Human Ecology, Bio-ethics and Human Rights in the Anthropocene:
How and Why Place-Based Agency Matters

Lewis Williams

articolo

Introduction[1]

Rapid advances in Western Science, bio-medicine and related technology over the past fifty years or so, mean that humanity is increasingly confronted with ethical decisions which involve evaluations of the quality, value and meaning of human life. Cognizant of the global scale and magnitude of these rapidly evolving complexities, UNESCO championed and oversaw the adoption of the Universal Declaration on Bioethics and Human Rights. Arguably, the most far reaching international agreement in the field of bioethics to date, the Declaration takes into account people's social, legal, cultural and ecological dimensions whilst recognizing the unique interactions between medical and technical innovations, and particular environments.

Paradoxically however, just as the human civilization has reached these unprecedented levels of scientific and bio-medical innovation (which have given rise to the Declaration), we find ourselves having crossed a threshold of another kind; one of comparatively exponential proportions, defined by humanities' impact on the planet. Arguably a new epoch, the Anthropocene is primarily driven by the ongoing dominance of Western reductionist science and its subordination to market expansion imperatives that have little regard for limited planetary resources. Rates of natural resource-extraction, consumerism, and waste emission continue to escalate, pushing the planet and life as we know it into dangerous and uncharted territory. These processes are leading to mass extinctions of life which in time may quite possibility include the human species[2]; thereby, rendering the Declaration irrelevant.

Interestingly, the Universal Declaration on Bioethics and Human Rights includes several articles which either directly or potentially relate to environmental considerations. These articles – *respect for cultural diversity and pluralism* (article 12), *protection of future generations* (article 16) and the *protection of the environment, the biosphere and bio-diversity* (article 17) – if correctly interpreted, could potentially present new opportunities for the development of a relational ethic which could definitively situate human rights and bioethics within the deeply interconnected Life-World[3] that humanity inhabits. Human Ecology as a field, particularly more recent genres, could potentially offer much to such an endeavour, provoking a fundamental re-orientation of the Declaration which in its current form emphasizes the unique capacity of human beings for reflection and intentionality, and infers agency to be an exclusive human attribute.

These recent theoretical developments found within several branches of Human Ecology scholarship – for example, Integral Ecology, Indigenous Studies, Eco-Feminist and Sustainable or New Science – introduce a number of empirically substantiated attributes pertaining to eco-systems such as the varying capacity for interiority, consciousness, intentionality and agency of other than human life-forms[4]. According to these theories, life is hardly the Cartesian variant of two clearly delineated life spheres (the human and the

Founding Director, Koru International Network

Associate Professor, School of Health, Nursing and Midwifery, University of Southern Queensland, Australia

Studia Bioethica - vol. 8 (2015) n. 2, pp. 25-35

environment); rather we exist in a web of multi-species entanglement and exchange (Life-World) which incorporates the tangible corporeal and material world, but also goes beyond this to incorporate the sub-atomic and states of energy and consciousness.

These later genres of human ecology which also clearly position human health as grounded in and inexplicably linked to the well-being of the "eco-system" call us to re-imagine bioethics and human rights within the broader context of multi-species differences and connectivities where ethics might be "understood as an interface – a site of encounter and nourishment"[5] between life-forms. Thus human ecology – the study and practice of human-environmental relationships has the potential to re-position human rights and bioethics not as the primary protagonists of human quality of life and well-being but rather as secondary actors clearly operating within the limits of the earth's carrying capacity. Within this scenario, the bioethics surrounding human reproductive technologies for example, would not only be sensitive to culturally mediated human rights but to the limits of the earth in sustaining human population increases.

In this article, I argue the relevance of place-based agency for informing a relational ethic between people and place that could in time inform the implementation of the Declaration. I primarily focus on Human Ecology as a form of philosophically engaged practice based on the Aristotelian value of "living-well". From this perspective, the field is understood as enabling people to strike a balance between «one's internal desires and moral character and one's social and natural circumstances»[6]. As a philosophy, Human Ecology should encompass critical explorations of the ontological and epistemological basis of any given ecological phenomenon. Given that the Anthropocene is primarily sustained by neo-liberalist corporate – state relations which ensure that global mass production and consumption (which include bio-medical and technological innovations) remain uninterrupted at almost any cost, I also emphasize political and economic forms of ecology. These have particular relevance for the ways in which contemporary human-environmental relations are mediated by various dynamics of power, culture, history and nature. I discuss the Ecology of Well-being Project with Indigenous and international migrant and refugee women in Canada and Aotearoa New Zealand, as an example of how the articulation of culturally and place-based epistemologies of well-being and place (in this case Indigenous and Participatory worldviews) provide a valuable form of relational ethic which potentially includes and transcends human-centric approaches to well-being. Despite the often deterministic nature of structural power relations (political ecology), this example re-situates humanities embeddedness in nature as being the primary informant of a relational ethic for bio-medical and technological innovations aimed at enhancing human health.

The Universal Declaration on Bioethics and Human Rights includes several articles which either directly or potentially relate to environmental considerations

The Evolution of Human Ecology[7]

Today, Human ecology – the study and practice of relationships between people and the environment – represents a broad and burgeoning field comprised of numerous sub-disciplines with recent scholarship estimating over 100 emerging schools of ecology, environmental studies and ecological thought[8]. Historically speaking, Western conceptualizations which frame modern scholarly debate are very recent emanating from the 1800s. Human Ecology has its roots in Ecology which is grounded in the physical and biological sciences, and is largely concerned with the study of the ecosystem as distinct from human beings. The 1940s and 50s gave rise to the birth of human ecology when mount-

ing concerns about the impact of people on the environment culminated in the inclusion of human beings into the equation. Over time, the entrance of other key disciplinary protagonists – namely, sociology and human geography – was largely responsible for the fields growing account of the reciprocal impact of the environment on human society.

The most persistent definitions over time have conceived of human ecology as 1) "the study of relations between men and their environment[9], and 2) and more latterly as «an academic discipline that deals with the relationships between humans and their natural, social and created environments»[10]. Not withstanding more recent conceptualizations which are beginning to appreciate more fully the entwined and embedded nature of human-eco-systems relations, overall contemporary approaches tend to reflect three historically embedded and related characteristics: an emphasis on scientific rationality and reductionism, a concern with materiality and externalities, and an underpinning onto-epistemological mono-culturalism.

Whilst human ecology's development has been similarly influenced by the same modernist paradigm that has also driven global economic, cultural, technological and political developments, in recent years discourse has begun to demonstrate a gradual shift from shallow sustainability approaches and associated questions regarding the earth's capacity to absorb the impact of humans, to those more focused on whether or not humans have the ability to comprehend our relations with the living world[11]. Whilst beginning to re-align itself with "deeper sustainability" approaches which focus more on the epistemological nature and depth of relationship between humans and the environment, the field has begun to show an increasing engagement with Participatory and Indigenous worldviews and place based forms of consciousness and agency[12]. These latter schools of thought articulate the necessity of Human Ecology as a holistic and integrated disciplinary endeavour concerned with accessing objective, subjective, inter-objective and inter-subjective realities and provide an important gateway for connecting Western, modernist subjectivities to the environment. In keeping with these developments and human ecologists common desire to envision and participate in shaping a more ethical future, Human Ecology is defined for the purposes of this paper, as «the ability to understand, respond to, and work towards what is in the best interest of and will benefit all human beings and life on this planet»[13].

Human Ecology and Place-Based Agency

Due to their respective epistemological orientations both Indigenous and Participatory Worldviews offer potential for situating human rights and bioethics as embedded and encompassed by the larger eco-system or Life-World. While there are many similarities between Indigenous and Participatory Worldviews, the re-assertion of Indigenous worldviews is inextricably tied up with Indigenous decolonization and resurgence – the restoration of cultural practices and the re-generation of one's relational place-based existence[14]. Indigenous worldviews or Paradigms conceptualize agency to be a human and more than human attribute – all life forms, even those that are in the Western sense considered to be inanimate, have life-force, varying degrees of consciousness, receptivity and initiative[15]. This inclusive notion of kinship recognizes the existential value of nature independently of its utilitarian value to humanity. While Indigenous worldviews are particular to place and peoples, they share some similar epistemological roots and principals which include: the interconnectedness of all of life; that every element or life form has its own life-force; that matter is imbued with spirit; and the inherent reciprocity between life forms[16].

Paradigms of Indigenous Resurgence differentiate themselves from non-Indigenous sustainability efforts through their grounding in three political themes or agency imperatives– *Resurgence* – the resurgence of place-based consciousness and culture, *Responsibilities* – guardianship and responsibility towards all living things which are fundamentally differ-

ent from human rights discourses derived from state-centric forums premised on capitalist and Eurocentric norms of the precedence of humanity over nature, and *Relationships* – other than human forms of life are not resources in the way of the free market economy, but rather part of the web of life[17]. To varying degrees, these agency imperatives (reasons for acting) differ significantly from other cultural communities who while may be equally concerned about human and environmental well-being and subscribe to epistemologies which while similarly aligned, are however, differently positioned within contemporary forms of globalization and colonization.

Aninshnabe and Haudenosaunee scholar Vanessa Watts captures this Indigenous-Life-World-Agency perspective (my term) well through her observation that in contrast to Euro-Western understandings for Indigenous communities, society is constituted not just by human to human relationships, but from the interactions between the entities within the Indigenous Life World – i.e., the interrelations between humans, other animals, plant, mineral and spirit worlds. She articulates this consciousness as "Place-thought", a distinctive space which recognizes the interconnectedness between thoughts and place, «based upon the premise that the land is alive and thinking and that humans and non-humans derive agency through the extensions of these thoughts»[18]. Given this, Indigenous perspectives of whom and what contributes to societal structures are quite different from post Enlightenment, modernist, Western thought in which the agency of "other than human life" is subjugated to the desires, needs and agency of humans. «From an indigenous point of view», Watt's continues, «habitats or ecosystems are better understood as societies; they have ethical structures, inter-species treaties and agreements and further their ability to interpret, understand and implement»[19]. Within Indigenous communities in both Canada and New Zealand, these contracts between humans and place have existed and been nourished in the form of sacred guardianship agreements between particular tribes, place and the other beings of place. Traditionally in Indigenous societies it has been the Shaman who has practiced one of the most advanced forms of human ecology in mediating these relations, ensuring an appropriate flow of nourishment between human and other than human life[20].

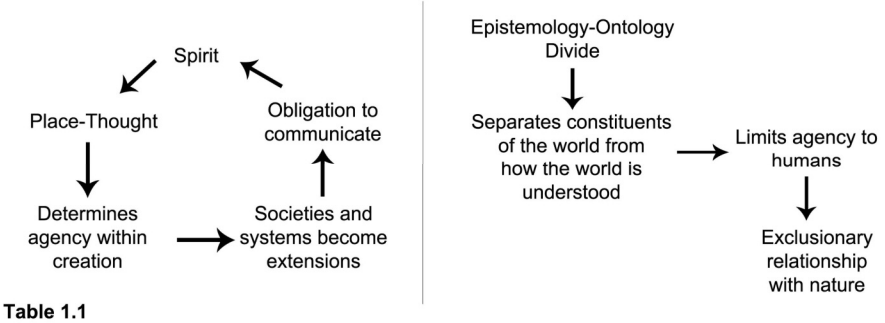

Table 1.1

Table One: Visual representation of Euro-Western and Indigenous Framings of Agency, Source (Watts, 2013:22).

The evolution of Participatory world views emanating from Western scholarship reflects a progression from earlier phenomenological studies which emphasized the embodied nature of human perception to later genres which position all matter as alive and with varying degrees of consciousness, and view knowledge as resulting through the interplay between matter and mind, human and other than human life[21]. Similarly to Indigenous worldviews, agency is attributed to human and other than human life which with its various modes of consciousness and levels of being are in themselves agentic.

Participatory Worldviews differ from Indigenous Paradigms in so far as the latter are always specific to place and peoples, having emerged as the epistemological bedrock of a

specific place over time. Participatory scholarship more represents a generic set of principals born of out of re-engagement with place by individuals and communities seeking to re-capture the Indigenous relationship to the earth community enjoyed by their ancestors – it offers an important means of engaging with place, but it is less so uniquely born from continuous, place-based existence. Secondly, whilst Participatory paradigms are political in that they are seeking life-giving ways forward beyond the bounds of Western modernist development these differ significantly from Indigenous Resurgence political imperatives. Not with-standing the devastating impacts of colonization for Indigenous communities, those who have maintained some connection to traditional lands are more often "of a place" with respect to thought, language and culture – i.e., reflect the consciousness of place – than those who have a broken relationship with place. As is evident in research articulated in the next section Indigenous peoples with access to land may through acts of resurgence experience the economic and political dimensions of their lives differently than international migrant and refugee women (also affected by issues of forced migration and cultural dislocation) who are literally disconnected from their ancestral lands and perhaps more active participants in the «consumer construct of citizenship»[22].

Both Indigenous and Participatory worldviews differ markedly in their conceptualizations of agency from Western modernist genres of human agency (which until very recently have underscored much of human ecology) which are often tightly interwoven with late capitalist or neo-liberalist forms of governance. For example, Hird[23] provides a compelling account of the configuration of waste management by contemporary neo-liberalist forms of governance which position it as an issue needing to be managed through technology and industry and individual responsibility rather than a system that supports relentless, extraction, consumption and environmental degradation. On the other hand, Participatory and Indigenous approaches to human-environmental relations more attuned to human-place relationality and the awareness of humanity as being "of the earth", view this same scenario of waste management as the subjugation of "other than human agency" to human need through the relentless exploitation of place.

Both Indigenous and Participatory worldviews differ markedly in their conceptualizations of agency from Western modernist genres of human agency

Table Two "Three key contemporary Human-Ecology Paradigms" summarizes and contrasts Positivist, Participatory and Indigenous approaches to human-ecology. Participatory and Indigenous paradigms are conceptualized as transcending and including positivism, which has played and continues to play a significant role within the biological and physical sciences, enabling the study of various ecological phenomena with great precision and detail. As the primary fields which have given rise to the need for bioethics (decisions about human interventions and life processes), bio-medicine and related technological innovations, are strongly rooted in positivist framings of reality, and the post Enlightenment epistemological divide between human and other living beings[24]. These tendencies are similarly reflected in current articulations of human rights and bioethics which are in turn strongly linked to human and State-centric forums underscored by late capitalism and aligned corporate interests[25]. On the other hand the agency imperatives articulated within Participatory and Indigenous paradigms are not necessarily (and often not) those of the corporate elite – i.e. – market expansion and the tendency towards the unbridled precedence of human life over other than human forms at almost any cost. Rather notions of "living well" are framed within a reciprocal participatory exchange which situates human rights and bioethics within these.

	Positivist Paradigm	Participatory Paradigm	Indigenous Paradigm
Ontology	Absolute reality, Universal truths.	subjective-objective reality, co-created by mind and given cosmos.	Physical reality is interpenetrated by metaphysical (spiritual) reality. All life has an essence. This essence is not static however, as life is perpetual movement. Multiple experiences of realities shaped by the multiple connections human beings have with the environment, cosmos, living and non-living.
Epistemology	Objective, measurable, materialist, reality consists of only that which is able to be physically observed	Critical subjectivity in participatory transaction with cosmos; extended epistemology of experiential, propositional and practical knowing & co-created findings.	Place-based epistemologies, often developed over 1000s of years in continuous relationship with land, waters, spirits and ancestors of a place.
Political ecology + cultural alignment	Western, neo-liberalist, State-Corporate forums of development , human-centric, Citizenship = homo-economicus	Deep ecologists, environmental ethicists, Eastern philosophers; varying degrees of State alignment.	Indigenous Communities, separatist and state-based forms of political alignment.
View of human agency/being	Rational, unified actor, self-responsibility, utilitarianism. Anthropocentric; agency and consciousness are limited to humans; human life valued over other life forms.	Reciprocal agency within life-world system of human and other than human life. Agency is subtle (energy, consciousness) and gross (social structures, material).	Reciprocal agency within the Life-world system of human and other than human life. Human agency results from place-based thought and is related to human and other than human agreements. human consciousness and agency de-centred. Co-intelligence.
Life / agency Imperative	Human centric, materialist growth paradigm, emphasis on technological solutions to sustainability issues that do not disturb. late capitalism as the governing system.	Well-being, human flourishing and the flourishing of all life forms.	Self-determination; Indigenous resurgence; reconstruction of knowledge that promotes political transformation Decolonization, guardianship of traditional territories and the earth community.

Table Two "Three key contemporary Human-Ecology Paradigms"

The Ecology of Well-Being Project

The Ecology of Wellbeing Project (EWBP)[26] provides an example of a critical approach towards mental health which potentially situates bioethics and human rights within a broader relational ethic that encompasses place. In seeking to address psycho-spiritual wellbeing with women affected by forced migration and cultural dislocation from Indigenous and international migrant communities in Canada and Aotearoa New Zealand, this project focuses on "vulnerable" populations as articulated within Article eight "The principle of human vulnerability and personal integrity" of the UNESCO Declaration. These populations who are at the economic and cultural margins of society experience significant mental health disparities relative to other groups. While underlying causes are more often social and ecological, these populations are predominantly treated within Western bio-medical frameworks which consist of therapeutic drug regimes or individual and family counselling. However presenting issues are often symptomatic of rupture from culture and place[27]. Through individual interview and group dialog research methods which provide the opportunity to articulate holistic conceptualizations of emotional wellbeing, the EWBP aims to build human social and ecological resilience across these communities. Relationship building and re-surfacing traditional knowledge related to the interconnectedness between human health and the well-being of place are key facets of this.

The project is aligned with an evolving body of scholarship which recognizes issues for Indigenous and international migrant women to be intimately connected through the historical facts of colonization and contemporary forms of colonization[28] whilst also acknowledging the unique experiences of Indigenous and migrant communities. Obviously, these categories are not clear-cut, and these identities and cultural histories are more often hybrid ones, than not. For example, a good number of migrant and refugee women are Indigenous to their countries of origin or from traditional societies which hold Participatory worldviews. The theoretical framing for this study therefore, encompass the application of Participatory and Indigenous-Life-World perspectives to understanding the impacts of migration on well-being whilst also recognizing that most of these women were also schooled within Western education systems and will also have modernist framings of reality alongside Indigenous and Participatory perspectives.

The Indigenous Peoples of both Canada and New Zealand are now flanked by sizeable immigrant populations many of whom are also marginalized in the context of the intensifying effects of globalization, growing income inequalities and health disparities. Public policy within each nation emphasizes the strategic positioning of each within a global economy in part through the provision of human capital and therefore increased emphasis on the economic rather than the humanitarian aspects of domestic social or international migrant and refugee policy. Increasingly, «differences in customs and origins are overlooked so long as one reflects the ideals of homo-economicus or the rational actor who adopts and is well versed in the logic and idioms of the market»[29].

These contextual issues give rise to two significant differences between our study populations. Firstly, whilst ethnic and immigrant minorities are often looking to settle down and fit within existing social and political frameworks, Indigenous Peoples are forcibly incorporated nations who often want to "get out" of the imposed nation state. Secondly, while for Indigenous communities, citizenship often includes rights and responsibilities that include the natural world, international migrants tend to be more immediately focused on their human rights as citizens[30]. However, the same struggle to belong and be included exists for both.

Unlike dominant Western, individualistic notions of mental well-being, for many of the EWBP participants emotional wellbeing is inseparable from place; a construct which is also articulated within literature pertaining to Indigenous meanings of resilience and emo-

tional wellbeing[31]. For example one Canadian Indigenous participant talked about well-being in the following terms:

> Relationships are very important. They may actually be the essence of wellness for me… .connections to family…..and when I am there (ancestral lands), I absolutely feel when I am there that I am a part of that land… the experiences we have in our dreams (of other than human life) are really important, they help us nurture our relationships with the land and the animals[32].

As such, the Indigenous (Maori) concept of Turangawaewae (standing place) has been an important means of facilitating land-based, holistic conceptualizations of resilience and well-being. Often conceived as a place of belonging in terms of land, it also refers to a place of power – the place where one is powerful[33]. Through bringing these communities together for conversations around Turangawaewae and wellness, submerged Indigenous and other traditional knowledges are re-surfaced and applied to conceptualizations of human-environmental wellbeing. Narratives of globalization and colonization (of land, spirituality, knowledge systems) are important connecting points as are these convergences in belief systems.

While significant overlaps in experiences and worldviews between the study populations have emerged from dialogue circles, two important differences are evident. Firstly because some of the Indigenous participants are still connected to their traditional lands, their experience of turangawaewae is qualitatively different than that of immigrants. A Maori (Ngai Te Rangi) woman who has migrated to Auckland for work, but still enjoyed a connection with her ancestral lands in Tauranga discussed turangawaewae in the following terms:

> For me turangawaewae is having a sense of belonging and having that connection to the land your ancestors walked on and knowing that's where you're from… my ancestors are an important link to my mental health as well because for Maori we believe they're always with us. So when you are walking onto a marae for a powhiri, it's not just for you, you've actually got thousands of people behind you in spirit[34] (Ngai Te Rangi, woman, Tauranga).

A sense of turangawaewae as expressed through the land generally differs according to circumstances precipitating migration. The more disconnected one is from one's ancestral lands can mean that a sense of turangawaewae is more elusive. For example one Tongan woman who came to to Aotearoa at the age of 17, in part to support her extended family through remittances back to Tonga spoke of turangawaewae as being exercised more through cultural spaces and church:

> Back in the Islands we grow our fruits and we grow our crops… we get things straight from the land… But like here in New Zealand I am still floating… because you don't own the land you know, you just float around on the surface, you don't have any hard foundations that you own your own land… whereas in Tonga your land is your land… here my sense of belonging is my parish my church, my relationships… my turangawaewae is my mana[35], it comes from my heart and it makes me who I am (Tongan migrant woman, Aotearoa)[36].

Secondly, emerging research results[37] demonstrate not only the traditional knowledge of woman who maintain a connection to place to be stronger, but that these same connections afford acts of resurgence such as place-based tribal management plans and the adoption of more critical perspectives of State-waste management regimes[38]. On the other hand international migrant and refugee women without connection to land, living in urban environments who may be under more direct scrutiny for their economic contribution as prospective citizens or permanent residents, and perhaps therefore, more likely to be forcibly incorporated by citizenship governance forums into waste management regimes.

As currently articulated, bioethics attends to the rights of "vulnerable" and culturally marginalized women through ensuring ac-

cess to resources such as interpretive services, informed consent and even socio-cultural models of health, but certainly not approaches which link emotional and social wellbeing with place-based thought and the wellness of place. Both Participatory and Indigenous worldviews potentially resituate experiences of psycho-spiritual wellbeing and human rights within the broader ethic of caring for place. These approaches to human ecology potentially have a lot of offer in re-centring "place" in our considerations of ethics pertaining to living systems. Emergent findings demonstrate the ways in which place-based thought and agency are mediated by the political ecology of place, power and culture. International migrant and refugee women who even though might subscribe to Participatory worldviews of place-based agency and well-being may be less well-positioned to articulate these than women who are Indigenous to place and arguably less reliant on state-centric forums of citizenship.

Conclusion

Human Ecology is first and fore mostly a philosophy; a relational ethic that shapes human and other than human relationships. It is an approach towards living well, whilst increasing our ability to understand, respond to, and work towards what is in the best interest of and will benefit all human beings and life on this planet. The field necessarily engages questions of ontology and epistemology whilst acknowledging the limits of bounded rationality – the world as we apprehend it, is shaped by the limits of human consciousness.

Whilst the Anthropocene represents an Epoch which is dominated by exponential rates of production, consumption, and unprecedented waste, it is not era solely defined by late capitalism. It is also a time of re-awakening and re-integrating the Participatory and Indigenous worldviews that were once held by our common ancestors, along with the scientific wisdom we have since gained. These worldviews of interconnectedness, not only best represent the underlying nature of reality in so far as has been empirically proven, but are also appear best suited to the Aristotelian value of living well. The EWBP provides an important example of these perspectives, whilst also demonstrating the potentiality of marginalized knowledges pertaining to "vulnerable populations" to contribute to the re-inscription of bioethics and human rights into a larger human-environmental framing of well-being.

The capacities of science, bio-medicine and related technology to prolong, improve and even shape life itself are remarkable and strike at the heart of the meaning and value of life. The far reaching potential of the Universal Declaration on Bioethics and Human Rights, particularly with respect to its cultural and environmental dimensions is also an invaluable step towards a more integrated approach to human-environmental wellbeing. Whilst humans may have unique capacities for reflection and moral reasoning, agency, consciousness and intentionality is not limited to humans. Moreover the extrinsic value of human – i.e. – value to other life forms – is less significant to the eco-system in its entirety than many other life-forms[39]. It follows that unless human rights and bioethics are understood as existing within multi-species and participatory environmental contexts, that actually defines the limits of bio-medical and technological innovation and human life itself, the Declaration could quite possibly be rendered irrelevant in the face of diminishing life on earth. To be truly effective the Universal Declaration on Bioethics and Human Rights must recognize that the "subjugation of other than human agency" is dangerous for the planet, resituating human ethical decisions about life-processes within the broader context of multi-species encounter and nourishment.

NOTE

[1] This social action research project has only been made possible through the dedicated participation of the Indigenous, immigrant and refugee women's com-

munities of Toronto, Canada; Auckland and Tauranga, Aotearoa New Zealand; and partnering organizations: the Riverdale Immigrant Women's Centre, Umma Trust and Te Runanga o Ngai Te Rangi. This research was funded by a grant from the Canadian Institutes of Health Research, Canada (Grant # 149037).

[2] ISSC and UNESCO *World Social Science Report 2013, Changing Global Environments,* OECD Publishing and UNESCO Publishing, Paris, 2013.

[3] Here after I mainly refer this conceptualization of reality as "Life-World" which refers to an Indigenous conceptualization of a deeply interconnected reality which stands in contrast to "life-word" which refers to an experience of reality which is strongly bounded or limited by Western scientific traditions and materialist notions of reality. It is this contracted or much reduced life-world that is the experience of many in contemporary Western societies.

[4] S. Esbjorn-Hargens - S. and M. Zimmerman, *Integral Ecology. Uniting Multiple Perspectives on the Natural World*, Integral Books, Boston and London, and L. Williams - R. Roberts - A. McIntosh, *Radical Human Ecology: Intercultural and Indigenous Approaches.* Ashgate Publishing Group, Farnham, 2012.

[5] D. Rose, «Multi-species knots of Ethical Time», in *Environmental Philosophy* 9(1) (2012) 132.

[6] C. Christensen, «Human Ecology as Philosophy», in *Human Ecology Review* 20(2) (2014) 31-49.

[7] This section partially draws on pages 2-3 of Radical Human Ecology: Intercultural and Indigenous Approaches (2012).

[8] S. Esbjorn-Hargens - S. and M. Zimmerman, *Integral Ecology. Uniting Multiple Perspectives on the Natural World,* Integral Books, Boston and London.

[9] J. Quinn, «Human Ecology and Interactional Ecology», in *American Sociological Review* 5(5) (1940) 762.

[10] Z. Mumtaz - Z. and L. Williams, *Human Ecology: concepts, subfield and thematic areas of knowledge development*, Prairie Region Health Promotion Research Centre, University of Saskatchewan, Saskatoon, 2007.

[11] R. Borden, «The Future of Human Ecology», in *Human Ecology: Journal of the Commonwealth Human Ecology Council* 23 (2011) 47-49.

[12] C. Chalquist, *Terrapsychology. Reengaging the Soul of Place*, Spring Journal Books, New Orleans, 2007; K. Kassam, *Bio-cultural Diversity and Indigenous Ways of Knowing: Human Ecology in the Artic*, University of Calgary Press, Calgary, 2009; L. Williams - R. Roberts - A. McIntosh, *Radical Human Ecology: Intercultural and Indigenous Approaches*, Ashgate Publishing Group, Farnham, 2012.

[13] M. Spariosu, *Global Intelligence and Human Development: Towards an Ecology of Global Learning*, C. MIT Press, Cambridge, 2005, 6.

[14] J. Corntassel, «Re-envisioning resurgence: Indigenous Pathways to decolonization and sustainable self-determination», in *Decolonization: Indigeneity, Education and Society* Vol 1, No. 1 (2012) 86-101.

[15] L. Broadhead - L. S. Howard, «Deepening the debate over "Sustainable Science": Indigenous perspectives as a guide to the journey», in *Sustainable Development* 19 (5) (2011) 301-311.

[16] M. Stewart-Harawira, *The New Imperial Order. Indigenous Responses to Globalization.* Zed Books, London, 2005.

[17] J. Corntassel, «Re-envisioning resurgence: Indigenous Pathways to decolonization and sustainable self-determination», in *Decolonization: Indigeneity, Education and Society* Vol 1, No. 1 (2012) 86-101.

[18] V. Watts, «Indigenous place-thought and agency amongst humans and non-humans (First Woman and Sky Woman go on a European world tour!)», in *Decolonization and Indigeneity, Education and Society* Vol 2(1) (2013) 21.

[19] *Ibid.*, 23.

[20] L. Broadhead - L. S. Howard, «Deepening the debate over "Sustainable Science": Indigenous perspectives as a guide to the journey», in *Sustainable Development* 19 (5) 2011 301-311.

[21] L. Fessenden, «Towards a Participatory Worldview», in *The Journal of Pedagogy, Pluralism and Practice* Vol. 3(4) (2007) http://www.lesley.edu/journal-pedagogy-pluralism-practice/lily-fessenden/participatory-worldview/.

[22] J. Walsh, «Navigating Globalization: Immigration Policy in Canada and Australia, 1945-2007», in *Sociological Forum* 23, no. 4 (2008) 786-813.

[23] M. Hird, «Making waste management public (or falling back to sleep)», in *Social Studies of Science* 44 (3) (2014) 441-465.

[24] T. Heyd, «Global bio-ethics and environmental problems», in *Global Bio-ethics* 20(1) n. 1-4 (2007) 1-7.

[25] H. Randall, «Global Ethics, the Environment, the Corporation and Autonomy», available at http://www.verney.ca/assets/Randall Horton.pd.

[26] L. Williams - L. and L. Hall, «Women, migration and well-being: Building epistemological resilience through ontologies of wholeness and relationship», in *Global Change, Peace and Security* 26(2) (2014) 1-11.

[27] L. Williams - L. and L. Hall, «Women, migration and well-being: Building epistemological resilience through ontologies of wholeness and relationship», in *Global Change, Peace and Security* 26(2) (2014) 1-11.

[28] H. Bauder, «Closing the Immigration-Aboriginal Parallax Gap», in *Geo-forum* 42 (2011) 517-19.

[29] J. Walsh, «Navigating Globalization: Immigration Policy in Canada and Australia, 1945-2007», in *Sociological Forum* 23, no. 4 (2008) 786-813.

[30] A. Fleras R. Maka, «Indigenity-grounded analysis (IGA) as policy (-making) lens: New Zealand models, Canadian realities», in *The International Indigenous Policy Journal* 1(1) (2010), Article 4 http://ir.lib.uwo.ca/lipj/vol1/iss1/4.

[31] L. Kirmayer, «Rethinking Resilience from Indigenous Perspectives», in *The Canadian Journal of Psychiatry* Vol. 56, No. 2 (2011) 84-91.

[32] L. Williams, *The Ecology of Well-being Fieldnotes*, Unpublished.

[33] C. Royal, «Papatuanuku the Land», in Te Ara Wananga, *Te Taiao Maori and the Natural World*, Te Ara

Wananga (eds), Prepared by Te Manatu Taonga - the Ministry for Culture and Heritage, David Bateman Ltd, Auckland, 2010.

[34] Powhiri refers to the traditional welcome ceremony when one is being welcomed onto the marae of another iwi, hapu or whanau (tribe, sub-tribe or extended family). This ceremony greets not only the living of the manuhiri (visitors), but the ancestors of the manuhiri who have passed on.

[35] In Maori culture the equivalent is mana tangata (status or authority that comes from how one is in one's relationships with people).

[36] L. Williams, *The Ecology of Well-being Fieldnotes*, Unpublished.

[37] L. Williams, *The Ecology of Well-being Fieldnotes*, Unpublished.

[38] Te Rünanga o Ngäi Te Rangi, Te Rünanga o Ngäti Ranginui and Te Rünanga o Ngä Pükenga ki Tauranga, *Te Awanui Tauranga Harbour, Iwi Management Plan,* Te Rünanga o Ngäi Te Rangi, Tauranga, 2008.

[39] K. Wilber, *The Nature of Being*, Shambhala Publications, Boston.