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Love and social justice in learning for sustainability

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Abstract:
The planet seems to be heading into an ecological catastrophe, in which the earth will become uninhabitable for many species, including human beings. At the same time we humans are beset by appalling injustices. The Rio Declaration which addressed both these sets of problems contains conceptual contradictions about 'development and 'nature' . This paper addresses the issue of whether it is logically possible to work for both global justice and ecological sustainability. The article (1) proposes a way of responding to the spirit of the Rio Declaration without reinstating its contradictions; (2) considers a posthuman perspective on the issue; and (3) proposes a phenomenological approach to ethics and justice which would include both the human and more-than-human parts of the world. In section (4) the implications for education are drawn out, in terms of 'learning to mind'. Finally, links are drawn to the Journal theme of translation.

Introduction

We are living in a geological era which has been called 'the anthropocene'. The planet seems to be heading into an ecological catastrophe, as a result of which the earth will become uninhabitable for many species, including human beings. At the same time, we humans are beset by appalling injustices, both locally and globally. The Rio Declaration (United Nations 1992) addressed both these sets of problems. It proposed:

> (Principle 1) Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.
> (Principle 3) The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.[1]

The Rio Declaration was followed by the United Nations (UN) Decade of Education for Sustainable Development 2005-2014, which adopted the Rio view that it was possible to "protect the integrity of the global environmental and developmental system".

Doubts have been raised about whether this is a coherent proposal (e.g. Bonnett 2002, 2007; Kahn 2008; Kopnina 2013; Brennan and Lo 2015). Two doubts are particularly relevant for this *Special Issue* and in this article. First, the Rio Declaration did not spell out what kind of environmental and developmental system might be entailed by Principle 1. Clearly, the life styles of the wealthy nations are not sustainable: to maintain them would require the resources of several planets. However, the term 'development' is widely understood as leading to more people enjoying such life styles. Second, there is an implicit assumption that human beings

are separate from 'nature'. It is precisely this assumption which is questioned by those working to avoid ecological catastrophe. They argue that one root of the problem lies in the sharp distinctions drawn between human beings and the rest of the planet.

In this article we discuss the issue of whether or not the Rio declaration is coherent; similarly for the Decade of Education for Sustainable Development. These questions go to the core of the theme of this Special Issue – philosophy as translation and the understanding of other cultures. Global injustice and global citizenship are intricately related to issues such as global warming, availability of water, clean air and the oil economy, all of which affect everyone but which are disproportionately caused by the rich and suffered by the poor. They also affect the young more than the old. This paper addresses the issue of whether it is possible to work for global justice and also to avoid ecological collapse. If it is possible, it will be necessary to communicate across languages and cultures, including perhaps, being able to understand what the more-than-human world is letting us know about global well-being. How can we make sense of respecting those whose language we can't (yet?) understand – and which may be only semi-translatable or even untranslatable? What connections can we make across differences: differences of language, culture, world views, and even more radically, differences of species?

Since the issues raised by the Rio declaration will increasingly affect coming generations, they are particularly relevant in educational practice and policy. However, deciding what to do about them is far from straightforward. The authors of this article take the view that policy makers, educational theorists and teachers need to come together to work out possibilities. The article is a beginning.[2]

We begin by (1) proposing a way of responding to the Rio Declaration without reinstating its contradictions. We go on to flesh that out by (2) considering a posthuman perspective on the issue, and (3) proposing a phenomenological approach to ethics and justice which would include both the human and more-than-human parts of the world. In the following section (4) the implications for education are drawn out, in terms of 'learning to mind'. We conclude by relating the arguments and proposals in this article to the themes raised in this Special Issue.

1. Living well: sustainable development, sustainability and social justice

In Scotland the preferred term is 'Learning for Sustainability' (LfS) rather than 'Education for Sustainable Development'. This avoids – rather than resolves – some of the tensions inherent in the Rio Declaration. The government agency, Education Scotland, states that underpinning the use of the term 'learning for sustainability' is the aim that teachers:

> See how their global citizenship, outdoor learning, and sustainable development education activities overlapped and could be joined up. In

> introducing this term, the group wanted to help schools weave all of these themes together so that the collective impact would be greater than the sum of the parts. A whole school and community approach can only be achieved when the themes contained within LfS are fully connected and aligned. (Education Scotland n.d.)

The themes are further detailed in a 'word cloud' made up of 50 phrases, including 'outdoor learning', 'health and well-being', 'global citizenship', 'social justice', 'sustainable building and grounds' and 'protecting biodiversity', but it is left unclear how they all cohere, if they do, within the single issue of 'Learning for sustainability'.

We suggest that an alternative approach would be to recognise that all these themes are an attempt to answer an overarching question: '*How should we humans live well in our world?*', where the term 'world' is understood ecologically, as inclusive of both human and more-than-human elements, in relationship. This is an extension of a basic question for ethics and social justice, which has been addressed in many ways over the centuries. The question is a fruitful and significant one precisely because there are no simple or straightforward answers. Education is needed to help students develop the judgement and wisdom to deal with the complexities and contingencies of living well in the world.

2. A posthuman perspective on ethics and social justice

In considering both the human and the more-than-human elements as relevant to social justice, we turn to posthumanism. 'Posthumanism' is a name given to a fairly new set of approaches which have arisen from a range of theoretical backgrounds. It would be impossible to give an adequate overview in this short article; there are significant differences as well as similarities in the approaches, as can be seen in existing overviews of the topic (Badmington 2000; Coole and Frost 2010; Soper 2012; Herbrechter 2013). Here we draw attention to some of the strands that have been significant in our discussions. We have been influenced by new materialist theories which blur the boundaries between humans and technologies and also the boundaries between humans and other living beings (Bennett, 2010; Coole & Frost, 2010; Haraway 1991, 2008). We have also been influenced by Latour (2004, 2010, 2014) who argues for the agency of non-human participants or 'actants', emphasizing that events occur in 'assemblages'. His earlier work developed 'actor network theory', though he has now moved beyond it. Another set of approaches are drawn from deep ecology which is a set of ideas developing its original formulation by Naess (1973). These approaches emphasize inter-relatedness, from a perspective of ecocentricism.

Two themes from posthumanist discussions have been particularly helpful as we try to address issues of social justice in a way which include both human beings and the more-than-human. The first is the critique of anthropocentricism. This critique informs the second theme, 'social materiality'. We begin the discussion of anthropocentricism by presenting some examples which challenge human

exceptionalism.

The notion that human beings are qualitatively different from the rest of the entities on the planet, including living ones has pervaded Western thought for centuries. Aristotle based the difference in rationality: man, he famously said, is the rational animal. Religions in the West have long placed human beings between the animal and spiritual, superior to, and stewards of, the merely animal. Biologists and ethologists, like philosophers, have hypothesised many possible sharp divisions between the human and the more-than-human. They include intelligence, language, consciousness and personality. These hypotheses have become untenable as biology and ethology continue to provide evidence which breaches these boundaries.

Some examples which challenged our own anthropocentricism may help show the range of ways in which these boundaries are being breached. Intelligence and reasoning, it has been discovered, is not the preserve of human beings, or even of mammals. Birds too, especially members of the Corvus and parrot families can count, design and make tools, use mirrors, and recognise shapes, including faces (Woolfson 2010; Davis n.d.). The relatively new field of plant neurobiology demonstrates that plants exhibit behaviours that cannot be accounted for in terms of automatic reactions to chemicals, water, gravity or light. These behaviours can be described straightforwardly as intelligence and learning – but the use of these terms is controversial. Similarly, the ability to communicate is not, we now realise, purely human. There is evidence that this, too, is something that plants do. Again, it is not agreed whether, or how far, this is to count as 'language'. Part of the problem is the lack of a brain in plants. However, it appears that brains are only needed for movement, something that animals do but plants do not (Pollan 2013; Mancuso and Viola 2015). Consciousness and personality seem to be much more widespread than previously assumed. Experiments by Barron and Klein (2016) show that the mid-brain of insects indicate that there is 'something it is like' to be an ant or a ladybird, for example. Experiments on bees, cockroaches and aphids indicate that insects have personalities (Planas-Sitja`, Deneubourg, Gibon and Sempo 2015; Barron and Klein 2016; Dow, 2016).

We also want to draw attention to 'social materiality'. A key concept is assemblage because it indicates relationality between material objects, including human beings. The term 'material objects' includes not only living creatures and geophysical objects, but also structures which do not have extension in space, such as theories, systems and religious entities (Latour 2010). This conceptualisation contrasts with a traditional understanding of agency in which sharp distinctions are drawn both between intentions and behaviour and also between animate, agentic beings and inanimate, inert ones.

Social materialism and the lessening of anthropocentricism challenge some of the

anthropocentricism of traditional approaches to ontology, epistemology and ethics. Anthropocentricism is the view that human beings are distinct from the rest of the world of plants, animals, geological formations, and the technologies that human beings have created. From a more-than-human perspective we humans are all part of the biosphere within the geophysical system which is the planet. At the same time social materialist approaches take the view that we are always already positioned as part of the technical more-than-human world we have created, and part of the theories, religions and systems we use to understand it. For example, who and what we humans have become is dependent on technologies of literacy, on financial systems and on the internet – all of which were invented by human beings. We humans are geophysical, animal, cyborg and encultured beings sharing characteristics and agencies with other physical, animal, cyborg and encultured beings.

The loss of sharp anthropocentric boundaries between human and more-than-human challenges traditional anthropocentric approaches to ethics. Moreover, ethical responsibility is re-conceptualised within a relational view of how the world changes and is changed. No longer is it possible to hold that humans are the only, or primary, holders of moral standing. For example, deontological, utilitarian and Levinasian approaches to ethics commonly assume that only humans can be described as rational, happy or have the kind of otherness which has a face.

3. Living well: ethics and justice

We now return to our overarching question of ethics and social justice: '*How should we humans live well in our world?*' The answer depends on metaethical assumptions about the nature of that '*we*' and '*our*'. That is, an understanding of ethics and justice depends on assumptions about the nature of self and community and also on assumptions about how far our conduct is our own doing (individually or in community), and how far it is determined by other factors (including chemistry, physics, language/discourse and social systems). I refer back to a book I wrote many years ago on self and community in which I argued for a relational theory of the self – understood as part of a web or patchwork of connection with others (Griffiths 1995). Drawing on relational, phenomenological and feminist approaches, I argued that the self is knitted together, partially unpicked and then rewoven over and over again during a lifetime. I further argued that,

> "I" is a fragment rather than an atom. I am always part of a "we". I cannot assume I know who "we" is. (Griffiths 1995: 16).

I now realise that from a posthuman perspective, the 'we' – and so too the 'I' – needs to be understood in terms not only of other human beings but also of more-than-human relationships. We construct and are constructed by the social materialities we inhabit and recognise. Our sense of self, depends on our relations with a range of other beings and contexts, from the bacteria in our guts, to the technology we use, to the places we inhabit. As Donna Haraway has said, we are creatures 'of the mud, not

the sky' (2008: 3). At the same time, we Westerners who live in the midst of modern technology are all cyborgs[3].

In developing a posthuman, ethical framework we have been influenced by Hume (1998) and Merleau-Ponty (1968, 2002) and also by a range of relational, phenomenological, feminist theories (e.g. Young 1990; Whitford 1991; Benhabib 1992; Battersby 1998; Cavarero 2000). We follow Hume in his argument that both ethics and social justice begin with responses which need to be developed through education. Hume says that the response is an:

> Internal sense or feeling, which nature has made universal in the whole species. …But in order to pave the way for such a sentiment, and give a proper discernment of its object it is often necessary, we find, that much reasoning should precede, that nice distinctions be made, just conclusions drawn, distant comparisons formed, complicated relations examined, and general facts fixed and ascertained (Hume [1751] 1998: 75-6)

Following Merleau-Ponty (and coherent with Hume's arguments), we want to emphasise that our human responses are not confined to our relations with other human beings. As Merleau-Ponty (2002) argues, we human beings are both of the world and intertwined with it. We respond to it: to animals, plants, places, things around us in our homes, and the buildings in our locality. We respond to rocks and mountains, trees and forests. We sometimes do this directly, sometimes through our cyborg selves using binoculars, television and social media. We respond to other humans: to their faces or their voices. We respond to the sounds of insects and birds. In all of these, our response may be one of love or hatred, but possible responses also encompass a wide range: amusement, disgust, horror, delight, contempt, fury, admiration and so on. Alternatively, we may refuse to acknowledge the range of our responses, and seek to exploit the other – human and more-than-human – solely for our own instrumental ends.

Some examples will demonstrate the complexity of these responses. Consider the variety of ways that people react to demagoguery, to the plight of refugees, and to family members who might be in trouble. None of these reactions are simple and all require moral judgement. Equally, our reactions to oncomice, and to other animals bred for medical research, are complex matters of response and understanding. It is not just mammals or even animals that generate ethical dilemmas. Trees provide livelihood but that is not the whole reason that people hug them. Indeed, it is not just living things that are significant for us. Moral outrage is generated when ancient artefacts are destroyed. Consider the widespread concern about the ruins of Palmyra in Syria, the library of Timbuctoo, and the Buddhas in Afghanistan, a concern that went far beyond any national or religious affiliation. On the West Coast of Scotland Gruinard Island was evacuated in the 1940s so that it could be used as a testing ground for anthrax. Again, discomfort is widely expressed about such an experiment for reasons that go beyond any instrumental concerns.

Moral responses and judgements may result in decisions to act (or not to act). Social materialism means that our decisions, moral or otherwise, are to be understood in terms of the assemblages they concern, our ecologies. Even small children act as if happiness, love, and fairness (i.e. justice) are all dependent on each other. The cry made by young children, 'It's not fair!', is a familiar one. It depends on the expectation that the people listening want the child's happiness, and wants it because they love him/her: because they mind. Children then need to learn how to mind about the good of others, which, as Hume argues, is the start of social justice[4]. Early on they find that these others include animals and plants, such as family pets and garden plants (at least in British urban homes). In sum, the point of justice is joy and it springs from love.

As children mature into adulthood, their responses to the world continue to contribute to their apprehension of what social justice is and how to contribute to social justice in their own contexts. This process of coming to understand ethics and social justice requires education, as the quotation from Hume explains. Social justice, like ethics, is a complex – and contested – notion and needs to be taught. In relation to human beings it is multi-dimensional. Issues of fair distribution, mutual recognition, and open association, are all significant, difficult to apprehend, and sometimes lead to conflicting imperatives (Fraser, 1995; Young 2000; Griffiths 2003, 2009, 2012). So judgements have to be formulated using knowledge, wisdom and understanding. They will be contested, as different people make different judgements. Moreover, they can never be final. Indeed, social justice could never be an achieved static state, given a world which is always in a process of becoming something else. A useful way of understanding this is to realise that the noun form, 'social justice', is misleading. It is more active than that: more of a verb. Thus there will no utopia, but happily, neither will there be a dystopia.

Just as we learn to make our responses to human beings ones of love and justice, so we can learn to do the same to the rest of the world. The rapacity and cruelty that is found in human relations is like the rapacity and cruelty that is found in relations with the rest of the world. Refusal to acknowledge our common humanity is a source of unjust human relations. Equally, unjust relations stem from a refusal to acknowledge our interconnections and commonalities with the more-than-human. In terms of social justice, and learning for sustainability, teachers and students need to consider what they need to know and understand about our human impact on the things they value as individuals, intellectually, emotionally, spiritually, and aesthetically, as well as on the long term maintenance of an ecosystem that includes the existence of human beings.[5] In Merleau-Ponty's terms, human beings need to understand the 'chiasm' or 'intertwining': that we are both entirely of, but also able to reflect on, the world (Merleau-Ponty 1968: Chapter 4). So what we do to others, be they human or more-than-human, we do to ourselves. Again, as with the merely human world, judgements

are needed, and will be contested. There are no ultimate answers in ethics. Learning how to act with love and justice is difficult and uncertain.

4. The role of education in learning to live well in the world

We have been emphasising the essential role of education in learning to live well in our world, human and more-than-human. Of course we acknowledge that education has multiple and sometimes conflicting purposes and effects in relation to the state, the economy, and the intrinsic worth of learning (Griffiths 2012). However, all these purposes are subsidiary to the heart of the matter for education: living good, just lives. This is a matter of *education*, not just of enculturation, disciplining or providing role models, because, as we have argued, there is no final certainty about the good. There is no utopia to be offered. Instead teaching should be open enough - and rigorous enough – to enable students to form their own, well-founded views about how to live. They need to work out how to contribute to remaking the world in order to lead worthwhile lives now and in the future. To do this they need to understand the world and their place in it. Or to put it another way, the task of teachers is to engender in their students the joy *in* learning, the joy *from* learning, and the wisdom to contribute to the collaborative task of creating a just world (Griffiths 2012). In this view of education, we follow Arendt (1968) – and Wollstonecraft before her – in their arguments that the young should not be told what to think or how to behave (Griffiths 2014). As Wollstonecraft said:

> "It is difficult for us purblind mortals to say to what height human discoveries and improvements may yet arrive when the gloom of despotism subsides which makes us stumble at every step." ([1792] 1994: 102)

Therefore, as Arendt said:

> "The function of the school is to teach the children what the world is like and not to instruct them in the art of living…nor to strike from their hands the chance of undertaking something new, something unforeseen by us." (1968: 196)

If students are to learn to engage enough with the world to develop informed, critical, heartfelt judgements, a pedagogy is required which inspires, persuades and encourages them to pay attention and to re-think their outlook on the world. Such an open-ended pedagogy is well described by Hogan (2009):

> "What is at issue here is the thoughtful creation of new imaginative neighbourhoods on a daily basis, or on successive occasions through a normal day." (80)

Spivak prefers to talk of desire rather than of imagination, and also points out that this pedagogy requires students to move well beyond their accustomed areas of comfort.

> "[Education as] the uncoercive rearrangements of desire: [even though]… There can be no education if there is no shoving and pushing." (Spivak 2014: 80-1)

In terms of teaching ethics and social justice, such openness means that teachers are less concerned with specific actions that the teachers think right, than to make sure that the students have sufficient information and understanding of the world as it is. Indeed, the conclusions that students reach may not concur with those of their teachers. So teaching students to live well is not so much about their using some politically correct vocabulary, for instance, or considering air miles when they buy food, as enabling them to be informed and responsible in working out what living a good life might be, individually and collectively.

Open-ended pedagogies are difficult and demanding for both teachers and students, and pedagogical relationships are key to their success. Teachers enable students to become who they are not yet, as they develop relationships not only with each other, but with school subjects and with what matters in the world (Griffiths, Hoveid, Todd and Winter, 2014). All pedagogical relationships are ones of response. Everyone and everything is changed through these relationships. All of them involve minding about something or someone. An open-ended pedagogy (unlike one primarily concerned with imparting a pre-determined curriculum of information or skills) has to take this into account as part of the point of the pedagogy.

Mind (like matter) is an interesting English word. The verb and gerund forms, 'to mind' and 'minding', include both affective and cognitive associations. These forms, unlike the noun form, 'mind', imply the inseparability of reason, emotion, feeling and logic. Minding is characteristic of human relationships. It always includes both understanding and feelings: admiration, awe, cold, curiosity, competition, ease, horror, imagination, love, memory, warmth, etc. As we have argued in the previous section, these are relationships of love and justice – or their opposite. For human beings, minding is always an ethical matter in relation to other human beings and also, often, to the rest of the world. Thus a desire for justice is rooted in minding[6].

Since minding depends on learning, education can be characterised as learning to mind. Thus a pedagogy for ethics and justice depends on teachers introducing the world to students while allowing them time and space to respond whole-heartedly, without any pressure to respond in specific ways. In other words, pedagogical strategies have to make space for response to what matters, and openness to minding about it. Moreover, this is not just a matter of allowing spaces within the school day. Undirected experience and play have their place, but are not enough. It is not enough to provide children with opportunities to be in nature[7], as in the 'children in nature' movement (Malone 2016). Neither is it enough

> "to see child's play in nature…[as a] seedbed for a lasting responsiveness to calls of natural care and future considerations…[which] can be loosely touched upon in the formation of personal judgement and discourse competence." (Postma and Smeyers 2012: 409)

Instead there have to be specific pedagogical strategies and practices which require students to pay whole-hearted (or loving) attention to the world and to make engaged connections with it. These connections are the subject to change as the teacher ensures that the students are questioned using information and critical discussion (Nicol 2014). Thus, as with any area of the curriculum, both responsive and proactive pedagogical strategies are needed. To return to the quotations earlier in this section, this is an uncoercive rearrangement of desire (which takes some pushing and shoving). This is an introduction to new imaginative neighbourhoods (using both persuasion and guile). This is a source of delight and joy in a worthwhile life. And it is giving students the chance to participate in re-making the world with wholehearted understanding – and in being re-made

Educational philosophy risks being irrelevant unless its conclusions are grounded in example. Therefore we have presented three examples from pedagogical practice. We have been careful to ensure that they represent different approaches within our overall framework. We have also drawn from different age phases: early years, secondary schooling, and Higher Education. Finally, since we do not have enough space to give many details, we have been careful to choose examples which have already been published.

Our first example is from Early Years. Murris's proposals for a posthumanist approach to early years literature begin not with play in the outdoors, or even indoors with objects (as in Rautio and Winston 2015) but with story books. She emphasises the significance of the art work and of the quality of writing because they engage the children who respond with attention. She goes on to explain how the books can be then used as a basis for asking "open-ended and thought-provoking conceptual questions" (2015: 64) in which they question – and learn to mind about – conceptual distinctions such as human/animal, machine/life and nature/culture.

In our second example Winter draws on her own experience as a schoolgirl on a geography field trip. She explains the significance of her response to the place they visited:

> "I had copied countless diagrams of U-shaped glaciated valleys…but never seen one for real…The picture remains inscribed in my mind 40 years later…I was shocked, disturbed and disoriented by the emptiness and eeriness as I confronted this mysterious feature." (Winter, 2012: 281)

She goes on to describe methods she uses as a geography educator which make a space for secondary pupils to attend to a place and also to be challenged by different ways of representing it, through maps, aerial photographs, technical diagrams and sculpture. She creates an opportunity for her students to mind about a place rather than reducing it to a simple example of a currently dominant, instrumental, technical discourse.

Our final example comes from a postgraduate outdoor education course. Higgins and Wattchow discuss the kinds of educational encounters that may occur when the group and their teachers undertake a canoe journey down the River Spey in Scotland. The teachers are explicit that the "merits of an outdoor journey relate directly to the quality of the subjectively lived-experience of the participants" (2013: 19).

> Now I find time to dwell on this river, a thoroughfare for millennia, and its banks that reveal a history of human use – deforestation, farming and settlement, warfare and peace, privilege and poverty, railways, industrialisation, and the distilleries with the emblematic Spey malt whiskies – Macallan, Aberlour … (28)

At the same time, they ensure that students' understanding of the river is challenged and extended by introducing multiple perspectives:

> "The perspectives of the geologist, hydrologist, ecologist, the landscape historian, the economist, the fisher, the artist and the canoeist are just some of the possibilities that might all be brought to the students' attention and into the realm of their experience." (20)

Meanwhile the teachers are themselves attentive to questions such as:

> "How will complex, ambiguous and contradictory meanings be dealt with? How is this whole learning experienced cognitively as well as 'in' the students' sensing bodies?" (20)

These examples give some indication of open-ended pedagogical strategies for learning to mind. Significantly, all of them are recognisable as 'just good teaching'. Learning to mind need not entail extraordinary practice; it does entail a reflective, indeed minding, approach to pedagogy. In each case students were introduced to new imaginative neighbourhoods in ways which can be described as uncoercive rearrangements of desire. All of them make space for students to pay attention to the matter at hand, while also challenging them to be rigorous in their use of facts, critical of their previous responses and assumptions while able to deal with ambiguous and multiple meanings. All of them deal in their different ways with issues that are relevant to the central question of 'How we should live well in the world'. None of them give easy answers but may provoke the students into deeper thoughts and actions about social justice, love and sustainable living.

Concluding thoughts

We began this article by referring to the UN Rio declaration and the UN Decade of Education for Sustainable Development 2005-2014 These initiatives indicate that there is now a growing international awareness that global well-being depends on an acknowledgement of the interdependence of the human and the more than human. At the same time, as we pointed out, both documents contain serious tensions. So far they remain unresolved. The peoples of the world have still found no strategy which will achieve the central Principles of the Rio Declaration. Nor is there a consensus on what 'education for sustainable development' entails.

Keen to find some resolution, we have suggested an approach which brings together both human flourishing and ecological concerns as two aspects of a single concern for social justice, which we understand as endeavouring to live well in our world. This is a matter for education: for we human beings, learning to understand our place in the world requires us to take a critical approach to our own individual and cultural responses to the human and the more-than-human. It also requires us to attend to the responses of others: both human and more-than-human. The last of our examples in the previous section explains how students are required to attend not only to their own individual and collective responses, and not only to a range of human perspectives, but also to how the river itself responds to its changing contexts.

Attending to the responses of others entails communication not only across languages and cultures but also across different kinds of being on the planet. Translation is key to such a process. This proposal highlights some aspects of both communication and translation. In particular, only some communications are in verbal language or even in gesture. And only some are intentional. Translation transcends different modes of existence. Further highlighted is that while communication and translation may be only partial, they are essential to the future well-being of the world: the ecosystem and the future existence of human beings on the planet. The difficult effort needed to understand, if only partially, what the rest of the world has to tell us is entirely worthwhile.

Education has an essential role to play in enabling human beings to develop a full, heartfelt apprehension of the world they live in. We have expressed this in terms of 'learning to mind'. Education will not may not be sufficient but it is necessary. In general, if enough young people mind about living well in the world, that is, mind with full, whole-hearted understanding, the hope remains that there will be a worthwhile future life for them and their children. It is the task of educators to make this possible for them.

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Endnotes

[1] Principle 2 is less relevant to the theme of this article:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

[2] Both authors were school teachers and now teach in Higher Education. Morwenna Griffiths has been in teacher education for many years, while Rosa Murray was, until recently, an educational policy maker and is the person who was most closely responsible for introducing Learning for Sustainability into the Teaching Standards in Scotland in 2013. They met regularly during the 2015-16 academic year to discuss the relation between ecological sustainability and social justice. This paper is one result of the collaboration. It was written by Morwenna who uses 'I' (Morwenna) as well as 'we' (Morwenna and Rosa). But all the arguments have been developed and are owned by both of us.

[3] Of course, many non-Westerners also live in the midst of modern technology. On the other hand, much of the world's population has little access to it. For instance, according to World Bank data, in 2016 only 40% of the world's people had access to the internet (http://data.worldbank.org/indicator/IT.NET.USER.P2).

[4] Learning that each of us is part of a human community means losing self-centredness. However, it does not mean losing the self. This is analogous to losing anthropocentricism. Abandoning the view that humans are the only holders of moral standing does not mean we abandon the moral standing that we have. Further, while acknowledging that the human perspective is only partial, it is the only perspective available to us.

[5] We are indebted to our colleagues at the University of Edinburgh, Peter Higgins and Robbie Nicol, for this way of articulating the educational task.

[6] We are focusing on the education of human beings in this article. We expect that

the inseparability of reason, emotion feeling and logic will apply to other entities in the world, but the investigation of that is beyond the scope of this article.

[7] We have avoided using the term 'nature', which is notoriously ambiguous, and also liable to invoke a Romantic vision of wilderness and beauty.