

The Urgency of the Greening of Ethics

Anna Malavisi

Western Connecticut State University

forward this particular theory as opposed to deep ecology. Sylvan argued that some forms of environmental ethics were quite shallow and hence, ineffective in transforming individual and social change. Unfortunately, a shallow environmental ethic is still the most dominant type of environmental ethic reflected in the environmental policies of countries such as the U.S. and Australia (Sylvan and Bennett, 1994).

Understanding ethics

To begin to consider what environmental ethics is, could be and should be, some understanding of what we mean by "ethics" is needed. As Sylvan and Bennett (1994) noted, "without a characterization of ethics, a satisfactory account of environmental ethics and its roles is remote," (p.9). Ethics is too often, relegated to the sphere of the individual and thus is threatened by relativist justifications. But, as Sylvan and Bennett (1994) assert, ethics does mean the guiding moral principles of an individual, but also denotes the 'characteristic spirit of a community' (p.9). So, ethics becomes something which guides individual lives but also the appropriate actions of a moral community. What is often missed about this characterization is the notion that when contemplating ethical principles, one must consider both the theoretical and practical applications. The tension between the theoretical and practical is dialectical, so it is essential to work with this tension. For Sylvan the term applied ethics could be considered a pleonasm of a popular sort. The true meaning of ethics lies in the application of governing principles, such as doing no harm, acts of beneficence, etc.¹ For Dennis Goulet, a development ethicist, the concept of ethics transcends the theoretical, "Genuine ethics ... a kind of praxis which generates critical reflection on the value charge of one's social action" (1997, p.1165). The theory and practice are inextricably linked. The result of this is public action.

Another characteristic of ethics which has caused much controversy, is the way it has been confined to our relationships with other humans only. In the field of environmental ethics, primarily due to the urgent need to do so, there is now awareness that we must also consider non-human beings, the biotic community in its totality. The shift from anthropocentrism to a more holistic, biotic paradigm is crucial not only for environmental ethics, but for ethics in general.

The Greening of Ethics

The need for ethics in regard to the environment is not new. For many years now, thinking about the environment from an ethical dimension has not only been deemed valuable, but also necessary. And particularly so, now, as the world witnesses a global environmental crisis, resultant of the effects of human based activity. The evidence is there. Scientists

¹How one defines harm or beneficence is subject to relativist notions, this is not an issue of concern in this paper.

know that since the beginning of the industrial revolution in the 18th century, global warming has increased in disproportionate amounts compared to what may be considered normal fluctuations. And this has only increased as countries all over the world have endeavoured to become more industrialized.

Sylvan and Bennett (1994) talk about the reluctant greening of ethics and the way humans although completely dependent on the environment for our existence and continuity have exploited the environment for our own benefit with little consideration for the ecosystem as a whole. They say, "Human creatures, like others, depend on a satisfactory environment for their well-being and their very survival. But in their dealings with it, so-called developed societies have learned hubris, not wisdom," (p.6). Some of the reasons for thinking about the greening of ethics include human chauvinism, translated into control and domination by humans of non-human species as well as forests, rivers, and the treatment of the environment as something available to our disposal, to be manipulated and exploited without repercussion. This is like saying that someone who has been repeatedly tortured or even witnessed gross violations against human dignity will weather no damaging or long-term physical or psychological effects. A constant, repeated harm to a subject, whether human or non-human, which includes, land, river, forests and so on, can only result in harm to the subject's ontological existence.

As humans, there is an urgent need for realizing that as a species, we are only one among many, that our existence is interdependent and inter-related with other species, just as much as other non-human species are with us. "Once again humans need to remember that they need other species more than other species need them. Humans are more likely to miss rainforests than rainforests are likely to miss humans" (Sylvan and Bennett, p.115). And maybe it's not so much the case that we don't realize it, but that we don't want to accept it, or value the importance of it. There is a need to refrain from treating other non-human species and the environment as mere objects.

In philosophy, for centuries, moral concern has been primarily limited to humans. "The non-human world did not qualify in and of itself as an object of moral concern or even as the sort of thing that could be considered for inclusion" (p. 7). However, as Sylvan and Bennett (1994) say, this notion has become increasingly contentious with the rise of environmental philosophy and ethics. It has also given rise to different levels of environmental ethics. Sylvan and Bennett describe them as shallow, intermediate and deep.

A shallow form of environmental ethics, is anthropocentric. The treatment of the environment is always measured by the extent of interference this has for the interest of humans. Non-human species and the environment hold instrumental value only. Their value, lies in the interests and concerns of humans. Sylvan and Bennett (1994) consider two arguments: prudential and instrumental that uphold a shallow environmental ethic. The prudential argument pleads for the prudent treatment of the environment but only as a way to benefit humans. "Prudential arguments are arguments encouraging humans to exercise wisdom, but mainly the wisdom of protecting human interests" (p.64). Instrumental arguments about nature and the environment provide justification for the instrumental use

of the environment for the benefits of humans.

Intermediate forms of environmental ethics do not limit the notion that humans alone are of value. This position will acknowledge the value of non-human species and other elements of the environment such as rivers, trees, and mountains, however only second to human concerns. Sylvan and Bennett named this type of argument relevant here as extension arguments. They offer two examples, Aldo Leopold's land ethic and the Argument from Marginal Cases. These arguments are important for two reasons. First, they reject the 'sole value assumption' that only humans have value, and second, they extend the ethical framework already established to non-human beings. In the discussion about Leopold, "He recognized that items in the natural environment, such as a biotic community, have value-in-themselves as well as or despite any value they may have for humans," (p. 76). A second extension principle of Leopold's land ethic extends the ethical community to include the entire ecosystem. In Leopold's words, "The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively the land" (p.77). Some have criticised Leopold's stance by noting that since some entities included in Leopold's biotic community cannot reciprocate moral obligations, then they cannot be deemed part of the ethical community. Callicott and other defenders of Leopold have stated, that reciprocity of moral obligations is not a necessary condition for being considered a part of an ethical community. This should not lessen the moral obligation we have towards them (Sylvan and Bennett, 1994).

principle only. However, for Sylvan this is inadequate. Any theory needs to be applicable too. As such, it becomes an empty maxim (Sylvan, 1985).

Self-realization for deep ecologists is not only the realization of self, but an understanding of self as part of the ecosphere. Who we are, and what we do cannot be thought of as separate from our connection and interdependency with the environment. Self-realization in this context does not promote selfishness, but rather a more collective notion of self. For Sylvan, deep ecology theory is analytically weak and not well articulated. The absence of an adequate theorization of self gives rise to a weak understanding of self-realization. Around the same time that deep ecology was introduced Sylvan and Plumwood put forward their deep-green theory. This is the topic for the next section.

Deep-Green Theory

Val Plumwood and Richard Sylvan are recognized as two brilliant Australian philosophers. Their contributions have not been limited to environmental philosophy, their work extends to logic, metaphysics, and more. They made their mark with the publication of their book, *The Fight for the Forests*, first published in 1973. A book, which strongly criticized Australia's forest policy, became a bible for many environmental activists since it offered an eloquent critique from both an economic and philosophical perspective. As to be expected, the book was not well received within the Australian National University and in particular the Forestry Department where many national policies originated. According to Dominic Hyde,³ "The book's critical and pugilistic" stance caused uproar in Forestry circles and its anticipated publication" (2014, p.14). This book laid the foundation for their deep-green theory, which Richard Sylvan later further developed.

Deep-green theory is now recognised as a deep environmental theory offering a different paradigm from the prevailing philosophical one that is restricted to a shallow environmental ethic. While deep-green theory can be deemed similar to deep ecology, there are also many contrasts. The main principle that both share is the complete rejection of human chauvinism. Both theories discuss the intrinsic value of all living beings, and, if you like, non-living beings such as rivers, forests, mountains, and so forth. But while deep ecology espouses the principle of biospheric egalitarianism, deep-green theory does not. A principal difference between deep-green theory and deep ecology is that the former's theoretical underpinnings are completely philosophical, whereas in deep ecology, they are philosophical and religious. This difference is significant because what Plumwood and Sylvan offer is a well articulated and analytical framework, based on logical arguments and reasoning, separate from relativist positions that some religions defend.

Deep-green theory attempts to alter the ethical paradigm from which shallow and intermediate ethics cannot escape from. This ethical paradigm is still human-centered, so

³Dominic Hyde has written a splendid book on the lives of Val Plumwood and Richard Sylvan titled, *Eco-logical Lives: The Philosophical Lives of Richard Routley/Sylvan and Val Routley/Plumwood*.

regardless of whether you consider a non-anthropocentric position, because this is still enshrined within a human-centered ethical paradigm it only perpetuates a form of anthropocentrism. An ethical paradigm in deep-green theory does not essentially appeal to humans, or other groups based on features such as sentience. It demands a complete shift in perspective. The new focus should be categorical distinctions that are morally relevant (Sylvan and Bennett, 1994).

As a response to deep ecology's unsatisfactory biospheric egalitarianism, Sylvan and Bennett (1994) offer the principle of eco-impartiality. This principle is based on the notion that there would be no significant differential treatment of anything human/non-human. This allows for the fact that although all living and non-living things do have intrinsic value, this does not demand that they are all treated equally. As Sylvan says, "impartial treatment does not entail equal treatment, or equal consideration, and does not require equal intrinsic value or other value" (p.142).

Deep-green theory is broader in its perspective for as well as considering ethics and axiology, it also includes the need for a more radical socio-political theory. It is not only concerned with strictly environmental issues but also those that are environmentally relevant, such as peace and war, nuclear energy, poverty and hunger, non-human beings and their habitats and so forth. With this, comes the need to transform political structures otherwise we go nowhere. And this is where I want to go next, to discuss what is currently happening politically with the environmental agenda and why I think deep-green theory could help us get out of this quagmire.

Environmentalism Today

As I write this, Donald Trump, President of the United States, withdraws from the Paris Climate Accord, and the Queensland Government has just signed an agreement with Adani mining company to go ahead with Australia's biggest proposed coal mine (*The Guardian*, 2017). In a period where scientists caution against the continued exploitation of fossil fuels, and encourage research and investment in renewable energies, two countries, decide to ignore the science and invest in energy sources that are guaranteed to deepen the environmental crisis and destroy already fragile environments such as the Great Barrier Reef to defend national economic interests. Sylvan talks about the Great Barrier Reef as one of the many environmental riches of Australia. What would he say today, as we witness the coral bleaching and irreversible damage of the Reef. He cautioned against environmental complacency, arguing that all was not well, however it seems that this environmental complacency is one causative factor for the environmental damage we see today (Sylvan and Bennett, 1994).

Australia, once recognized as a vanguard in the environmental movement for its investment in renewable energy back in the 70s, has now, become environmentally stagnant.⁴

⁴I grew up in Australia and once I began traveling to other countries during the 80s, I realized how

Sylvan and Bennett (1994) described Australia as a bellwether territory, "It is estimated that Australia has more members of environmental groups in relative terms than almost any comparable country" (p. 54). Despite this, according to The Climate Institute, Australia is the worst polluter per head among developed countries. Since 1971, carbon dioxide emissions have nearly tripled and we have seen a decline in the use of renewable energy. This is in a country with much potential for wind and solar energy. On the heels of the U.S. is the promotion of a lifestyle that is unsustainable. Unfortunately, Australia's economy has been built on the exploitation of natural resources, and resource-intensive agriculture. A carbon tax implemented in 2012, was quickly overturned in 2014 with the change of government. So, rather than environmental policy gaining momentum, environmental protection has been minimized (The Climate Institute, 2017).

The latest report by the Global Carbon Project claims that fossil fuel emissions have risen 2% globally in 2017. To be able to meet the goals of the Paris Agreement, global emissions need to decline now, so that the projected net zero global emissions after 2050 become a reality. In the U.S. it is projected that coal consumption will rise slightly in 2017, the first time in many years (The Conversation, 2017).

A newly released report from the Australian Federal Government, the Climate Policy Review shows scant serious commitment to reducing reliance on fossil fuels. Rebecca Pearse regards this new report as just reflecting Australia's weak climate policy. She says, "The Climate Policy Review is also not surprising because it continues a longstanding, bipartisan tradition in weak climate policy formulation. It echoes four enduring features of Australia's ineffective climate policies since the 1990s." These four features are: pursuing a weak emissions target; loosening obligations for industry; shifting the heavy lifting elsewhere and a unperceived role for governments in planning and building a low-carbon economy. One can plainly see that the paradigm from which climate and other environmental policies emerge are strictly within a shallow environmental ethic, if an ethic at all. The focus is essentially anthropocentric with little concern for the well-being or sustainability of the entire ecosphere, except in the interests and benefits of humans (The Conversation, 2017).

An environmental impact analysis of the proposed Adani coal mine has concluded that possible impacts include negatively affecting the water table of the Great Artesian Basin; reducing the habitat for wildlife and endangering species such as the ornamental snake, squatter pigeons and the black throated finch; increases the possibility of coral disease and ultimately, significantly increases greenhouse emissions. These can all be considered unintended consequences, however, we have reached a stage, that as a result of unintended consequences over the last couple of centuries, we are now witnessing a desperate global environmental crisis. We can no longer devise any project that will impact the environment in any way, without attempting to anticipate some likely negative consequences and make

responsible decisions. Otherwise, it is irresponsible and morally wrong.

The U.S. is currently not in a better position. The president, Donald Trump, has recently proposed allowing on shore oil and gas drilling in the Arctic and other coastal waters. The North Dakota Access Pipeline has gone ahead despite protests from Native American tribal groups and environmental activists. The Keystone pipeline is also going forward. EPA regulations to set tougher emissions are threatened and the list goes on. The consequences, intended and unintended will likely impact sacred grounds, habitats, water sources and so on. There is a desperate need for a paradigm shift from a shallow environmental ethic to one consistent with deep-green theory. Before I enter into a discussion into what that paradigm may look like, I would like to spend some time thinking about why we are still stuck in this weak one.

Environmental Ethics Still on the Margins and the Need for Helpful Philosophy

In the preface of the book, *The Greening of Ethics*, the authors say the following, "the biosphere, as a system capable of supporting versatile and diverse life forms satisfactorily, will not tolerate indefinitely present patterns of energy and resource use, waste production and life-support-systems degradation, by concentrated human communities. Conditions for satisfactory lives for many species, including humankind, will deteriorate further in the next century, perhaps disastrously, unless some fundamental changes are made, and made soon, to these patterns. Ideas and motivation for such fundamental changes, for an environmental transvaluation of widespread basic values, are accordingly needed, desperately needed," (p.5). The authors go on to say in the book and in other sources,⁵ that these ideas and motivation should come from environmental ethics, and philosophy in general. Sylvan argues that philosophy is to blame for the way it has promoted certain ideologies embedded within enlightenment ideas of rationality that are completely anthropocentric.

Using global development⁶ as an analogy, one can compare how problems that arise in the practice of global development are also evident in thinking about the environment. The principal obstacles for global development are not based on scientific fact or evidence. They are attributable to a gross abandonment and ignorance of other factors such as: national interests, power and domination, skewed values, attitudes, among others. And since these occur at the structural level as much as the individual level it will be very difficult to budge or if you like transform these structures. The same can be said for issues concerning the environment. Thinking that we can address environmental degradation purely by individual behaviour is delusional, it is a necessary but insufficient condition. But just like global development, if we do not at least bring the issues to the surface and

⁵See Sylvan (2010).

⁶By global development, I mean development which is directed at ameliorating the living conditions for those living in disadvantaged and vulnerable situations.

make them visible, then we go nowhere.

saved ethics by shifting the primary locus from the study to the bedside. His piece on the recovery of practical philosophy argues that in areas such as medicine and criminal justice, specialists such as psychiatrists, lawyers and judges, in addressing general philosophical problems usually do so incompetently. Hence, "there is important work for philosophers to do in conjunction with such specialists" (1988, p.349). Therefore, the importance of philosophers to actively engage in environmental ethics. This is something that Sylvan writes about too. He considers that often a field ethics such as environmental ethics is based too much on case studies without connecting it to ethical theory. Also, field practitioners are not generally trained in ethical theory and many do not have the adequate analytical skills to evaluate ethical situations effectively.⁷

Michael Nelson, an environmental philosopher considers that for philosophers to succeed in doing helpful philosophy two conditions need to be met. First, in the case of environmental issues, "philosophers need to continue to convince ecologists (and others) of the relevance of philosophical and ethical discourse" (2008, p.612). Just making known the ethical dimensions of problems in the case of the environment "is not, in and of itself, sufficient" (2008, p.612). As Nelson says, "Relevance, helpfulness and interdisciplinarity are not obtained merely by exposing the philosophical dimensions and dilemmas of a given discipline. It is, unfortunately more difficult than that" (2008, p.612). The second condition Nelson claims necessary is the need for philosophers to work with environmental scientists, social scientists and policy-makers. Working with is hugely different than working on (p.612).

The role of philosophy is a greater understanding of everyday problems and illuminating what really matters. I think this is our ultimate goal and is also consistent with Richard Bernstein who writes about the praxis of philosophers. He says, "Our first task is to try to understand and to understand in such a way that we can highlight what is important and sound" (1971, p.8). I will argue that philosophers have a moral obligation and responsibility to contribute to the problems of the environment, but in a way which is helpful. Philosophers, at least traditional ones are not very good at working in a collaborative way. This has been one of the obstacles to carrying out an interdisciplinary approach. To avoid this type of theoretical limitation requires the need for philosophers to be careful when applying their theories in the practice, especially if we are talking about abstract theories and principles, and an area of practice grounded in action. Lisa Schwartzman argues "If the stereotypes and biases held by individuals are ever going to change, the deeply rooted systems of power that give rise to them will need to be understood and fundamentally altered. Thus, philosophers must make critical social analysis an integral part of their theorizing" (2012, p.312). This is not so straightforward and demands a deeper understanding of the issues one is writing about. This is not an impossible venture; it just requires some professional humility and willingness to explore further, going beyond our own thoughts

⁷I make a similar argument in the case of development professionals in my dissertation: *Global Development and its Discontents: Rethinking the Theory and Practice*.

and knowledge.

Deep-Green Theory in Practice

Thinking about putting deep-green theory into practice should not seem an insurmountable task. If it is true, that many people are now aware of the risks that lie ahead in regard to the environment such as depleted land mass for humans and non-humans alike; the further extinction of endangered species; water scarcity; food insecurity; the displacement of people; severe weather conditions and resultant storms/disasters to mention a few, then it is time to seriously consider our role as a part of the ecosphere. Let's face it, a shallow or an intermediate environmental ethic is insufficient to achieve the level of change required. It will require a deep-green theory with a paradigm shift at the level of individuals, but also at the level of institutions and social structures that uphold them. According to Sylvan and Bennett (1994), It is deeper environmental ethics that should be developed and promoted. It is a substantial change that is wanted. It is not just the stopping of impending environmental disasters to humans that is required, but an appreciation of the intrinsic value of other things that share the environment with humans that is needed (p.179). Some of the ways Sylvan and Bennett propose that could encourage a cultural paradigmatic shift include:

- { teaching environmental ethics to children, making them aware of their existence as part of a larger whole and the importance of caring for the earth;
- { a stronger emphasis on ethics and ethical practice;
- { change individual behavior: responsible consumption, simple living, recycling, activism;
- { responsible citizenship: boycotting industries that exploit and abuse environmental parts and the whole; voting for elected officials who promote sound environmental awareness, protection and policies;
- { promoting and educating the general public on a deeper environmental ethic, thus increasing awareness but also concern and a lobbying force to place pressure on governments;
- { control of the human population;⁸

- { government policies that encourage environmental protection and place harder regulations on the corporate sector;⁹
- { governments that provide incentives for the promotion of deep-green environmental practice to corporations;
- { deep-green environmental ethics should be part of any environmental impact study;

If you think that all these strategies will be difficult to implement, it might be worth remembering how we once thought about slavery, or homosexuality, or even the status of women, and how far we have come in changing attitudes and values. Although we still have a long way to go before we can say that we have achieved gender and racial equality, we can say that the situation for women in western countries is much improved than what it was one hundred years ago. The same could be said for people of color, and those of the LGBTQ community.¹⁰ I think it's worthwhile quoting what Sylvan and Bennett say about this, "Changing to respectful approaches to the environment and supplanting the place of humans in the world and their ethical systems may seem excessive and extreme. Yet what is now seen as unthinkable, as the voice of extremism, will in a decade or two be seen as necessity: what was extreme 10 years ago is now a balanced view" (p.184).

Take the topic of sexual harassment. I think we are currently at a watershed moment. No-one can be completely surprised that sexual harassment is pervasive in our society. However, what is interesting is that it is now being publicly exposed. This in time will lead to a change in attitudes and behavior, but not so much because men will realize they should not do it, but more for the reason that they can no longer get away with it. Zero tolerance policies of sexual harassment in workplaces and other environments are essential, but what is more urgent is mechanisms to allow women to report sexual misconduct where they are listened to, and not silenced. Where they are not threatened nor offered compensation for remaining silent, and where action is taken, and prosecution if necessary against perpetrators. One of the reasons why corruption is so rife in poorer countries is not so much due to people having lesser values, but more because as humans we are all fallible (and men are at risk, particularly since our cultural paradigm is embedded in patriarchy and condones certain behavior).¹¹ People perform in corrupt ways in these countries due to an absence of mechanisms and sanctions that regulate these activities.

⁹I would add that Governments should declare moratoriums on any projects that involve oil, gas and coal exploration and extraction, but endeavor to encourage research on renewable and alternative energy sources.

¹⁰Granted, the situation for women in other countries is still deplorable, as well as for some people of color, different sexual orientation, and so forth. However, one of the reasons why attitudes have changed in western countries has been due to social movements, and people from these groups, such as women, speaking out and making oppression visible.

¹¹For an interesting piece on sexual harassment and patriarchy, see Crossthwaite and Priest (1996). Although written a number of years ago it is still relevant today.

I would like to add two more things to Sylvan's list that have emerged over the last few years that may help push an agenda within a paradigm of deep-green environmental ethics. These are responsible innovation and a steady-state economy. Responsible research and innovation is an interdisciplinary initiative currently centered in Europe and North America that provides a process and framework to promote research and technology that takes into account anticipating outcomes, ensures inclusion of representation, critical reflection and responsiveness.¹² This process is consistent with a deep-green environmental ethic and should be promoted as such. It encourages us to think about technology and innovation in a more responsible way.

The second one is a steady-state economy. Mainstream economics has made us believe that our economies need to consistently grow. The only way nation-states can prosper is by ensuring a percentage of annual economic growth. Steady-state economics is an attempt to debunk this myth, particularly if we are talking about a world with finite resources. Steady-state economics also requires a paradigm shift from an empty-world economics to a "full-world" economics. Herman Daly in his work on ecological economics uses these terms to describe where we are at now. Our current world is full of us, and stuff (Daly, 2007). The definition of a steady-state economy is, "an economy that aims to maintain a stable level of resource consumption and a stable population. It's an economy in which material and energy use are kept within ecological limits, and in which the goal of increasing GDP is replaced by the goal of improving quality of life," (Dietz and O'Neill, p.45). A steady-state economy is also consistent with deep-green theory.

The main impetus behind a steady-state economy is the evidence that our current economic system and consistent pursuit of growth is unsustainable. We live in a world of finite resources, this means that we cannot think of incessant growth. There will come a time when we run out of natural resources. A steady-state economy is not only concerned with limiting economic growth, the four key features include: sustainable scale, the limited use of materials and energy; fair distribution, giving people equal opportunities to gain livable incomes but also limiting inequality; efficient allocation of resources and a better quality of life. Greater wealth does not correlate with greater happiness, the way to happiness is not economic. The focus then for a steady-state economy is sustainability, equity and well-being (Dietz and O'Neill). Bringing together initiatives such as responsible innovation and steady-state economics can be seen as practical strategies that will allow for the theory of a deep-green approach to become practice. But there is also something to be said for an interdisciplinary approach, as well as a synergy between responsible innovation and steady-state economics with deep-green theory. Something that should be taken advantage of. For many, deep-green theory will seem too ethically demanding and unrealistic, especially for those of us comfortable with our current lifestyles. For others, they might ask what impact they could have as an individual. Others will say that simple living is not possible in our materialist and consumerist society. And others will say that the rich are so set in their

¹²For more information about responsible innovation see the following: P. McNaughton et al., 2014.

ways that they would not cede any of their luxuries and privileges.

For those who consider deep-green theory as too demanding and unrealistic, I think we are left with no other choice. It is demanding in the sense that it will require a degree

Sylvan, R. (2010) Is there a need for a new, an environmental, ethic? In **Environmental Ethics: The Big Questions**, Ed. D.R.Keller, Oxford: Wiley and Blackwell.

The Conversation, \Infographic: here's exactly what Adani's Carmichael mine means for Queensland" { <http://theconversation.com/infographic-heres-exactly-what-adanis-carmichael-mine-means-for-queensland-87684>. Retrieved 14/12/17.

The Conversation, \Fossil fuel emissions hit record high after unexpected growth: Global Carbon Budget 2017" { <http://theconversation.com/fossil-fuel-emissions-hit-record-high-after-unexpected-growth-global-carbon-budget-2017-87248>. Retrieved 12/12/17.

The Conversation, \The federal Climate Policy Review: a recipe for business as usual" { <http://theconversation.com/the-federal-climate-policy-review-a-recipe-for-business-as-usual-89372>. Retrieved 14/12/17

The Climate Institute, <http://www.climateinstitute.org.au/search.html/q/carbon%20dioxide%20emissions/querytype/cat/page/1>. Retrieved 7/10/17.

The Guardian, <https://www.theguardian.com/business/2017/aug/16/why-adanis-planned-carmichael-coalmine-matters-to-australia-and-the-world>. Retrieved 07/01/18.

The Guardian, <https://www.theguardian.com/environment/live/2017/jun/01/donald-trump-paris-climate-agreement-live-news>. Retrieved 07/01/18.

Toulmin, S. (1988) \The Recovery of Practical Philosophy," **American Scholar**, 57:3 337-352.

Wol , J. (2011) **Ethics and Public Policy: A Philosophical Inquiry**, London: Routledge.