-Ponty, and Indigenous conceptions of co-creative becoming

Reference to quantum theory in a philosophical paper may raise eyebrows at first, since misappropriation of its alleged findings has been rife (Polkinghorne, 2002, p. 92).

However, what is at stake in this section is by no means that Newtonian physics is going to be claimed no longer to be valid. Newton's apple will continue to fall, in the West and in Indigenous communities alike (for example Peat, [1995] 2005, p. 170). Rather, we are going to be offered an introductory glimpse beyond exclusive application of a Newtonian paradigm – a glimpse of a world that can, and will, be more than a collection of controllable billiard balls only ever subject to cause and effect. It is this idea which is going to be shown initially to have drawn Indigenous philosophers to engagement with quantum theory, and subsequently to their discussion of its shared ground with phenomenological thought as well as with their own.

This section is first going to consider some basic concepts of quantum theory as relevant to its relationship with phenomenology and with Indigenous philosophies. Secondly, it is going to discuss the role of paradigm in our participation with the world.

Finally, these preliminary thoughts are going to form a stepping stone into an approach to Indigenous philosophies on their own terms.

### *2.1. Quantum theory and why it matters*

Niels Bohr's double-slit experiment – whereby particles passing through two slits in a screen, and onto a photographic plate behind it, turned out to display a diffraction pattern demonstrating their wave characteristics while equally retaining their particle identity – remains as baffling today as it was when it was first conducted (for example Barad, 2012). Quantum theory cannot but challenge us, as some of its findings appear to be in contradiction to the classical physics we are accustomed to (for example Peat, [1995] 2005, p. 45-46). There are, however, also aspects of quantum theory which have clarified previously inexplicable phenomena: Einstein's earlier findings of light – in other words, of waves – being capable of displaying particle characteristics not only dovetail with the pattern of wave/particle duality later demonstrated by Bohr; they also made sense of the initially inexplicable helium spectrum discovered some years previously, and thus paved the way to the replacement of the inadequate plum-pudding model of the atom (Polkinghorne, 2002, p. 5). Despite quantum theory's indisputable strangeness to our Newtonian sensibilities, it is not only its mathematical equations which turn out to be impeccable whenever scrutinised: their actualisation in the living world has been borne out by experimental evidence.

In a field that challenges the exclusive validity of the very foundations of logic underlying our accustomed, contemporary Western paradigm,[ix] doors will open not only to genuine enquiry, but also to facile jumps to conclusions where none can realistically be drawn. Karen Barad, for one, issues a word of caution in this regard (Barad, 1996, p. 166). Attempts, for example, to "prove" the existence of telepathy by invoking a "signal" allegedly travelling in quantum entanglement are easily discredited as no signal can travel the distances involved in the time available (Polkinghorne, 2002, p. 92).

It may therefore be helpful to bear in mind the four key characteristics of quantum theory put forward by David Bohm as the Dialogues were embarked upon, which were:

1. indivisibility of quantum action
2. wave/particle duality
3. properties of matter as statistically revealed probabilities
4. existence of non-causal relationships (Bohm [1980] 2002: 162-166).

### *2.2. Paradigm and why it matters: ethology's teething troubles and phenomenological thought*

An intriguing feature of Bohm's above list in the context of this paper is that three of its four items (all except wave/particle duality at least in its narrower sense), surprising as they may initially sound to our post-Enlightenment Western sensibilities, can be shown to form part of our lived experience.[x] If we work on the assumption that Newtonian clockwork is all that there is, it is not for want of evidence to the contrary: rather, our tacit expectations of what we are going to see play a part in shaping what we find it easy to see and what we do not. This, in turn, may short-circuit our full participation in the dynamics around us. The underlying dynamic of our shortcuts to presumed (but erroneous) recognition of the familiar among the already existing is explored, for example, by John Dewey ([1934] 2005, p. 184-193). It is then shown by Indigenous philosopher, Shay Welch, to be a factor in preventing not only successful engagement with the already existing, but also in preventing successful shared innovation and becoming (Welch, 2019, p. 45).

Whenever we fail to take this dynamic into account, we are opening the door to its negatively impacting on our academic rigour. Examples of the influence of paradigm on processes of contemporary Western science are manifold, and can be shown to have affected the work even of scientists of impeccable credentials.

Niko Tinbergen, while at Oxford, turned down Alister Hardy's offer of a transdisciplinary collaboration extending the remit of the newly established discipline of ethology beyond the boundaries of contemporary Western scientific convention (Burkhardt, 2005, p. 333).[xi] Even the possibility of animals' subjective experience, although not excluded altogether, was conceived to lie outside ethology's remit (Burkhardt, 2005, p. 435). A mere couple of decades later, Tinbergen, with generosity and intellectual integrity, admitted that his research had been negatively impacted by his failure to take into account feedback received by the animal in the course of their interaction with their world (Burkhardt, 2005, p. 431).

Louise Westling's work synthesising Tinbergen's findings with Merleau-Ponty's final course of lectures at the Collège de France was similarly carried out without Tinbergen's involvement, even though Merleau-Ponty's lectures were given almost thirty

years before Tinbergen's death. It was left to a philosopher to remind contemporary Western science that contemporary Western science bears out Merleau-Ponty's philosophical stance regarding our sharing in the flesh of the world (Westling, 2013, p. 27).[xii]

It is for reasons such as these that Vine Deloria, Indigenous academic and activist, cites Alfred North Whitehead regarding the fallacy of misplaced concreteness (Deloria and Wildcat, 2001, p. 2-6). Evidence overlooked or disregarded due to mistaken assumptions of the universalisability of prior experience may later turn out to be what topples our carefully constructed models of the world. It is not the fact of our employment of models which is problematic here (Lloyd, 1996, p. 124): it is our assumption of a Newtonian clockwork universe that tempts us to treat the maps we have created as the territory itself (for example Apffel-Marglin, 2011, p. 84) – a clockwork which was already shown in ***section 2.1*** only to be explanatory of a subset of the world.

In an Indigenous worldview, conversely, initially incompatible evidence can be easier to incorporate, as disagreement tends to be viewed as progress (for example Burkhart, 2019, p. 263). Relatedly, Anne Waters points out that Indigenous worldviews do not tend to show the amount of reliance on binary dualisms common to contemporary Western ones (Waters, 2004, p. 97-115). Questions tend to be valued more than premature answers (for example Cordova, 2007, p. 36).

Where methodology expects to be open to the unexpected, paradigm becomes less likely to obscure the unknown..

### *2.3. Shared ground between contemporary Western and Indigenous paradigms, and a glimpse of what lies beyond: layered dynamics of our co-creative becoming*

At the inaugural conference of the ten-year period of the Dialogues, in an attempt to build initial bridges between Indigenous and Western paradigms, Leroy Little Bear summarised three areas of philosophical unity in diversity between Indigenous worldviews:

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) (Parry, 2008, p. 89).

It is important to note from the beginning that the term "spirit", here, cannot be conceived to have an "otherworldly" connotation as it would in a largely Cartesian-based paradigm understanding the sacred to be in a separate realm from the material (Apffel-Marglin, 2011, p. 87). Rather, the sacred is here understood to be part of this world, as, for example, illustrated by Rengifo (1998): this is one reason why Viola Cordova, one of the first generation of Indigenous holders of PhDs in Western philosophy in the United States, offers Benedict de Spinoza's work as a Western stepping stone into engagement with Indigenous thought (Cordova, 1992, p. 83).[xiii]

It would be possible to analyse Little Bear's three points individually, and to attempt to map each to one or to several of Bohm's above points regarding quantum theory. Despite potentially representing a piece or two in a mosaic of nascent understanding of Indigenous thinking, this would, however, miss a crucial point. Little Bear does not necessarily treat the three elements as separate entities to be examined in isolation: rather, they form part of a whole (Little Bear, 2000), and it is the interaction of this whole with the findings of quantum theory and, through this, with phenomenological and with American Pragmatist thought, which Indigenous academics have been interested in. Vine Deloria, no doubt building on his own experience of completing a first degree in science as much as on his exposure to Peat's and Bohm's thinking, makes clear that his claim of Indigenous conceptions of the wind *nilch'i* – and of *usen* , and related concepts in other parts of the world – showing parallels with quantum fields should by no means be understood as a claim of the wind reducing to these (Deloria and Wildcat, 2001, p. 140). Cordova (1992, p. 57-70), relatedly, characterises *nilch'i* as suffusing the entire universe while being within as well as around, and worthy of awe, before linking the concept to similar ones from elsewhere.

What is thus going to be at stake, first and foremost, are shared meanings identified between quantum theory and Indigenous thought, and the way that these, where at first glance unwieldy when considered from a Western point of view, may initially be approached through quantum theory's shared ground with phenomenological thought.

Cordova offers a cluster of three analogies to illustrate our responsible, co-creative participation with the world. Firstly, Cordova likens our co-creative activity to the rolling

of a snowball, whereby today's shaping of its inner layers plays a part in our addition of tomorrow's outer ones (Cordova, 2007, p. 175). Secondly, she argues that our actions cannot simply be understood as ripples in a pond, moving outwards in predictable concentric circles, but that our ripples are going to interact with everyone else's ripples in a process of greater complexity (Moore, 2007, p. xiii-xiv). Cordova's third analogy can be approached through the first two: she conceives our quest to attain and maintain balance in the world in no way as a static form of balance but, rather, as our balancing on a board placed across a barrel on shifting sand (Cordova, 1992, p. 99).

Cordova's analogies are offered in the context of her call for our responsible participation, and it becomes clear from the dynamics of the latter two that this responsibility cannot involve unilateral control: it is, rather, a matter of respectful, responsive interaction, and it is here that the most pertinent patch of shared ground emerges between the meanings inherent in the findings of quantum theory and those proposed by Indigenous philosophers – and gestured towards in Merleau-Ponty's Collège de France lectures.[xiv]

Karen Barad, arguing from a contemporary Western scientific point of view and from the background of her discussion of the above indivisibility of quantum action, points out the dynamic of our participation in the world leaving traces in the world, both in the laboratory and beyond (for example Barad, 2012, p. 33-39). The presence of acausal relationships alongside causal ones entails that the responsibility required of us must be one of humility (for example Barad, 2012, p. 38): while Newton's apple, for one, will reliably continue to fall, it is no longer realistic to expect predictability irrespective of context. Verisimilitude rather than omniscience (Polkinghorne, 2002, p. 84) of the already existing, as conceived from within a representationalist paradigm, is no longer the only reason for the impossibility of our responsibly exercising unilateral control. The world whose continuing creation we participate in is also impossible for us to grasp because Cordova's sand is shifting under our feet as we balance on our barrel, and it is our very feet which are co-creating the shift. In the participationalist paradigm proposed by Cordova's analogies and by Barad's agential realism, Merleau-Ponty's conception of the subject weaving the network that carries its existence comes to life (Merleau-Ponty, 2003, p. 176). What Cordova adds to the debate is that we cannot control what we are weaving because we are not the only subjects weaving it. We are part of a world that is alive, and this living world is more than a Cartesian automaton.

It has been shown that Leroy Little Bear's three elements of philosophical unity in diversity can, at first glance, tell us simply what quantum theory does and what has, to some extent, been philosophically expressed in a Western-accessible way in Merleau-Ponty's Collège de France lectures. Little Bear's reference to the sacred can, for the moment, be left aside to be returned to in a later section, while bearing in mind that due to our engagement with a paradigm locating the sacred within the material world, it is bound to make another appearance below as we emerge into embodied interaction with those around us.

## 3.0. *Embodied contributions and inter-species jazz: a confluence of science and ethics*

The previous section closed on a sobering note. Argued initially from contemporary Western science and from contemporary Western philosophy, and subsequently from Indigenous thought, our aspiration to unilateral human control has not only been shown to have ended in failure by events such as our recent creation of the climate emergency. Rather, the fault line remains in place for next time, too, and it is deeper than representationalist verisimilitude alone: once the participationalist paradigm introduced above enters into the equation, it becomes clear that we cannot know all that we are participating in creating. Responsibility must entail the humility of our mutually responsive communication with others as we feel for a shared way forward.

Indigenous and Western voices alike expect contemporary Western science to continue to play its part (for example Cajete, 2000, p. 271, and Peat, [1995] 2005, p. 312). The point being made here could not be further from a call to replace one already existing approach with another while leaving the underlying dichotomy in place, let alone in a context where Indigenous thought has already been shown to embrace non-binary conceptions of dualisms. Rather, the challenge appears to be one of fostering shared innovation and becoming between those who happen to share our accustomed Wittgensteinian riverbeds and those who do not.

The direction of travel in this section is going to be from acknowledgement of the simultaneous ethical and scientific importance of our engagement with the perceived "other", into exploration of non-verbal ways in which this may play out. Particular attention is going to be paid to inter-species relationships in this regard, and to an

exploration of how the West may wish to approach its own forging of original forms of these in mutually responsive interaction with its Western localities.

### *3.1. Blind spots and our need for each other's subjectivity*

Indigenous expectations of inter-species relationships being conducted on an equal footing may initially appear unusual to our contemporary Western sensibilities. For all that Louise Westling's work referenced above may demonstrate our own culture's past richness in stories of such relationships (Westling, 2013, p. 49-60), it is without question that Cartesianism, and economic as well as cultural developments following in its wake, have since resulted in our tacit assumption of non-human nature being something to be learnt *about*, as opposed to all our being a community of subjects to be learnt *from* and *with* as we co-create the world (for example Kimmerer, 2020, p. 346 and 56).

And yet, some stepping stones available to support Western engagement with the Indigenous expectation of relating to non-humans at eye level are Western ones. The complexity of Spinoza's network of relationships, and its corollary of our inability to grasp it in its entirety (Lloyd, 1996, p. 129), chimes with Mary Midgley's above methodology of allowing methodology to emerge. The entailed inevitable gap in our understanding, in fact, suggests that it may be those currently located in the perceived further reaches of the network – those we are tempted to deem "other"; those whose contribution we struggle to acknowledge because it may be too alien for us initially even to perceive – who are likely to contribute those pieces to any emerging mosaic that we could not.

An ethical requirement of non-discriminatory interaction with the perceived "other" is widely recognised. When Raimond Gaita speaks of the importance of allowing other voices to be heard for their *unique* contribution (Gaita, 2002, p. 104), he treats this as the matter of decency that it undoubtedly is. Miranda Fricker, too, refers to the "epistemic breaking of bread" in a paper positioning epistemic contribution as a capability related to dignity (Fricker, 2015). The inevitability of the incompleteness of our understanding following from the complexity of Spinoza's network, however, chimes with a point made by Indigenous philosophers: the matter of decency of welcoming others' unique contributions is simultaneously one of academic rigour, because the two are in fact best conceived as one (for example Burkhart, 2019, p. 200, and Cajete, 2000, p. 306). Relatedly, Fricker – even while arguing from within a representationalist paradigm –

shows epistemic injustice to be corrupting the knowledge base (Fricker, 2015), as does Welch, arguing from within a participationalist paradigm (Welch, 2019, p. 45).

The importance of this dynamic, in an Indigenous context, being conceived as an inherently inter-species one cannot be overstated (Deloria, [1979] 2012, p. 203). Burkhart stresses the value of everything and everyone. His wording of "Everything has all the value there is" (Burkhart, 2019, p. 200) relates to a conception of a network much like Spinoza's, whose complexity exceeds our understanding, so that it becomes unrealistic for Western environmental ethics to expect humans reliably to assess the moral considerability of others. Burkhart's understanding is echoed in other Indigenous philosophers' work. Pratt conceives voice and song as power of independent individuals who are at the same time interwoven with a meaningful whole (Pratt, 2002, p. 192-193); Cajete describes Indigenous education as community supporting the individual in developing their unique potential while the individual, vice versa, contributes to the community (Cajete, 2000, p. 86). We are not merely in static relationship, and we are not merely looking on: we are simultaneously individual and collective subjects, co-creatively weaving the network that carries our shared existence.[xv]

### *3.2. Brian Burkhart's jazz as a song without words*

Questions may arise with regards to the nature of this mutually responsive, respectful, inter-species communication now sought: in most cases, no shared spoken language will be available to achieve it.[xvi] On second thoughts, however, the role of human language in communication may well have become overrated (for example Dewey, [1934] 2005, p. 70) while non-verbal interaction, especially among non-humans, became increasingly relegated to a category named "instinct" – which we tend to construe as being inferior to human rationality, yet struggle to define (Deloria, 2004, p. 7). What we think of as communication may frequently be achieved by non-verbal, mutual attunement as much as it is by our spoken interaction.[xvii] When Ella Fitzgerald famously forgot the words to "Mack The Knife" at a concert, she and her band – who cannot have rehearsed what they were going to do – sounded tentative for a few bars at first (Fitzgerald, 1968) until, in their improvisation, they found each other again, their joy radiating from their every note in a celebration of their deepened confidence in each other.

The very idea of our Wittgensteinian riverbeds is that a large part of what is in them cannot be articulated in its complexity. When Jack Forbes asserts the inseparability of

nature and culture, chiming with Merleau-Ponty's "flesh of the world" comment above, Forbes explains that, true to the verb-orientation typically found in Indigenous languages, the English term "culture" is often best translated by a Native term which translates back into English as "together-doing" (Forbes, 2001, p. 118-119). Forbes' thoughts echo the second of Leroy Little Bear's above elements of philosophical unity in diversity, that of human co-participation in a nature showing patterns more than following laws.

"Mack the Knife" is in Indigenous company: Brian Burkhart likens our co-participation to all of our being musicians playing in a jazz band (Burkhart, 2019, p. 292). While there is no pre-conceived score that must be followed regardless of circumstance, there are, nonetheless, some interactions between the individual and the whole resulting in superior harmonies to others. To the extent that the individual and the band become attuned to each other, the individual's play will be buoyed by the band as the individual, simultaneously, transforms the band's play.

Reference to tradition is by no means rendered obsolete: the audience would not have been as enraptured had "Mack The Knife" no longer been recognisable as "Mack The Knife", and many a justified complaint has been made regarding Western interference preventing Indigenous practice of tradition (for example Pratt, 2002, p. 180-181). The point being made is, rather, one of tradition being lived as mutually responsive relationship, which, in order to chime with Leroy Little Bear's elements of philosophical unity in diversity above, must necessarily involve change as a new chapter is woven back into the tapestry of existing story. Rengifo (1998, p. 118-120) characterises the mutually responsive interaction between the land and those sharing in it as "custom" rather than "habit", with the former, while rooted in tradition, remaining responsive at all times. Cajete (2000, p. 95) relatedly describes the relationship between story and community as an iterative process of mutually responsive transformation. The interwovenness of tradition with living, ever transforming community may or may not surface as verbalised story here: Shay Welch, for example, describes a similar dynamic to Cajete's in the context of dance (Welch, 2019, p. 104).

Spinoza's thinking may once again provide a stepping stone to Western engagement: when Spinoza discusses intuitive knowledge, reached through reason as we mature into ability to let go of our exclusive reliance on a narrow conception of reason (Spinoza, [1677] 1996, 57/E2P40S2),[xviii] his thought process chimes with Deloria and Wildcat's "synthetic attentiveness", a heightened sense of awareness attained through

experience, and as a result no longer reliant on mechanistic models (Deloria and Wildcat, 2001, p. 149).

It transpires from the above that irrespective of whether or not a shared spoken language is available to support a particular (and potentially inter-species) relationship, much of our mutually responsive interaction takes place outside it either way. What matters is that as we mature into an ability to attune to those around us on their terms as well as on ours, our attunement necessitates our allowing ourselves to progress beyond our preconceived categorisations, much as Mary Midgley pointed out at the beginning of this paper, and much as Cordova's analogies and the findings of quantum theory suggested. It is this acknowledgement of the inapplicability of familiar categories, linguistic or otherwise, which honours the dignity of the "other", and contributes to the emergence of an uncorrupted knowledge base alike.

### *3.3. Embodiment extended: reconciling ritual with academic rigour*

In a discussion of a paradigm locating the sacred within the material, ritual practice as one possible form of embodied interaction cannot realistically be ignored. The question of the efficacy of Indigenous ritual can, however, be an uncomfortable one in academic circles, even among those sensitised to the thought processes involved. In an environment enculturated to Cartesian dualism to the extent that even acknowledgement of animal emotions can mark the beginning of a challenging conversation (Bekoff, 2007, p. 116-120), reluctance to discuss the possibility of there being a spiritual element to our inter-species relationships still tends to be the norm (for example Nadasdy, 2007, p. 36).

This reluctance of ours – as much as others' willingness to continue to engage with non-human nature in a ceremonial way – are both likely to have left their respective traces in the world. It has been demonstrated that the choices we make with regards to our interaction with our surroundings are capable of modifying our neurophysiological makeup.[xix] It is therefore likely that intensive engagement in a particular form of ritual practice is going to entail adaptations in its practitioners' mind-bodies just as, for example, training for an Olympic discipline would. David Peat's discussion of astronomical research conducted by Mayans prior to the availability of contemporary equipment – while remaining firmly rooted in his scientific background as a quantum physicist – acknowledges not only the role of years of practice in honing perception but also, within this, the role of ritual (Peat, [1995] 2005, p. 209-211).

In this paper's discussion of a paradigm where the sacred is understood to be in this world rather than in a realm beyond, and where the term "spirit" has been shown to lose its connotation of otherworldliness in the context of Leroy Little Bear's elements of philosophical unity in diversity above, the time has come to de-exoticise ritual.

It has been shown that mutual attunement in Brian Burkhart's great jazz band of the whole shares more common ground with the acausal relationships discussed in the section on quantum theory than it does with a causal drop of Newton's apple from height. Relatedly, it was shown both scientifically and philosophically that our control over the traces left by our participation in the world does not extend to full control: rather, because we are not the only ones participating, our responsibility is more realistically conceived as one of respectful, responsive interaction as our ripples in Cordova's pond interact with others'.

Accounts do exist of Indigenous ritual being conducted in order to achieve a particular, unilaterally preconceived outcome, for example to cause a hail shower to stop (Apffel-Marglin, 2011, p. 123). However, this appears to be far from the norm: rather, ritual tends to be characterised as an embodied form of mutually responsive conversation transcending species boundaries, aiming for balance rather than for actualisation of one's own preconceived ideas at any cost (for example Rengifo, 1998, p. 89 and 106, and Valladolid, 1998, p. 61).

In a paradigm where culture is referred to as an inter-species tradition of creative "together-doing" continuous with nature (Forbes, 2001, p. 118-119), and where the sacred is understood to be part of this world, it appears no more than realistic to allow the term "ritual" to break away from its connotation of magic and to see it move closer to denoting inter-species, day-to-day engagement in shared learning and creation, as embodied interaction grows into ceremonial ways of doing things, released from the constraints of unilateral human control and, instead, open to leaving awe in place. David Peat's example of a ritual rainmaker, then, offered in his context of acausal relationships, turns out not to involve the rainmaker making any rain: echoing Cordova's balancing board analogy above, he seeks to restore balance through attunement. It is as part of this balance that rain arrives (Peat, 2015, p. 106-107).

It might be tempting to categorise such ritual as "religious" ritual, simply because in a Cartesian-influenced, contemporary Western paradigm, this is what a tradition involving interaction with the sacred would be understood to be. However, a contemporary Western paradigm is not what is at stake here.[xx] Based on Leroy Little

Bear's elements of philosophical unity in diversity above, the material actions of human members of a community cannot here be understood as separate from their spiritual interaction with non-human members (for example Grillo, 1998, p. 224): the two are conceived as one.

Any discussion involving the sacred within the material must be complex for the simple reason that, based on the above discussion of the complexity of the network we are embedded in, we cannot help but acknowledge the sacred to be more than one individual or group can grasp and define.[xxi] A glimpse of some elements of a family resemblance is likely to be all that our intellect will stretch to. With this in mind, in a paradigm where the sacred is conceived to be part of this world, where better to find it than in the chiming of Spinoza's *conatus* of the individual with that of the whole, as Burkhart's jazz musician offers their unique contribution to the play of the band, and is buoyed by the band's play in return? Anne Waters has characterised the dynamic as one of the sacredness of maturing in relationship (Waters, 2021, p. 13-14).

There need, on the one hand, be nothing more exotic about ritual than a group of people spending enough time in respectful and responsive interaction with a swarm of honey bees for their human, neurophysiological makeup to become sufficiently attuned to the bees' waggle dance (for example de Waal, 2017, p. 11) to begin to engage in nonverbal communication with them, and to find that in their connection now made and in part understood through science, they have also found their awe and their love for the world, having grown into their inextricable participation with it.

Conversely, where there is more involved, it will be unrealistic for us to categorise what we find from within our unrelated paradigm. Acceptance of our limitations, along the lines of Bruce Wilshire's thinking (Wilshire, 2000, p. 56), will be the more realistic choice than to attempt to place a causal explanation on something which is unlikely to be causal. Premature categorisations short-circuit our immersion in Dewey's doings and undergoings as iterative processes of mutual responsiveness and modification (Dewey, [1934] 2005, p. 51-52). To allow space for the initially mysterious to emerge on its own terms, on the other hand, is to allow ourselves space to grow into full participation. If we had insisted on explaining dogs' pricking up their ears solely in terms of the bone we already knew we were carrying in our pocket, we would never have learnt what dog whistle frequencies were.

### *3.4. The low-hanging fruit of not knowing it all: evolutionary relationship as a starting point for Western explorations of inter-species kinship*

A case study about to be discussed in this section sees the richness of Indigenous philosophical thought emerge beyond its shared ground with contemporary Western scientific and philosophical thinking. It may, as part of our response to the climate emergency, point us in the direction of embarking on new, contemporary Western, mutually responsive, co-creative, inter-species kinship relationships of our own.

The role of relationship in bringing about evolutionary advantage is beginning to be recognised by contemporary Western science.[xxii] What is less frequently discussed, conversely, is the potential for evolutionary relationship to form a Western stepping stone to approaching Indigenous understandings of knowledge being contained in the land (for example Peat, [1995] 2005, p. 67-68), and of humans being the youngest species and therefore in need of the wisdom imparted by older species (for example Kimmerer, 2020, p. 4). It is particularly in this dynamic that we may find valuable learning with regards to our own inter-species relationships in the West.

Robin Wall Kimmerer relates a story of a postgraduate student's research project finding that – contrary to expectations at the time of the project's conception – human interaction with the plant of sweetgrass, rather than being inherently harmful to the plant, in fact correlated with enhanced plant growth as long as practices of honourable harvest were observed. These practices had been adapted from Indigenous basket-makers' stories (Kimmerer, 2020, p. 156-166).

Of particular interest in the context of this paper is the ancient, evolutionary relationship between buffalo and grass subsequently uncovered by Kimmerer in response to the postgraduate's findings: buffalo and grass, long before the arrival of humans, were found to have co-evolved into a relationship of delicate biochemical balance. Obvious factors include the migratory behaviour of buffalo herds resulting in no over-harvesting taking place, while fertiliser left behind supports new plant growth. Less well-known factors include the presence of an enzyme in buffalo saliva conducive to plant thriving (Kimmerer, 2020, p. 164). Kimmerer treats the biochemical balance described as relevant while remaining careful not to reduce the relationship to this: as outlined in the early sections of this paper, it would be unrealistic to assume that what we happen, let alone at

a particular point in time and in place, to be able to claim as our own in the form of propositional knowledge, is necessarily going to be all that there is.

The pathway for non-verbal, inter-species, evolutionary relationship to have developed into the basket makers' honourable harvest stories may be partially accessible via a Western stepping stone taken from Raimond Gaita's thought. Gaita points out that a proportion of our Wittgensteinian riverbeds developed as we live together may well originate from our relationship with the family dog (Gaita, [2002] 2017, p. 49-50).[xxiii] Applied to the basket makers' stories and to Indigenous conceptions of humans learning from older species on the land, there is thus every likelihood that, living in close proximity to buffalo and grass, the basket makers' ancestors grew into shared customs of honourable harvest much as we might grow into shared customary behaviours with the family dog, and that these shared customs originating from early proximity to buffalo and grass may then have been carried forward into relations with sweetgrass both embodied and storied. At no point does Kimmerer suggest the practice's having been recorded in propositional form.

In relation to the postgraduate's research project, it was again not through sole reliance on controlled environments and on exclusive application of preconceived methodologies that the story of Gaita's family dog of buffalo and grass rose to the surface of our present-day awareness. It was through the postgraduate's humility of allowing mutually responsive relationships with the basket makers, and with the plant of sweetgrass, to grow through the maps created to make sense of the world. Gaita's family dog of the evolutionary relationship between buffalo and grass at the root of the Indigenous basket makers' honourable harvest stories appeared when space was allowed for the Trickster's contribution to emerge in the living.

The story may be read as an illustration of the simultaneous ethics and rigour of allowing the "other" to contribute on its own terms. Relatedly, then, the story becomes relevant to the scientific and philosophical point made in the introductory sections of this paper: the price of a sustainable new braid of co-creation – for example, the braid of a response to the inter-species challenge posed by the climate emergency – is going to be relinquishment of our unilateral human control of its pattern. Low-hanging fruit that this may be, as it relieves us of the requirement to know it all: it may initially be a painful step. Our very desire to know it all arguably arises from a post-Enlightenment quest to find security in certainty in the face of our growing Cartesian doubt (for example Wilshire

2000: 16). Relinquishment of unilateral control may plunge us into anxiety resulting from this doubt.

We may wish to remind ourselves, however, based on the above and with Cajete, that our perception of control, and of security being attainable through its exercise, is at least to some extent illusionary in any case (Cajete, 2000, p. 16). The creation of the climate emergency cannot have been part of any human master plan and, as Leroy Little Bear's above elements of philosophical unity in diversity suggest and as Viola Cordova's analogies illustrate, we cannot realistically expect to have a master plan in the first place.

The direction of travel has become clear from the confluence of Western scientific, phenomenological, and Indigenous philosophical thought: it is in our very relinquishment of our aspiration to unilateral human control over non-human nature that we may find the security we were looking for.

## 4.0. Conclusion

This paper set out to showcase some contemporary Western scientific and philosophical stepping stones available to support Western approaches to engagement with Indigenous philosophers, whose voices have been largely inaudible in Western academic circles to date. In order to facilitate this while simultaneously allowing Indigenous philosophies to emerge on their own terms, Mary Midgley's methodology of allowing methodology to emerge was introduced as a way of avoiding the pitfall of premature categorisation cautioned against, for example, in Linda Tuhiwai Smith's and in McPherson and Rabb's work.

Shared ground between the findings of quantum theory, as well as related phenomenological and American Pragmatist thought, and three elements of philosophical unity in diversity between Indigenous worldviews asserted by Leroy Little Bear was shown to be supportive of this approach. It is not only our incomplete knowledge of the world as it currently is which may place limitations on our engagement with new experience on its own terms: the dynamic of our participation in the ongoing co-creation of tomorrow's world, in a universe of patterns and probabilities alongside causal relationships, equally entails the futility of our attempts at unilateral human control. The latter dynamic was illustrated by a cluster of analogies offered by Viola Cordova, which chimed with Karen Barad's theory of agential realism developed from the findings of quantum theory. It brought to life Merleau-Ponty's claims of our sharing in the flesh of

the world as we weave the network that carries our existence, and was then shown to transcend these.

The concepts discussed were not new to the West, much as they appear to have all but ceased to form part of mainstream Western paradigms since the arrival of Cartesian dualism. Ancient Western myths were contextualised with contemporary Western science and with Merleau-Ponty's thought by Louise Westling. Affinities between Spinoza's thought and Brian Burkhart's jazz analogy were exemplified by a confluence of science and ethics in the fairness of fostering universal epistemic contribution simultaneously resulting in enhanced academic rigour. Unique Indigenous contributions to the debate were located at the intersection of the co-creative nature of our weaving Merleau-Ponty's network and of the sacred being experienced as part of the material world in our continuing, co-creative emergence. Based on these reflections, a de-exoticising discussion of ritual became possible.

A case study enabling a Western approach to (albeit almost certainly partial) engagement with Indigenous experiences of wisdom being contained in the land was discussed, exemplifying the role of our embodied engagement with the "other" at the intersection of epistemology and ontology in a participationalist paradigm. It was especially in the dynamics of this case study that a seed we may wish to grow into our own, mutually responsive, co-creative, Western inter-species relationships was shown to be located.

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[i] This paper is going to use the terms "Indigenous philosophies" and "Indigenous worldviews" interchangeably. This is because, owing to the incommensurabilities between paradigms about to be discussed, neither term is ideal on its own: a gap exists between post-Enlightenment Western and Indigenous understandings of what is at stake when they are employed. Contemporary Western thought is strongly influenced by Cartesian dualisms (for example, of mind and body), while Indigenous thinking is not: Gregory Cajete (for example) defines philosophy as relating to "all aspects of interactions of 'human in and of nature', that is, the knowledge and truth from interaction of body, mind, soul, and spirit with all aspects of nature" (Cajete, 2000, p. 64). The term "worldview", while better able to cope with Cajete's richer conception of the scope of the discipline, comes with its own caveats: firstly, Cajete's quote relates to participation, which is more than a mere "view". Secondly, a discriminatory history of non-Western philosophical ideas being labelled "not philosophy" (for example Nye, 2000) requires consideration.

[ii] The thrust of the points made in this paper is thus not going to be one of anthropological engagement with any selection of individual Indigenous societies in their difference. Rather, a cluster of three elements of philosophical unity in diversity between Indigenous worldviews, as asserted by Leroy Little Bear in the context of a series of transdisciplinary conferences and again in the context of the development of the United Nations Declaration on the Rights of Indigenous Peoples, is going to be discussed in ***section 2*** as a potential basis for philosophical dialogue across paradigms. Little Bear's three elements of philosophical unity in diversity are going to be further illustrated through examples taken from nineteen additional Indigenous authors' work. A more detailed discussion of the positioning of the authors involved is offered in the ***Methodology*** section.

[iii] Initial incommensurabilities between the paradigms involved do, of course, become evident from the very beginning, and are exemplified from an early stage in discussions of the terminology involved (for example, near the beginning of the ***Methodology*** section, with regards to the term "person"). It becomes evident in every aspect of the remainder of this paper, however, that it would be misleading to attempt to explain such differences in terms of any perceived relationships of mutual exclusion. Rather, it is shown that the contributions of contemporary Western philosophy discussed in this paper remain as valid as they were before – as does the reassuring reliability with which Newton's apple continues to fall in the section drawing upon some findings of contemporary Western science. At the same time, it is going to become clear that neither contemporary Western philosophy nor contemporary Western science can realistically claim to be telling the whole story of our world of continuing co-creation. An initial exploration of their shared ground with Indigenous thought, followed by steps beyond contemporary Western comfort zones using a methodology of allowing methodology to emerge (proposed by Mary Midgley and further supported by Dennis McPherson and Douglas Rabb), are not going to be reconciled by any changing of perceived sides while leaving any perceived dichotomies in place. Rather, they are going to culminate in a conclusion of responsible human co-creative activity in the world, while recognising the impossibility of unilateral human control (as evidenced, above all, by the work of Indigenous philosophers) involving respectful and responsive responsibility in continuing recognition of the subset of understanding of the world that we do have at our disposal.

[iv] In the early 1990s, a group of Indigenous academics in Canada and the United States became interested in the work of two theoretical physicists, David Bohm and David Peat. A series of conferences referred to as the "Dialogues" began to take place, and continued into the early 2000s. The purpose of the Dialogues was to explore potential shared ground between quantum theory and Indigenous thought. Information specifically relating to the Dialogues can, for example, be found in Peat [1995] 2005, and in Parry 2008. It would, however, be misleading to think of the Dialogues in terms of exclusively American thought: it becomes clear in contributions to Marie Battiste's anthology (2000) that interaction, for instance, with Linda Tuhiwai Smith's research in New Zealand (Smith [1999] 2012) was there from the beginning. Echoes of the findings of the Dialogues subsequently remain audible in a number of Indigenous philosophers' output. Those cited in this paper include, amongst others, Cordova 2007 and Cajete 2000.

[v] Brian Burkhart, for example, while identifying as a citizen of the Cherokee Nation of Oklahoma, cites multiple affiliations to other Indigenous groups and, in addition, credits his mentor, Vine Deloria, with Deloria's background then being given as Standing Rock Sioux/Dakota (Burkhart 2019: xi-xiii). For Indigenous thinkers of the generation preceding Burkhart's, an additional source of knowledge transfer between Indigenous societies can, ironically, be traced to the very residential school system which sought to eradicate Indigenous thinking. While unfortunately succeeding in securing the desired outcome to a

significant extent, the schools have, conversely, also been found unintentionally to have facilitated intellectual exchange between peers from a diversity of Indigenous backgrounds (Sakakibara, 2020, p. 87.)

[vi] The abbreviation "PRATEC" stands for *Proyecto Andino de Tecnologías Campesinas* . PRATEC is an organisation founded and led by Western-educated academics from an originally Indigenous background. Their aim is to strengthen Indigenous-led projects reclaiming Indigenous modes of human interaction with the land in Andean agriculture. Their philosophy and practice are discussed in the following works cited below: Apffel-Marglin, 2011, Grillo, 1998, Rengifo, 1998, and Valladolid, 1998.

[vii] Kyle Whyte's reference to "diverse animacies" in different species may be helpful here, too (Whyte, 2021, p. 32). What is meant is not that the stone is conceived to be leading a similar life to a human being: rather, the stone is conceived to be alive in a way that may be very different from our own. This point is also relevant to other authors' reference to a wider conception of persons in Indigenous worldviews (for example Cajete's with regards to ecological personhood understood as a matter of inter-species relationship: Cajete, 2000, p. 288-289).

[viii] It may be useful to note here that – due to Indigenous philosophies arising from relationship as humans and non-humans share in the same land – there can be no one, unified Trickster. However, a pattern of unity in diversity emerges, for example, from Brian Burkhart's *Indigenizing Philosophy Through The Land* (Burkhart 2019) and Scott Pratt's *Native Pragmatism* (Pratt 2002), with Tricksters tending to challenge and to annoy the community but, through this, also tending to be a helpful presence as they bring unexpected wisdom to the table which may have been overlooked. Pratt's choice of wording is to describe the Trickster as someone "who does things that both help the community and challenge it" (Pratt, 2002, p. 236).

[ix] For example, the phenomenon of superposition (which is, in Niels Bohr's above double-slit experiment when conducted with one isolated electron, the observation of one and the same entity appearing 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, 2002, p. 37).

[x] For example Barad, 2012: Barad discusses macroscopic phenomena allowing us to observe the other three. In relation to wave/particle duality, it becomes clear in Barad's paper that although wave/particle duality *itself* does not form part of our day-to-day experience due to the entities involved being too small to be perceived by humans, its *dynamic* (of identity not reliably being able to be ascribed without knowledge of circumstance) is nonetheless observable in macroscopic phenomena as well, for example in the different manifestations of pfiesteria piscicida.

[xi] Between the lines of Burkhardt's work, it becomes apparent that Tinbergen may not have found this choice an easy one to make: due to funding being easier to obtain for a new discipline demonstrably within the remit of mainstream Western science, the only options available to Tinbergen and his colleagues may well have been either to establish ethology as they did or to lose the opportunity altogether.

[xii] Westling's comment here might, on the surface, initially be taken solely to imply that embodied interaction in the world is more meaningful than a young Tinbergen, given the constraints of the context in which his early research was conducted, could allow himself to acknowledge. A closer look at Merleau-Ponty's work referenced, however, shows that – as also revealed in the connection between it and Jack Forbes' points made in ***section 3.2*** below – there is more to this than initially meets the eye. Merleau-Ponty's thought processes in this regard can be traced through his Collège de France lectures, from embodied inter-animality within and across species (Merleau-Ponty, 2003, p. 173) and an understanding of this interaction as an acausal dynamic (Merleau-Ponty, 2003, p. 175), to Merleau-Ponty's explicit inclusion of humans within this dynamic (for example Merleau-Ponty, 2003, p. 208), to his eventual characterisation of this embodied, meaning-making dynamic as the "flesh" in which we all share: for example, "The world and the others become our flesh." (Merleau-Ponty, 2003, p. 211), and "The flesh of the body makes us understand the flesh of the world. We have found the correlate in sensible Nature (…): it is the sensing body. (…) because it is the being of totality, macrophenomenon, that is, eminently perceived being (…)" (Merleau-Ponty, 2003, p. 218).

[xiii] Selected aspects of Spinoza's thought are going to be revisited in the context of Brian Burkhart's thinking in the following section.

[xiv] Merleau-Ponty was aware of his shared ground with the findings of quantum theory: he cites Mme Paulette Destouches-Février's work in this regard (Merleau-Ponty, 2003, p. 97-98).

[xv] Indigenous conceptions of respect being due to all should not be taken as romantic denials of the potential for mutual harm in interaction. Lives may be taken in the inter-species relationships involved: Cordova relates eating an onion (Cordova, 2007, p. 173), and animals are killed in Cajete's work (for example Cajete, 2000, p. 161). The crucial point is, in both cases, that these lives are taken in recognition of the meanings involved: they are not taken as a matter of course, let alone wantonly. A Western stepping stone may be located in Louise Westling's stories of inter-species relationships referenced above, illustrating our capacity to create shared meanings as well as to cause each other's deaths (Westling, 2013, p. 49-60).

[xvi] Accounts do exist of non-human animals being taught to communicate using symbols representing human words (for example de Waal, 2017, p. 110-111). However, as this practice exclusively relies on categorisations already available to humans, its scope for achieving communication of content *not* yet familiar to humans is inherently limited.

[xvii] It has, for example, been shown that while recognition of Ekman's basic emotions initially correlates with cultural similarity (Elfenbein and Ambady, 2003), cross-cultural attunement is then usually achieved through positive interaction (Jasini, de Leersnyder, Phalet, and Gomes de Mesquita, 2018). A partial explanation may be found in mimetics (for example Welch, 2019, p. 131).

[xviii] It may be helpful to note here that the richer conception of rationality being proposed in no way implies any intention to devalue the mainstream, contemporary Western one, leaving the underlying dichotomy in place. What is being suggested, rather, is that it is the dichotomy itself which is ill-conceived, and that the rational course of action would be to allow rationality to grow into inclusiveness of embodied and emotional factors alongside purely intellectual ones (for example Lloyd, 1979, p. 23-24).

[xix] For example Holder 2013: London cabbies displayed neurophysiological change in relation to their capacity for spatial recognition after working as London cabbies for a number of years. Accomplished violinists were found to display a different type of neurophysiological change in line with their different activity pursued. Findings of neurophysiological change as a mark of intensive engagement in a particular activity have also been reported in songbirds, whose song-related brain areas were found to be subject to seasonal change (de Waal, 2017, p. 267).

[xx] It has been shown, for example, that the customary Western distinction between subsistence on the one hand and religion on the other is not one that can be universalised: Chie Sakakibara's discussion of an Alaskan whaling community finds its author forced to coin a new term of "cetaceousness" for the spiritual *and* material inter-species relationship of mutual nurture encountered between hunters and hunted. No suitable English term exists, as the form of relationship does not tend to form part of mainstream experience where English is usually spoken (Sakakibara, 2020, p. 6-17). Arguably, miscommunication arising from the imposition of the above distinction in inappropriate circumstances has also been a contributing factor to conflicts regarding land rights (for example McPherson and Rabb, 2011, p. 87).

[xxi] For example James, [1902] 1985, p. 332-333. James is clearly aware that his stance is going to ruffle feathers as some will perceive it to be anarchic (James, [1902] 1985, p. 334). Given that related points made in James's work carry echoes of points made by Spinoza regarding the complexity of the sacred network of relationships proposed, however, it is difficult to imagine that James could have said anything else.

[xxii] This can be construed to be entirely unrelated to Lamarckism: with the evolutionary first step of random mutation firmly in place, Bekoff, for example, cites a study of coyotes' cooperative behaviour (in his case, demonstrated through play) then becoming a factor in the evolutionary second step of influencing who succeeds in passing on their genes (Bekoff, 2007, p. 102-103). The question of whether and how this cooperative behaviour is then passed on remains an open one. However, I would expect, based on de Waal's comments regarding neurophysiological change in songbirds cited above, that a coyote growing up in a social group where play is the norm will be well placed to develop neurophysiological features allowing them to be good at play and, as a corollary, be well placed to successfully engage in play when their own pups grow up, so that play, and relatedly the development of neurophysiological features associated with it, may be passed down to a new generation of coyotes entirely without involvement of genetic change as a result of acquired characteristics.

[xxiii] Accustomed ways of doing things have been shown to be able to develop non-verbally in inter-species relationships, for example, by case studies such as that of Clever Hans (de Waal, 2017, p. 45-47). Clever Hans was a horse initially believed (including by Hans' owner) to be able to count and to tell the day of the week. Hans was then found, instead, to be responding to unconscious clues given by his owner's body language. The crucial point is that the owner was unaware of giving these clues: horse and owner had developed a form of mutually responsive, non-verbal communication incapable of wholly being captured by propositional knowledge, much as that described between horse and rider by Louise Westling some decades later (Westling, 2013, p. 140).