BY PARALLEL REASONING WITH BIOETHICS: TOWARD UNITY AND EFFECTIVENESS IN THE THEORY AND PRACTICE OF ENVIRONMENTAL ETHICS

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by

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Whether philosophy can contribute decisively towards alleviating humanity's pressing environmental predicament I here argue in the affirmative. There are many considerations that challenge my case. Specifically, I show that environmental ethics, the subdiscipline of moral philosophy which was founded on the presumption of this possibility, has faltered. The field threatens to divide between "impractical theoretical" discourses within the academy, and "pragmatic" and largely atheoretical "practical" engagements with environmental science, policy and management.

To help environmental ethics advance beyond this dysfunctional division, I explore methodological comparisons with bioethics, the "most successful field of applied ethics". My deliberations apply in novel ways Bartha's model for evaluating the plausibility of scientific hypotheses that incorporate analogies. In an initial test application of Bartha's model, I evaluate the relevance to environmental ethics of the failure of the "top-down" applied ethics approach in bioethics. I present good reasons to conclude that environmental ethics can indeed learn from this failure. I also conclude that my trial application of Bartha's model is promising.

I then evaluate two proposals for reforms towards the greater practical effectiveness of environmental ethics. First I evaluate the plausibility of the proposal of Minteer and Collins for a new field of "ecological ethics". They argue for the adoption of the broadly pragmatic methodological commitments now prevailing in bioethics. Because they focus primarily on supporting individual rather than collaborative processes of ethical judgment, I argue they risk facilitating an ethically pernicious "ecological paternalism" on analogy with the widely condemned practice of medical paternalism.

Second I evaluate Norton's proposal to incorporate environmental ethics within the adaptive ecosystem management paradigm. By arguing that the tasks of seeking cultural and biophysical sustainability within spatiotemporally defined communities must be integrated, Norton offers a potentially vital interface for intelligent and just interaction between culture and wider nature. I also argue this interface may be of more general relevance to bioethics and moral and political philosophy. However, a significant theoretical challenge for Norton's sustainability model is identified.

I argue that his model provides a thought experiment which illustrates the conceptual and practical incoherence of the primary liberal mechanisms for managing ethical conflict once these are applied to the sustainability challenge. Those mechanisms are the separation of public and private spheres and the simultaneous pursuit within private spaces of mutually exclusive conceptions of the good (and biophysically sustainable) life. I argue that rectifying this failure defines a vital, albeit daunting, theoretical and practical challenge for environmental ethics. That is to reconceptualise ethical conflict and to help design and facilitate practical processes to achieve sufficient common ethical agreement. Addressing this challenge is beyond the scope of this dissertation. However, some promising work and possibilities for further research are outlined.

I conclude that I have successfully defended the value of analogical comparison with bioethics for enhancing the unity and effectiveness of theory and practice in environmental ethics. I therefore further conclude that I am correct to affirm that philosophy *can*, and I believe indeed *should*, contribute more effectively toward alleviating humanity's pressing environmental predicament.

Table of Contents

List of figures and tables

Figures

Tables

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Introduction

> We live in a world confronted by mounting environmental problems. We read of increasing global deforestation and desertification, loss of species diversity, pollution and global warming. In everyday life people mourn the loss of valued landscapes and urban spaces. Underlying these problems are conflicting priorities and values. Yet dominant approaches to policy making seem ill-equipped to capture the various ways in which the environment matters to us.
>
> (O'Neill, Holland, and Light 2008: i)[1]

This dissertation investigates the hypothesis that philosophy may be able to help solve the "mounting environmental problems" that confront humanity. It documents a novel but also systematic approach to evaluating this possibility. That philosophy can be of help, or perhaps that philosophical work may somehow be especially necessary to the success of attempts to alleviate humanity's environmental predicament is certainly a contentious claim. There are very many considerations that challenge this suggestion and this present work does not presume to answer them all. Rather, the focus is more specifically on evaluating the success or otherwise of existing work by philosophers taking this possibility seriously. Significant recent proposals to enhance the relevance and effectiveness of such philosophical work are also evaluated.

Environmental ethics is an academic field in which the hypothesis that philosophy *can*, and indeed many have said, *ought* to contribute to solving these great problems has been presupposed and pursued with considerable rigor since the 1970s. Bucking the established commitments of analytic moral philosophy to maintain a stance of rational impartiality in all matters, many philosophers contributing to environmental ethics have identified with a public mission toward addressing the "environmental crisis"[2]. It might then seem that the hypothesis that philosophy can make a vital contribution to addressing environmental problems has already been answered in the affirmative simply through the emergence of that field. This is after all the subdiscipline of philosophical ethics in which fundamental ethical and philosophical questions regarding human relations with the natural

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[1] I am grateful to Taylor and Francis Group for permission to reproduce this paratext.

[2] Historian Lynn White was one of the first academic writers to prominently discuss concerns regarding an "environmental crisis" facing industrial civilisation. His notable contribution concerned the "historical origins" of this "crisis". Writing more than ten years later, William Catton argued that humanity did not face an "environmental crisis" but an environmental "predicament". His point was that the environmental problems leading to increased public alarm during the 1960s and 1970s were mere symptoms of a long established and disaster-bound pattern of unsustainable expansion of human population and material consumption. Catton noted that this unsustainable social and economic system has been utterly dependent on a one-time only exploitation of non-renewable fossil fuel energy sources (Catton 1980; White 1967).

environment have already been explored for some 40 years. The field has produced a good deal of creative philosophical work and many interesting debates have been generated. It might then be argued that there is surely no need for a "novel and systematic approach" to evaluating this hypothesis as proposed in this dissertation.

However, one does not have to study the literature of environmental ethics for long in order to become concerned that there may be something seriously amiss. An indication that something is indeed "amiss" with environmental ethics has come from a person no less qualified to make such an evaluation than Eugene Hargrove, the editor of the journal which gave the field its name. Hargrove laments the way in which environmental ethics continues to be marginalised both within academic philosophy and within the domains of environmental management and policy where it could be expected to have had most relevance and influence. He notes that the field has been criticised for being both too *practically-oriented* to be good philosophy according to "mainstream" academic philosophers and too *theoretical* to be of any relevance to the *practice* of environmental scientists, policy professionals and managers (Hargrove 2004: 5)[3]. I acknowledge that this state of affairs is not necessarily a consequence of systemic problems within the field so much as the very great practical and theoretical challenges that have been taken up. It can of course be argued that the field is merely in its early or "originary stages" of academic development[4]. It may then simply be too early to conclude that there is some fundamental inadequacy reflected in this deep division between the theoretical preoccupations of the field and the immediate concerns of those engaged in the practices of the environmental science, policy and management disciplines.

The present dissertation assumes a critical stance toward the field of environmental ethics, not because I lack respect for the good intentions and hard work of contributors to this field. I must express here from the outset that I have the greatest admiration for the genuine concern and true intellectual dedication and personal fortitude of so many of the best contributors to the field. Taking up environmental ethics as the focus of a career in academic philosophy has not been an easy option as Hargrove's struggle to establish the journal *Environmental Ethics* and win academic tenure reflects (Hargrove 2004: 4-5). Indeed, Claire Palmer's recent comments on the continuing difficulties facing

[3] Political theorists concerned with the environmental crisis such as Andrew Dobson *also* emphasise the impracticality of the theoretical discourse of environmental ethics for political discourse regarding the natural environment and environmental problems more generally (See Dobson 2000: 55-61).

[4] Environmental pragmatist Anthony Weston uses the rather awkward term "originary stages" in a seminal article on the development of the discourses and theories of environmental ethics. Weston rejects premature attempts to force that discourse and theory into the strictures imposed by any single, unifying approach during these so-called "originary stages" of the discipline (Weston 1992).

individuals pursuing postgraduate programmes in environmental philosophy[5] suggests that choosing to commit to a career in this field remains very challenging (Palmer 2007: 137-139). I thus do not mean to criticise particular individuals or examples of philosophical writing in this area. Rather, my concern has been to re-evaluate the theoretical orientation and practical strategy of the field at a quite general level. I believe that my overarching objective remains the same as that which has motivated so many drawn to the field. That is the mission to define and contribute toward what might yet prove a vital and even necessary philosophical response to the environmental crisis.

The title of my dissertation reflects its contents. It is primarily structured around the evaluation of three reconstructed analogical arguments. Each of these analogical arguments draws some parallel between methodological commitments and experience in bioethics and similar methodological presumptions and prescriptions in environmental ethics. Paul Bartha's recent book; *By parallel reason: The construction and evaluation of analogical arguments* has been essential to the final structure and mode of analysis employed and this debt has been directly acknowledged in the dissertation title (Bartha 2010). Another significant but very different debt is acknowledged to the work of environmental philosopher Bryan Norton in my secondary title. This involves a more partial trading on the title of one of his most significant books. That book is *Toward unity among environmentalists* (Norton 1991). However, his more recent work, *Sustainability: A philosophy of adaptive ecosystem management* (Norton 2005a) is of most direct and critical relevance to the present study.

The subtitle highlights the central commitment of this dissertation towards the achievement of both "effective theory and practice in environmental ethics". This emphasis on a potentially critical role for effective theory in environmental ethics reflects an important difference I have with Norton. His career as an environmental philosopher is most notable for his insistence on practicality in environmental ethics above theory or at least the form of theory that has prevailed in environmental ethics. My emphasis on the continuing centrality of theory to the "mission of environmental ethics" is shared with another philosopher whose work I likewise give significant consideration. And very relevantly as I will soon elaborate, that philosopher, J. Baird Callicott, has long been engaged in an instructive disagreement in the environmental ethics literature with Norton regarding the role of theory and practice for this field.

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[5] There has been an increasing tendency for contributors to major journals of the field such as *Environmental Ethics*, *Environmental Values*, *Ethics and the Environment* and *Environmental Philosophy* to refer to themselves as environmental philosophers rather than environmental ethicists and to their field as "environmental philosophy". Indeed, Eugene Hargrove, the founding editor of the journal which gave its title to the new field, later remarked that he regrets this decision and in hindsight wishes he had used the term "environmental philosophy". For the specific purposes of this dissertation I will continue to employ the original term "environmental ethics".

While most contemporary academic philosophers may have some familiarity with at least the major debates and figures in the bioethics literature, this is less likely to be the case with regards to environmental ethics. No doubt also, all philosophers now have some reasonable awareness of the serious environmental problems that confront humanity in the 21st Century. However, the continuing marginal status of environmental ethics within academic philosophy[6] makes it much less likely that philosophers will have a similar degree of familiarity with the key figures and debates of the environmental ethics literature. The present dissertation is very much centred on the concerns and fortunes of this marginal field, but as the strategy of engaging in analogical comparison with bioethics should make immediately apparent, my scope is broader than that field. Environmental ethics defines the problem or "target domain" conditioning the essential practical concerns of this dissertation. But an insistence on the centrality of philosophical theory holds open the possibility of arguing for conclusions of wider relevance, perhaps even to moral and political philosophy more generally. Such have been the ambitions of many contributors to environmental ethics over the course of the last 30-40 years. The continuing marginal status of the field bears witness to their limited success to date. It has also motivated methodological criticism directed at environmental ethics from the so-called "environmental pragmatists" such as Norton. And moving beyond this criticism, a number of environmental pragmatists, along with some other environmental philosophers such as Robert Frodeman, have more recently argued for fundamental changes in the methods and orientation of environmental ethics.

Many environmental ethics books and texts begin with an extended description of worsening environmental problems both locally and globally. For example, Andrew Light and Holmes Rolston III provide such a list of 'symptoms' of "environmental crisis" in the introduction to their *Environmental ethics: an anthology*. Their list of symptoms of environmental dysfunction is as follows: ". . . deforestation, soil loss, water and air pollution, desertification, loss of species habitat, loss of biodiversity, suburban sprawl, escalating population, escalating consumption, global warming and endless other concerns" (Light and Rolston 2003: 2).

After suitably alarming and likely also rather depressing the reader, environmental ethics texts generally move quite abruptly to the question of the potential direct moral status of non-human species and even of biophysical systems. They then outline taxonomies of the variety of philosophical ethical positions developed by academic philosophers in response to the environmental crisis since the early the 1970s. Seminal articles, book excerpts and related philosophical debates are

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[6] I will discuss this issue of the marginal status of environmental ethics within academic philosophy combined with limited credibility within environmental management and policy domains at the close of Chapter 1. This discussion is informed by the contributions of 15 prominent environmental philosophers at a special meeting on "The future of environmental philosophy" held at the University of North Texas in February 2007 (Frodeman and Jamieson 2007).

provided which together, effectively illustrate what Alasdair MacIntyre has labelled as the strikingly "interminable character" of contemporary moral disagreement (MacIntyre 1981: 6). Of course MacIntyre was not referring to the debates of environmental ethics and the novel moral desiderata and theoretical devices that have come to define this field. Nevertheless, I believe his description remains highly appropriate to the debates of environmental ethics as much as it does to moral disagreement more generally.

I will not labour the matter of the seriousness of contemporary environmental problems which is by now extremely well documented. Just one instance of authoritative statements about the scale and significance of our "mounting environmental problems" is a 1994 warning signed by some 1,500 of the world's most prominent scientists, including a majority of Nobel Prize winners (Speth 2008: 39). More recently the United Nations commissioned Millennium Ecological Assessment project has provided an authoritative international audit of the status of global ecosystems. This report has reinforced earlier warnings about the seriousness of the world's ecological problems[7]. The report emphasises that since the Second World War, the rate of ecological degradation has dramatically increased due to very rapid population growth, urbanisation and industrialisation and the related ecological consequences of massive clearance of forests, loss of productive land, water shortage, over fishing, pollution and toxic waste problems, all contributed to serious anthropogenic biodiversity loss. The Millennium Ecological Assessment reports call for urgent action to prevent worsening localised ecological problems in many regions, as well as global-scale threats such as that posed by global anthropogenic climate change. Warnings of the dire consequences of anthropogenic climate change have also become commonplace since the early 2000s. Most notably, the reports of the Intergovernmental Panel on Climate Change (IPCC) document a strengthening and now very considerable scientific consensus on this very worrying problem which has finally received greater media and political acknowledgment in recent years (Speth 2008: 21-24).

What requires more explanation is the particular form of the philosophical ethical discourse that arose in response to the modern environmental crisis and which rapidly came to define the field of environmental ethics. That is the primary metaethical and axiological focus of environmental ethics on the question of the possibility of the direct rather than purely instrumental moral value of non-human entities. This is a focus much concerned with the possibility of nonanthropocentric values in general and of the intrinsic value of nonhuman nature or at least certain aspects of it in particular. The discourse of nonanthropocentrism continues to hold centre stage in environmental ethics as is evident in most contemporary textbooks in environmental ethics even though their scope has broadened in recent years (See for examples: DesJardins 2001; Keller 2010; Light and Rolston 2003; Pojman and Pojman 2008). It is also this prevailing metaethical and metaphysical focus that has increasingly

[7] This research project had contributions from over 1300 scientists from many countries.

become the subject of a concerted internal critique from a number of environmental philosophers (For example Brennan 1988, 1992; Cheney and Weston 1999; Light 2003a; Wenz 1993; Weston 1985). Many of these critics, but not all[8], consider themselves pragmatists although their debt to the canon of classical American pragmatism or neo-pragmatism varies considerably (Light and Katz 1996: 4-5). I will thus explain and evaluate this prevailing nonanthropocentric response to the environmental crisis in Chapter 1. I will then also introduce the critique of nonanthropocentrism coming from the so-called "environmental pragmatists" and the proposals they offer to reform the field towards greater practical relevance and effectiveness.

Norton has been one of the most vociferous critics of the central role of nonanthropocentric theorising within environmental ethics. But of particular relevance to this dissertation, he has also led a career-long campaign seeking to redefine environmental philosophy toward greater unity and effectiveness. Norton and others have challenged both the philosophical integrity and wisdom of the pursuit of comprehensive ethical frameworks and "grand narratives" given post-modern understandings. And they have linked these criticisms to their concerns about the lack of practical utility of this prevailing approach given concern about the very real and pressing nature of environmental problems (Cheney 1991; Norton 1995).

Norton argues for a refocusing of work in environmental ethics onto a practical and problem solving emphasis on particular environmental problems rather than grand theory. Along with other environmental pragmatists such as Light, Norton advocates a pragmatic engagement with the existing anthropocentric discourse of environmental management and policy. They call for environmental philosophers to develop arguments appealing to existing norms and values. In particular, they emphasise the rhetorical power of the widely accepted anthropocentric concern with protecting the natural environment for future human generations. On this account, environmental philosophers need to be less concerned with developing and defending comprehensive philosophical ethical theories and more concerned with helping design and facilitate public policy and decision-making processes that will achieve environmentally benign consensus. Considering the pragmatist critique of nonanthropocentric environmental ethics and the related proposals of Norton and some others for alternative approaches which are claimed to be more effective, represents the central work of this dissertation.

However, the internal critique from pragmatists and others has not gone unanswered from proponents of a nonanthropocentric and substantive theoretical programme in environmental ethics. Just as Norton has been the most outspoken internal critic of nonanthropocentric environmental ethics, Callicott has been one of the most persistent and eloquent defenders of the original theoretical

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[8] See for example the work of Frodeman who, although not a pragmatist, has been arguing for a "policy turn" in environmental ethics for similar reasons to the environmental pragmatists (Frodeman 2006, 2008, 2008).

mission of environmental ethics in response to this critique[9]. Callicott accepts the value of so-called "bottom-up" methods and of some direct engaging of environmental philosophers with particular environmental problems and policy and decision-making processes. However, he rejects the suggestion that such approaches should become the primary focus of the field at the expense of a continuing concern with the development and promotion of comprehensive ethical frameworks. Callicott argues strongly that maintaining a central focus on metaethics and metaphysics as well as normative ethics holds the promise of making the most truly distinctive and vital philosophical contributions towards addressing the environmental crisis (Callicott 2002b; 2005). He argues that to abandon concern with defending the possibility and significance of nonanthropocentric values and to focus instead on facilitating consensus on particular environmental problems would be a seriously insufficient philosophical contribution. Callicott accepts that a theoretically pluralist or even atheoretical and consensus-focused approach to particular cases does hold the promise of much more immediate and tangible results for environmental philosophers. But Callicott and others argue that Norton's purely practical focus, without the aid of adequate (theoretical) normative ethical resources will be quite lacking in rational grounds capable of resisting the continued unsustainable degrading of the natural environment (See Eckersley 2002).

Callicott and Norton have directly and prolifically engaged the question of whether environmental ethics properly concerns the sweeping reorientation of theoretical thinking or alternatively more properly should be primarily concerned with practice in what may be a quite atheoretical and pragmatic manner. A central aim of this dissertation is to identify *why* environmental ethics appears to have failed to provide a fully adequate response to our "mounting environmental problems". The debate between Callicott and Norton is thus very pertinent to my purposes.

This debate and the contrasting proposals for the future direction of the field provided by these authors certainly provide a context within which the possibilities for a more effective philosophical response to the challenge of the environmental crisis may be considered. It would seem little can be done to evaluate the merits of either Callicott's claims for the importance of a grand theoretical mission or Norton's practical and case-focused approach to environmental ethics other than to observe the outcomes achieved through their respective approaches over the course of coming years. Of course this is not an attractive option given the sense of urgency many now recognise regarding the need for much more effective responses to environmental problems. As Light advocates, the most obvious response to this sense of urgency is to adopt those approaches which offer the most likely and immediate results. The obvious choice on this criterion would seem to be Norton's emphasis on more

[9] Holmes Rolston III has similarly been an influential and persistent defender of the nonanthropocentric mission of environmental ethics. However, Callicott has most frequently been both the target and respondent to the criticism of this approach launched by environmental pragmatists, including most notably, Norton.

pragmatic and practice-focused approaches. However, Light does not cajole environmental philosophers to relinquish their concerns with grand theory in the manner in which Norton tends to do[10]. Rather, he simply argues that environmental philosophers should devote a significant proportion of their professional efforts towards the type of practical philosophy that Norton advocates (Light 1996: 325-338).

At the same time, some environmental philosophers such as Throop have become concerned that the demands of both achieving and maintaining an adequate grasp of the academic philosophical literature and also being sufficiently knowledgeable and skilled to engage in environmental management and policy discourse may be unreasonably demanding on individual philosophers. To develop and retain competence in the academic philosophical literature, not only specifically within the now extensive literature of environmental philosophy but also in terms of relevant developments in the wider philosophical work in ethics, metaphysics and epistemology is a sufficient challenge. Also seeking competence in practical discourses regarding particular environmental problems and an ability to engage with professionals from the environmental and policy sciences involves a considerable additional challenge achieved by very few environmental philosophers, Norton notwithstanding. Throop suggests in future it may be necessary for environmental philosophers to choose between achieving sufficient competence in a more *pure* academic environmental philosophy, or in more *applied*, practically focused and engaged pragmatic approaches (Throop 2007: 147-149).

The tension and demands that Throop attempts to address by recommending such a division between pure and applied environmental philosophy are certainly real. But I question his solution which would effectively institutionalise a division between theory and practice. In the context of my concern with the possibility of further philosophical (theoretical) developments of practical relevancy regarding the environmental predicament, Throop's proposal is simply an admission of defeat. There is also an obvious challenge to his proposal. If environmental philosophers can specialise to engage effectively alongside other disciplines in addressing particular environmental problems without a deep concern with philosophical theory, then perhaps there may be no need whatsoever for the retention of a significant number of purely academic environmental philosophers, given that the essential mission of the field was always practically motivated.

In reply it can obviously be argued that environmental ethics has now created a literature with a sufficient set of interesting philosophical issues. These issues can now entertain the research and publishing needs of a privileged small group of professional academic philosophers who may bring no more direct concern with the amelioration of environmental problems to their professional endeavours

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[10] Despite Norton's rejection of what he regards as "ideological" approaches to environmental problems, which most notably for him includes nonanthropocentric ethics, his work reflects his strong commitment to classical American pragmatism (Norton 2005: 56-87). The unkind might very well consider this commitment also to be "ideological".

than say logicians or metaphysicians (Samuelsson 2010). This is not an outcome for environmental ethics that I regard as desirable. I agree with the sense of urgency and the demand for practical relevance coming from the environmental pragmatists and Frodeman. But I am wary of Norton's insistence that the grand-theory inquiries and aspirations of environmental ethics defended by Callicott can simply be shed without the risk of losing a crucial source of normative guidance toward the vital task of defining sustainable approaches to living in a biodiverse world. On Throop's advice, environmental ethics is to separately embrace both sides of a seemingly unattractive dichotomy. That is for environmental philosophers to choose to further specialise between what British environmental philosopher Peter Lucas has previously warned may be no more than "an inconsequential philosophy and an unphilosophical consequentialism" (Lucas 2002: 353).

In this dissertation I have sought a practical but yet philosophical approach to move beyond this unhelpful impasse within environmental ethics. I explore an alternative and more immediate approach towards evaluating the most promising possibilities for a more effective environmental ethics. This approach begins with the observation that environmental philosophers quite frequently draw comparisons, perhaps even with a certain degree of envy, regarding the seemingly more impressive example of a practically effective contribution being made by moral philosophy in bioethics (See for example Hargrove 2004: 5). There are obviously very considerable differences in the concerns and approaches of bioethics and environmental ethics. Nevertheless, I have been struck by the possibility that comparative analysis between the two fields may offer the prospect of some advance on what may otherwise remain inconclusive debates regarding the relative significance of theoretically versus practically-oriented approaches to environmental ethics defended respectively by Callicott and Norton.

The proposed advantage of such a cross-field comparison rests on the fact that while environmental ethics has remained largely only an academic and theoretical endeavour, bioethics has seen a much more direct engagement between moral philosophers, abstract moral theory and principle and the ethical issues arising within the practices of biomedical healthcare and research. Bioethics therefore affords examples in which the presumptions of moral philosophy and of moral philosophers have been challenged by the empirical disciplines of practice. My ambition is then to draw on practical experience from this quite different applied domain, in the attempt to bring additional rational and empirical discipline to my considerations of the "theory-practice" debate in environmental ethics. That discipline will be in the form of a series of extended analogical comparisons between methodological commitments adopted and challenged by practice in bioethics and those of environmental ethics, where there has generally been no similar practical discipline.

This employment of analogical reasoning and argument represents an experimental application of a systematic model for the formulation and evaluation of analogical reasoning and argument recently developed by Paul Bartha (Bartha 2010). Bartha's work has been informed by, and developed

primarily to assist with, the evaluation of analogical reason and argument in mathematics and the sciences. Consequently the general model and detailed submodels that he develops for the evaluation of particular forms of analogical argument are most directly relevant to mathematics and the sciences. Nevertheless, Bartha argues that his approach may be of value for the evaluation of analogical reasoning more broadly. With regard specifically to philosophy, Bartha notes the considerable reliance placed on conceptual or thought experiments. Bartha suggests that his theory may help add rigor to such reasoning processes given the significant role that analogy usually plays in linking conclusions obtained from a hypothetical (source) domain to an empirical (target) domain (Bartha 2010: 320-326).

I will argue that the major analogical evaluation of Norton's work conducted in Chapter 5 is best understood as an extended thought experiment. I will also argue that each of the evaluations of analogical argument conducted in the various chapters below may have an advantage over the usual form of pure thought experiment conducted by analytic philosophers through being conditioned by philosophical experience in the source domain of bioethics.

Bartha's theory is introduced and explained in some detail in the first part of Chapter 3. In the second part of that chapter I illustrate how I propose to apply Bartha's model to conduct analogical comparisons between bioethics and environmental ethics. This example considers the relevance of a significant early experience for moral philosophers contributing to bioethics. That experience concerns the common initial presumption of the effectiveness of a deductive or "top-down" applied ethics understanding of the relationship between abstract moral theory, principle and practice. The presumption was rapidly found in practice to be inadequate. I argue that this is the most decisive example of the relevance of analogical comparison between the two fields. I also acknowledge that the conclusion reached should be of no great surprise to thoughtful environmental philosophers. But the conformity of the conclusions reached in this chapter with an emerging well-informed consensus on this issue within environmental ethics is taken to lend greater assurance to my further application of Bartha's model to more nuanced and challenging comparisons in Chapters 4 and 5.

Bartha emphasises the importance of seeking the best possible understanding of relevant phenomena in both source and target domains prior to evaluating analogical arguments seeking to link the two domains. In Bartha's terms, both the advocate and the hypothetical critic of an analogical argument ideally should share the same knowledge of the source and target domains. In the text I take on the role of advocate and critic for each of the analogical arguments considered. In order for the reader to critically evaluate my reasoning, they require a shared understanding of the relevant phenomena in the source and target domains. I meet that requirement by providing crucial descriptive and analytic background regarding the methodological commitments of the "source and "target domain" fields for my analogical evaluations in Chapters 1 and 2.

Chapter 1 provides an overview of the origins and the methodological debates of environmental ethics. This material should afford readers otherwise unfamiliar with the literature of environmental ethics sufficient background understanding of the relevant issues and developments in this field. Necessary background information is therefore provided regarding the target domain for the analogical arguments evaluated in Chapters 3 to 5.

Similarly, Chapter 2 provides an overview of the origins and the methodological debates of bioethics. This material allows the reader unfamiliar with the methodological literature of bioethics to gain sufficient background understanding of the field which functions as the source domain for the analogical arguments evaluated in the later chapters.

Chapter 4 involves the evaluation of the proposal of philosopher Ben Minteer and ecologist James Collins for a new field that they refer to as "ecological ethics" (Minteer and Collins 2005, 2008; Minteer, Collins, and Bird 2008). Their proposal draws quite explicitly on analogy with the existing example provided by pragmatic methodological trends in bioethics. I employ a reconstructed analogical argument that draws on experience in bioethics to evaluate their proposal. On the basis of this evaluation I defend some significant reservations about their proposals. In particular I identify a concern with the potential of their "ecological ethics" to support what I refer to as "ecological paternalism". I also argue that their proposal currently demonstrates insufficient consideration for the essential role of participative processes in responding to environmental problems.

In Chapter 5, I evaluate Norton's very extensive but almost entirely hypothetical model for a more practical role for environmental ethics. The model he defends involves a complex integrating of environmental ethics within the adaptive ecosystem management model, the paradigm that has more recently come to prevail in the environmental management sciences. Considerable background description of Norton's approach is required before the evaluation can be undertaken, including a short description of the adaptive ecosystem management model itself. Norton's model does not rely on any significant parallel with bioethics to support the plausibility of his approach equivalent to the role bioethics plays for Minteer and Collins. Thus the reconstructed analogical argument I use to evaluate Norton's approach is considerably more nuanced than those of Chapters 3 and 4.

Nevertheless it is argued that the evaluation helps to identify a central theoretical challenge for Norton's model which is tied to his presupposition of certain liberal-pragmatic commitments. This theoretical challenge in no way implies that Norton's model lacks overall significance or relevance for environmental ethics. On the contrary, I argue that his approach has much to offer both environmental ethics, and perhaps even moral and political philosophy more broadly. Rather paradoxically, Norton as the environmental philosopher most concerned with practical relevance, has pursued practicality in environmental ethics through what amounts to an extended thought experiment. The outcome of his experiment then inadvertently highlights what I believe to be a

pressing challenge requiring further theoretical work in philosophical ethics combined with transdisciplinary research.

The central reliance placed on Bartha's model for the evaluation of analogical reasoning and argument means that the argumentative forms used in this dissertation are rather experimental. It is hoped nevertheless that both the approach and the tentative conclusions reached will be of relevance and interest to environmental philosophers and even perhaps a little more broadly.

Chapter 1
The rise and falter of nonanthropocentric environmental ethics

1.1 Overview

This chapter begins with a short overview of the manner in which environmental ethics emerged as a new subdiscipline of academic philosophy. Perhaps the most significant aspect of this brief account is the manner in which the concerns of the field were defined in the first instance by non-philosophers. The field did not emerge as the result of attempts to provide novel answers to time-honoured philosophical problems. But of course existing philosophical models and theories, particularly from moral philosophy, rapidly came to influence the shape the field took thereafter.

I then provide a reasonably extensive discussion of the main methodological debates of the field leading up to the strong internal critique delivered by environmental pragmatists such as Norton. More recent alternative approaches such as environmental virtue ethics as well as longer established alternatives to the otherwise prevailing concern with nonanthropocentric ethics such as environmental aesthetics are also briefly discussed.

The overall purpose of the chapter is to familiarise the reader with the methodological debates of this field. The aim is to ensure they have sufficient understanding to consider the analogical arguments evaluated in Chapters 3 to 5 in which environmental ethics constitutes the target domain in Bartha's terminology (Bartha 2010: 13). Readers already familiar with the methodological literature of environmental ethics may wish to skip directly to the final section of the chapter.

1.2 The origins of academic environmental ethics

1.2.1 The problem – wider recognition of "environmental crisis" in the 1960s

The critical development that precipitated the emergence of the academic field of environmental ethics was not a philosophical debate that simply came to the surface amongst academic philosophers. Thus many standard accounts of the origins story of environmental ethics do not begin with reference to the insight or concern of any particular philosopher. Rather, they provide some kind of account of the emergence of serious scientific and popular concerns regarding the degradation of the natural environment. These were concerns and problems which therefore came to wider notice primarily

through the work of scientists rather than philosophers (See for example; Brennan and Lo 2008: 4-5; Palmer 2003: 15; Centre for Environmental Philosophy 2002).

Some recent introductory accounts of the field such as that provided by Light make no direct reference to the motivational basis for the origins of environmental ethics. Rather, Light launches into a discussion of the key metaethical debates of the field, seeking to show a contrast with other fields of so-called "applied ethics" such as biomedical ethics. It would seem that from the perspective of Light, the theoretical debates of the field have already taken on much of the character of other perennial and essentially ahistorical philosophical subjects open to interminable debate. Light seeks to contrast this initial metaethical focus of environmental ethics with what he understands has been attempted in other fields of applied ethics. He regrets the fact that environmental ethics has not followed what he considers to be a standard model of applied ethics, taking biomedical ethics as supposedly the paradigmatic example of this model (Light 2003b: 633). I will comment further on this suggestion in the last section of this chapter.

Light's article is not intended to dismiss the significance of the environmental crisis as the focus of work in environmental ethics, but rather to bring into question the utility of so great a focus on metaethical debate within the field (Light 2003b: 634, 640-647). Nevertheless, I believe it is important to emphasise the significance of the initial critical assumptions that were made. I believe that we should remember that such assumptions were necessary for the rise of environmental ethics as an applied field of philosophy in the first place, quite independently of other fields such as biomedical ethics and all the other domains of professional ethics that have emerged in recent times. This historical assumption has been essential to the whole enterprise in which a philosophical response first came to be considered as relevant and perhaps even necessary. Thus a belief that there is indeed a serious environmental crisis and that practically efficacious responses are required from many fields, including philosophy, is central to the origins of the field, and remains so. And Light later acknowledges this. He states

> . . . this field of ethics was formed, and continues to draw thinkers to it, out of concern to find a role for philosophical reflection (not simply a role for professional philosophers) in the resolution of environmental problems rather than simply their discussion and elucidation.
>
> (Light 2003b: 634)

Thus the grounding role of the environmental crisis or at least environmental problems remains for Light, even if he does not focus greatly on this grounding.

During the 1960s some scientists and environmental activists drew greater public attention to what they argued was a growing ecological crisis confronting industrial civilisation. Most notably, Rachel Carson's book, *Silent Spring* was widely read and generated considerable public alarm about the violent impact of industrial society on the natural environment (Carson 1962). She described

great dangers for both human health and the integrity of ecosystems resulting from a massive increase in the use of synthetic toxins after World War II. The use of such toxins was promoted for the more efficient control of plant and insect 'pest' species. The expectation was that agricultural production was to be increased and surely this would benefit human well-being. Carson warned that there were accumulating harms from these practices which were either not understood or acknowledged, or both. In any case, the net result of the heavy use of such newly synthesised substances was to pose a considerable threat to the well-being of all life, both human and non-human. An alarmed and increasingly better informed public started to become motivated to take some kind of ameliorative action. Thus Carson's work is widely recognized as having played a vital role in mobilising the modern environmental movement (Palmer 2003: 15).

Other accessible works such as Paul Erhlich's *The Population Bomb* represented dramatic warnings from scientists of serious threats to the viability of the Earth's life-supporting biophysical processes if rapid human population growth was not brought under control (Ehrlich 1968: 69-80)[1]. Similar warnings continued to be issued into the 1970s (Goldsmith 1972: 4, 133). The *Limits to Growth* reports of the Club of Rome were also very influential with their Malthusian focus on global problems tied to exponential population increase and unsustainable natural resource consumption. Catastrophic consequences were predicted for civilisation during the 21st century unless major changes to policy were made that would take into account the biological and physical limits of a finite and ecologically fragile Earth (Meadows and Club of Rome. 1972)[2]. Meadows also made a claim of considerable relevance for the fledgling interest of philosophers regarding the problems of the environment at that time. He claimed in the summary of the *Limits to Growth* report that a basic change of values in relation to the environment was required in response to the environmental crisis. In the commentary to the report, the authors wrote:

> We affirm finally that any deliberate attempt to reach a rational and enduring state of equilibrium by planned measures, rather than by chance or catastrophe, must ultimately be founded on a basic change of values and goals at individual, national and world levels.
>
> (Meadows and Club of Rome. 1972: 195)

[1] The focus of the widely influential writing of the biologist Gareth Hardin was also on human population. He offered his 'Life Boat Ethics' as a supposedly necessary response from wealthy nations to the need for population control in poorer nations (Hardin 1968, 1972, 1977, 1993, 1999).

[2] "The Club of Rome' was an elite and so-called 'invisible college' of executives, civil servants and management specialists organised by Italian management consultant, Aurelio Peccei. The aim of the group was to study and promote understanding at the global level of what Peccei called the 'problematique' "... of the present and future predicament of man ... Its purposes are to foster awareness of the varied but interdependent components – economic, political, natural and social – that make up the global system in which we all live; to bring this new understanding to the attention of policy-makers and the public worldwide; and in this way provide new policy initiatives and actions" (Meadows and Club of Rome. 1972: 9). The group drew initially on computer modelling work already undertaken by Jay Forrester of MIT and then commissioned further modelling work led by Dennis Meadows of MIT (Meadows and Club of Rome. 1972: 11; O'Riordan 1976: 57-60).

Environmentally minded philosophers could surely not ignore the challenge provided by this urgent call for basic change in values. This rapid emergence of environmental concern during the 1960s and early 1970s thus defined the social and political challenge which a new field of environmental ethics would seek to address (Brennan and Lo 2008: 5).

During this same period the fledgling global emergence of ecological concern was further reinforced by striking visual images. NASA released the first photographic image of the Earth taken from space and a new perspective entered popular consciousness. Ordinary people and not just astronomers and astronauts could from then on imagine the beauty of their planet as observed from space. These new images of the Earth encouraged the public to begin to comprehend the ecological interconnection and potential fragility of their planet which was now subject to unprecedented pressure from technological humanity (Brennan and Lo 2008: 5).

Complementing this greater awareness of the ecological impact of human expansion at a global level was a proliferation of localized battles to protect particular natural areas from development and the impacts of polluting industries. In New Zealand for example, popular awareness of environmental issues grew rapidly during the nation-wide campaign to stop the raising of the level of Lake Manapouri. This scenic lake, much of which was within the Fiordland National Park, was to be raised to increase the output of a hydro-electricity scheme, developed primarily to provide low cost energy for a large overseas-owned aluminium smelter (Galbreath 1993: 143-145). During the late 1960s and 1970s this newly emerged environmental movement became a significant social force in numerous similar campaigns in First World countries (Galbreath 1993: 146).

Professional philosophers inevitably became aware of the growing scientific and public concern about environmental problems and some joined environmentalist groups. In the United States, the events and discussions of the first Earth Day on 22 April 1970 are credited with providing a critical catalyst that encouraged a number of philosophers to begin to consider how their private concerns about the environmental crisis could be integrated with their professional philosophical work. Over 20 million Americans joined in Earth Day demonstrations and lectures aimed at bringing environmental concerns into the mainstream political agenda. Philosophers attending these events were urged by their students and other environmental activists to begin disciplined work on the ethics of human relations with nature (Centre for Environmental Philosophy 2002: 1). The first philosophical conference addressing environmental concerns followed soon after Earth Day and was held at the University of Georgia in 1971 (Palmer 2003: 15).

At very much the same time, a small number of philosophers in Australia and Norway were coming to similar conclusions and were also beginning to focus on the same philosophical issues (Brennan and Lo 2008: 5). In 1973 Richard Sylvan (then Routley), a New Zealand born philosopher based in Australia, presented a conference paper titled *Is there a need for a new, an environmental*

ethic? Sylvan answered this question in the affirmative, suggesting that a distinctively nonanthropocentric ethical focus was required to properly address the ethical questions raised by the environmental crisis (Palmer 2003: 15). The Australian philosopher John Passmore came to a quite different but also highly influential conclusion in his monograph *Man's responsibility for nature* (Passmore 1974). Passmore argued that existing humanistic ethical theory, adequately applied, was all that was needed to respond to this newly acknowledged challenge for academic philosophy (Palmer 2003: 16).

Norwegian philosopher and climber Arne Naess and colleagues also began to discuss the philosophical questions raised by the environmental crisis during this period. In 1973 Naess published an article that was to be influential, both amongst environmental philosophers, and also perhaps even more so for those concerned with environmental politics and activism (Brennan and Lo 2008: 5). In that paper titled *The shallow and the deep, long range ecology movements: a summary* (Naess 1973), Naess argued that there were two quite different strands to the emerging environmental movement; a shallow anthropocentric approach concerned with pollution and resource depletion; and what he labelled as the "deep ecology" movement. The deep ecology movement had very different commitments in terms of metaphysics, ethics and politics. Metaphysically, deep ecologists reject the common assumption of the separation of humans from their natural environment, and emphasise the complex interrelations between all living beings. Ethically, deep ecologists are committed to a biocentric equality which does not privilege human interests but is concerned with the interests of all living organisms in survival and flourishing. Naess proposed that deep ecologists should also be committed to political action favouring the diversity and decentralisation of human communities (Palmer 2003: 29-30).

The first step in the development of environmental ethics therefore did not come from any uniquely philosophical insight. What was involved was a process whereby some individual philosophers came to accept the validity of scientific and public concern about the relationship between modern civilization and nature. The field therefore emerged after the environmental movement was already underway. The concerns that motivated the rise of environmentalism such as the environmental impact of massive population growth, over-exploitation and exhaustion of natural resources and of environmental pollution were not obviously problems requiring urgent attention from philosophical ethics. Another critical background assumption had to be established, or at least widely accepted before a role for philosophical ethics would be seen as reasonable or even necessary by a minority of philosophers.

1.2.2 White's diagnosis – historical values dysfunction needing religious or philosophical 'cure'?

As with the identification of the criticality of the environmental crisis, again it was not a philosopher that performed this critical step in preparing the way for the emergence of the field of environmental ethics. Two non-philosophers have been widely recognized as having been most influential in defining the philosophical character of the environmental dysfunction of modern civilization. They were the forester and conservationist, Aldo Leopold and the historian Lynn White Jr. The main impact of their respective contributions to the development of environmental ethics differ chronologically from the original publication dates of their most relevant work, so that I shall first consider the influence of White's much cited article, *The Historical Roots of our Ecologic Crisis* (White 1967).

Firstly however, I will briefly note the contribution of a third non-philosopher, the biologist Gareth Hardin. Hardin also made a seminal contribution to understanding of the environmental crisis during the period that the field of environmental ethics was emerging (see Hardin 1968: 68). Hardin outlined a simple parable in which a common resource, in his example the grazing commons of the Middle Age village, would supposedly be progressively degraded, to the detriment of all users of commons, as the inevitable outcome of the logic of individual rational self-interest. He then argued that this "tragedy of the commons" model describes the underlying dynamics of inevitable decline for all natural resources held in common in circumstances where there is no adequate external regulation of individual self-interest.

Significantly, the implications of Hardin's discussion of the tragedy of the commons parable does not seem to have had a defining influence in the development of environmental ethics despite having had an essential role in the development of environmentalism (O'Riordan 1976: 27-36). At the very least, little influence is attributed to Hardin in many contemporary standard accounts of the origins of the field (for example, see Brennan and Lo 2008; Palmer 2003; Centre for Environmental Philosophy 2002; Light 2003b).

Hardin's thesis has continued to have considerable influence on environmental thought to this day, although the conclusions he drew from his analysis have later been shown to have significant flaws as I will explain further in Chapter 4 (see Ostrom 2002). Further, the policy recommendations that Hardin draws from his thesis are considered by many people, I believe rightly, to be ethically pernicious. For example, writing around the same critical time period in the formation of environmental thought and the rise of environmental ethics, the influential environmental thinker Barry Commoner expressed his concern as follows:

> To resolve the environmental crisis, we shall need to forego, at last, the luxury of tolerating poverty, racial discrimination and war. In our unwitting march toward ecological suicide we have run out of options. Now that the bill for the environmental debt has been presented, our options have been reduced to two: either the rational, social organization of the use and distribution of the earth's resources, or a new barbarism.
>
> (Commoner 1971: 296)

'The new barbarism' that Commoner warns lies ahead for civilization if a more rational and just social organization is not achieved is precisely the so-called 'lifeboat ethics' developed initially by the biologist Ehrlich and later expounded with great tenacity by Hardin (O'Riordan 1976: 68; Hardin 1972, 1977, 1993, 1999). This was Hardin's purported 'solution' to the particular global tragedy of the commons problem which he believed was most pressing. Hardin judged this problem to be exponential human population growth (see O'Riordan 1976: 30-32, 68). Contributors to the newly emerging field of environmental ethics rightly questioned Hardin's callous 'solution' of letting poor individuals and poor countries languish and even perish for the sake of posterity. However, failing to take 'on board' centrally the implications of Hardin's generic tragedy parable has been problematic for the field. The insight in question is that environmental problems are primarily challenges of collective choice and action. Instead, the field has pursued a surprisingly traditional focus on the ethical duties of the individual. I believe that this focus, and the scant concern for the social and political problems of collective choice and action implicated by the environmental crisis, has greatly contributed to the irrelevance of much work in environmental ethics for practice. This, at least, is the position that I will argue.

White's major impact on the field came through his seminal article on the historical background to the contemporary "ecologic crisis". His central claim was that a prevailing Judeo-Christian belief in the moral superiority of humanity over other species and natural objects represents the critical historical root of the environmental crisis of today. White concluded on the basis of his professional work as a medieval historian that it has been the unquestionable belief in the moral superiority of humans that has allowed the over-exploitation of Nature by modern nations, an over-exploitation that now threatens the very viability of human civilisation. Essential to his thesis is a reasonable claim that the way humans interact with Nature[3] is shaped at a very deep level by the understanding that prevails regarding the ultimate role and status of humans (Gare 1993; 39-40). In the West, our relationship with Nature has inevitably been deeply conditioned by the beliefs about human nature and human destiny that have been promulgated by that defining religion of Western civilization, Christianity (White 1967: 1205-1206).

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[3] This is "nature" in the narrow sense that Passmore has defined as "all that exists apart from humans and human artifacts". He contrasts this definition with the broad view of nature as "all that exists including humans and their works" (Passmore 1995: 129). I will use the convention of capitalizing *Nature* to denote this meaning and to hereafter avoid the use of clumsy terms such as "non-human nature" and so forth.

White notes that Christianity, or at least Western Christianity[4], has been an extremely anthropocentric religion that has presumed the moral superiority of humans over the rest of 'God's creation'. Medieval Christian dogma placed humans and their spiritual destinies in a privileged relationship to a transcendent God. The earth and all other living things had meaning and purpose only insofar as they contributed to the biological and material environment within which the great drama of personal spiritual destiny was enacted. The only relationships of moral significance in this drama were then generally only those amongst humans themselves and between humans and their transcendent God[5]. Unlike some pre-Christian pagan beliefs, Christian dogma thus denied the presence of any spiritual or direct ethical value in other species or natural objects which might otherwise need to be placated or accommodated before the modification or use of such an object or organism. White argues that Christian rejection of spiritual or ethical restrictions on the use of nature placed no sufficient moral barrier to the development and application of ever more powerful technologies. And it was these powerful technologies that made possible the ruthlessly successful exploitation of other species, peoples and 'natural resources' around the globe by the countries of the former Christendom[6]. Although White acknowledges there have also been Christian traditions that have encouraged more benign relations with nature such as that of the Greek Eastern Church, the long-prevailing tradition in the West has been that of despotic anthropocentrism and of human dominion of Nature (White 1967: 1205-1206).

Many people would argue that Christian dogma regarding nature is now of little significance to their thought and action in an increasingly pluralist and secular world. White argues directly against this assumption. He claims that an unreflective moral anthropocentrism[7] grounded in the belief that:

> . . . no item in the physical creation had any purpose save to serve man's purposes . . . continues to be the default and behaviourally decisive attitude of the majority whether or not they are committed to other aspects of Christian dogma.
>
> (White 1967: 1205)

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[4] Quite different traditions have prevailed in the Greek Eastern Church (White 1967: 1206).

[5] As White argues, there have been exceptions to this rule, most notably provided by his spiritual hero St Francis of Assisi (White 1967: 1206-1207).

[6] Bryan Norton notes that White highlighted an important factor here regarding the origins of modern environmental problems largely overlooked in the newly emerging environmental ethics due to the almost exclusive focus given to the significance of attitudes and values regarding nature. That factor was the centrality of changes in technology allowing humans greater powers to manipulate natural forces and resources. Significantly, White had noted that major technological changes were already underway in Christendom well before the rise of science (Norton 2003: 35-36). This omission is now being corrected by some contemporary environmental philosophers such as Paul Thompson. Interestingly, Thompson provides a definition of the subject matter and task of a comprehensive bioethics which would incorporate environmental ethics as being concerned with ". . . the cumulative effects of industrial technology on global and local ecosystems and on human health" (Thompson 2002: 199).

[7] That is a human-centered focus of values and meaning, analogous to the geo-centric astronomical orientation of Ptolemy that prevailed prior to the acceptance of the Copernican system.

He argues that modern science and the technology that science has made possible, continues to be fundamentally shaped by this original dogma regarding the relationship between humans and Nature. That is, a despotic orientation towards the rest of Nature has been presupposed at a deep level within the now globally influential science and the more powerful technology it has spawned.

White's conclusion is then that if the human-Nature relationship presupposed by modern science is fundamentally despotic, then against the common assumption, *"*more science and technology is not going to get us out of the present ecological crisis*"* (White 1967: 1206). To the contrary, White suggests that *"*since the roots of our trouble are so largely religious, the remedy must also be essentially religious, whether we call it that or not*"* (White 1967: 1207). By this I take White to be referring to the possibility of secular philosophical positions that might address the same level of fundamental concern regarding the human-Nature relationship that had been the province of theology before the Enlightenment. However, the solution he preferred was not secular. As a Christian, White advocated the adoption of an alternative Christian framework inspired by the thought and action of the man he describes as 'the greatest spiritual revolutionary', St Francis of Assisi. According to White, St Francis:

> . . . tried to substitute the idea of the equality of all creatures, including man, for the orthodox belief in 'man's limitless rule of creation'. He failed. Both our present science and our present technology are so tinctured with orthodox Christian arrogance toward nature that no solution to the ecological crisis can be expected from them alone . . . We must rethink and refeel our nature and destiny.
>
> (White 1967: 1207)

Of course, St Francis's ideas clearly failed to exert any significant or lasting influence on the prevailing Christian orthodoxy of his time. It is also apparent now over 40 years after White recommended the Franciscan model to his contemporaries, that a 'second coming' of this benevolent theology has had no greater influence on the march of Western civilisation towards ecocide than the first.

White's critical account of the role of orthodox Christian dogma provoked a rapid defensive response from many contemporary theologians (Centre for Environmental Philosophy 2002: 1). In addition to purely defensive accounts, there was also considerable interest in, and development of, more environmentally benevolent theological positions. Most notable amongst these were various attempts at extending the lesser stewardship tradition of Christianity that had been emphasised by the respected Australian social philosopher, John Passmore, in his book *Man's responsibility for nature* (Passmore 1974). However, given that the moral authority and political influence of Christianity across wider society has been greatly eroded since the Enlightenment, exactly what Christians have or have not believed with regard to the human relationship with Nature is now a rather moot point in many countries if not perhaps the United States (see Gare 1993: 63).

White's claims regarding the despotic anthropocentrism of the dominant historical Judeo-Christian tradition were confirmed in the later assessment of Passmore (Passmore 1974: 6-27). Passmore and others noted that the historical fact that a culturally prevalent Judeo-Christian doctrine regarding nature was despotic in character does not establish Christianity as the primary cause of our contemporary environmental problems[8]. White had consciously sought to avoid the criticism of oversimplification by not simply identifying a single fundamental cause of the environmental crisis. He thus quite deliberately chose the term "historical roots" to that end. However, as Gare argues, White's primary focus on despotic anthropocentrism nevertheless readily matched the simple model of a singular disability – anthropocentrism, and singular cure – non-anthropocentrism (Gare 1993: 40). And as others have noted, previous civilizations with quite different religious beliefs have also catastrophically over-exploited Nature (See for example Diamond 2005). Thus the causes of environmental degradation cannot be limited purely to central aspects of Judeo-Christian doctrine.

Moncrief has argued more plausibly that a combination of factors contributed to the historical development of our contemporary environmental crisis. Moncrief identifies the role of capitalism with the related developments in science and technology, a shift towards democracy, urbanization, increased wealth and the distribution of this wealth, increased population and individual property ownership as the key factors (Moncrief 1970: 511-512). Gare concludes his historical review of the precursors to the environmental crisis by accepting White's claim that Christianity has played a critical role in the development of despotic anthropocentric attitudes. However, he claims that a more comprehensive understanding of the driving forces of the environmental crisis identifies other quite different social, economic and political factors as being decisively implicated (Gare 1993: 70).

White's thesis on the historical origins of the ecological crisis is thus far from uncontested and may well have overstated the role of Christian dogma at the expense of other significant factors, including notably the role of Western philosophy itself (Hargrove 1989; 16-45). The article nevertheless served a critical role in the early development of the academic field of environmental ethics[9]. White had brought to academic notice the question of the historical cause or causes of the environmental crisis. By claiming that despotic anthropocentrism was a significant, if not sufficient, causal factor in the development of the environmental crisis, his work could be taken to suggest that philosophical work might have some significant role to play in amending this problematic anthropocentric attitude. White had looked to religion for his preferred solution to the environmental crisis. After a period of almost a decade mostly on the 'sidelines' (Centre for Environmental Philosophy 2002: 1), a number of philosophers began to see the possibility that work in academic

[9] Norton acknowledges the key role of White's influence on the emerging field. However, he argues that White's emphasis on the central role of despotic anthropocentric attitudes misdirected the initial focus of work in environmental philosophy (Norton 1995: 346).

philosophy might also be able to contribute towards a rational and effective response to the environmental crisis (Callicott 2002b: 4-5).

1.2.3 Aldo Leopold – a forester defines a role for secular 'philosophy'?

North American forester, conservationist and homespun philosopher Aldo Leopold was the second crucial contributor to the process of establishing the environmental crisis as needing some level of philosophical solution. Leopold continued a tradition of North American literature expressing reverence for wilderness and concern with nature conservation that had begun during the 19th and early 20th centuries with authors such as Thoreau and Muir (Muir, Engberg, and Wesling 1999; Thoreau and Anderson 1973). Leopold's most important contribution to the development of environmental concern came through his promotion of the concept of a "land ethic" in his last book, *A Sand County Almanac* published in the year of his untimely death,1949. This book was reprinted in 1970, coinciding with the Earth Day events that year previously mentioned (Leopold 1970 / 1949). This reprint allowed a much greater readership of Leopold's ideas regarding nature conservation and of his advocacy for the development of a land ethic. Thus posthumously, Leopold became an even more influential and inspirational figure for the environmental movement (Centre for Environmental Philosophy 2002: 1). Indeed he is frequently referred to as the modern prophet of environmentalism (Callicott 1987b: 186).

The overall purpose of Leopold's *A Sand County Almanac* is to persuade the reader that our generally exploitative and purely economic relationship with "land" or the biotic community needs to be revised to include ethical and aesthetic considerations. Leopold, like White, believed that the environmental problems confronting modern industrial society result from ill-informed and despotic attitudes to land, or nature. Unlike White however, he did not see potential solutions coming from the adoption of new religious frameworks. Instead Leopold hoped that secular ethical consideration could be extended beyond established limits within the human community, to take in the wider biotic community.

Leopold embraced a kind of proto-sociobiology through which he understood ethical systems as having co-evolved within interdependent human communities. On this understanding, ethical beliefs provide guides and limitations on acceptable behaviour that serve to facilitate greater mutual cooperation and interdependence. In the evolutionary context, the effectiveness of ethical systems has thus been vital to the flourishing and survival of human communities and only secondarily that of human individuals. Ethical systems are not on this count the result of a negotiated and consciously adopted social contract as much as a co-evolved dimension of cultures (Callicott 1987b: 190-195).

Leopold's contention is that the continuing survival of human civilisation now requires a further step in social evolution that would adjust ethical beliefs to take into account human interdependence on the wider biotic community. This interdependence had become better understood through

advances in the modern science of ecology. Leopold's vision was that if more people could become ecologically well-informed they would recognise that humans are simply "plain members" rather than "conquerors" of this more extensive biotic community. He hoped that a change of perspective would emerge, encouraging people to take greater care and responsibility for their actions within this expanded 'community' of interdependence. His land ethic was above all a call to move beyond the prevailing model that has portrayed the use of land and other species as simply a matter for economic consideration. Leopold urged instead that we:

> . . . examine each question in terms of what is ethically and aesthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.
>
> (Leopold 1987: 224-225)

1.2.4 Richard Routley – a role for analytic moral philosophy?

Both White and Leopold emphasised the significance of ethical beliefs and attitudes towards nature in the rise of environmental problems. Likewise, they both suggested that effective solutions to the environmental crisis would require changes at this level. As already noted, because White's thesis focused on the contribution of Christian dogma to the development of our environmental ills, an academic debate was initially encouraged on the culpability of religion in this regard (Centre for Environmental Philosophy 2002: 1). Leopold's land ethic, however, was a direct invitation to explore the prospects for a secular environmental ethics. It is then not surprising to find that the first published article on the subject of environmental ethics by a professional philosopher, the New Zealander born but primarily Australian based philosopher Richard Routley (later Richard Sylvan), began with reference to Leopold's land ethic (Routley 2001/1973; 17-18).

Routley, like most environmental philosophers that followed him, referred to Leopold as an inspirational source for a new philosophical focus on environmental ethics. But he did not attempt to build his own argument grounded in Leopold's central claims. In fact, Routley quickly noted that he disagreed with Leopold's suggestion that a land ethic requires the extension of existing ethical belief and practice to take in the previously neglected domain of the biotic community. Instead, Routley argued that an adequate environmental ethic will require a significant general change in existing ethical attitudes, values and evaluations (Routley 2001/1973; 17-18).

White and Leopold in different ways had both served to bring to prominence the notion that despotic anthropocentric attitudes and evaluations were central causal factors in the development of the environmental crisis. In doing so, they paved the way for environmentally concerned philosophers to begin to explore the prospects for some kind of expert philosophical 'treatment' for this misguided framework of belief and valuation. Routley's paper heralded the beginning of the search for a distinctly philosophical response to the environmental crisis.

1.2.5 The defining of a response to environmental crisis 'grounded' in moral philosophy

The approach that many of the first generation of environmental philosophers took was then very much shaped by the early assumption, influenced particularly by White and Leopold, that despotic anthropocentric attitudes represented a central cause of environmental problems. Given this 'diagnosis' of the environmental problem, the first generation of contemporary environmental philosophers such as Richard Routley (Sylvan), Arne Naess, Holmes Rolston and Tom Regan all envisaged a similar response from philosophy. They saw their principal task as philosophers to involve developing some form of nonanthropocentric ethical theory that might underpin the direct moral value of other species and perhaps of wild nature more generally. Making the case to justify such value would thus be a philosophical and ethical corrective to the all pervasive and problematic influence of despotic anthropocentrism and the purely instrumental valuing of nature this framework had fostered (Callicott 2002b; 5).

Routley, Naess, Rolston, Regan and others took the central theoretical challenge of this new undertaking to be the question of the intrinsic value of nature. Their assumption was that if the instrumental valuation of nature that anthropocentric value frameworks presuppose was a central *cause* of the destructive and unsustainable exploitation of nature, then making the case for nonanthropocentric valuing of nature would provide a '*remedy'*. Rather paradoxically for a supposedly 'radical' new approach, one of the defining philosophical influences informing this nonanthropocentric mission was Kant's conception of intrinsic value and the role that intrinsic value played within his distinctively anthropocentric moral theory (Callicott 2002b; 5).

It should be noted at this point that although many early contributors to environmental ethics thus began to explore the possibilities for justifying nonanthropocentric values in nature, from the beginning there has been considerable disagreement and a degree of confusion regarding the best way to characterise such value theoretically (O'Neill 2001; 8-10). Nonanthropocentric value has most frequently been described within the field as some kind of intrinsic value, taken to be a value that non-human individuals, species, communities or ecosystems possess themselves, independent of their instrumental value to human ends (Light 2003b: 636). Some environmental philosophers such as Rolston have attempted to provide human-independent or objective accounts of intrinsic natural value (Rolston III 1975; 93-109). Others have argued such human-independent values are nonsensical and have instead attempted to develop subjectivist accounts of intrinsic or inherent natural value (see for example, Callicott 2005; Elliot 1997). Others still have argued that there are many valid ways of valuing aspects of nature non-instrumentally, such as for scientific, aesthetic and recreational purposes. Such non-instrumental but still anthropocentric valuation is then said to avoid the theoretical difficulties associated with intrinsic value which have been the centre of so much philosophical controversy within environmental ethics (see Benson 2000; Norton 2005b).

The Kantian system of morals, so influential to the way in which nonanthropocentric environmental ethics was pursued, is built on the claim that entities that possess intrinsic value are ends-in-themselves. Such entities have a value independent of any worth they might have for others, and as such are said to possess a dignity that cannot be quantified by price. This claim has traditionally been justified on the basis that entities such as persons should be attributed intrinsic value because they possess an intrinsic value-conferring property, reason[10]. Assuming the supreme value of 'Reason', Kant then argued that rational beings have intrinsic value and should thus be treated as ends-in-themselves and never treated instrumentally as a means only to the ends of another (Callicott 2002b: 5).

The critical feature of the language of Kantian moral philosophy that fostered the ambitions of environmental philosophers was the prospect of establishing an analogous normative force to that asserted in the language of human rights, but now applied to novel (non-human) entities. The goal was to establish an environmental discourse analogous to that of human rights that might then justify the extension of moral duties to protect non-human entities such as endangered species and natural ecosystems. Many of the early contributors to environmental ethics therefore intended their work to contribute to a transformation of societal belief such that direct moral concern analogous to that attributed to persons, would now be extended to other species and wild nature more generally (Callicott 2002b: 5, 20, 22-23).

Kant believed that the possession of the capacity of Reason was the only intrinsic-value-conferring property. He certainly did not consider other species or nature more generally to have the capacity of Reason and thus possess intrinsic value. Famously he considered that humans may only owe indirect duties to other species. He argued that the mistreatment of animals is not directly morally wrong. Rather, the act of callous mistreatment of an animal degrades the moral character of the human. To permit the expression of such vicious character traits is then wrong because it degrades humanity. On consequentialist grounds that Kant would not have entertained, to do so is also to risk the purely contingent possibility that some individuals might later come to act callously towards humans, which are the objects of direct moral worth (Kant 2008 / 1873: 62-64). Callicott emphasises however, that it has been the architecture of Kant's moral philosophy that has influenced work in environmental ethics, not Kant's particular moral commitments. What was taken up by environmental philosophers was Kant's close linkage between moral ends-in-themselves, intrinsic value, an intrinsic-value-conferring property and rights (Callicott 2002b: 7). What had to be rejected was the necessity of the particular intrinsic-value-conferring property Kant identified, Reason.

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[10] Reason for enlightenment thinkers such as Kant is a capacity of great and universal significance. To denote the particular significance of this word as assumed by Kant and other Enlightenment thinkers, I will hereafter use the convention of capitalising it as "Reason".

Janna Thompson notes that there are two ways in which environmental philosophers came to take up the task of trying to justify the belief shared by many environmentalists that Nature possesses intrinsic value. The first approach has been employed by philosophers such as Paul Taylor (see below) and on an occasion by Rolston and involves an argument by analogy (Thompson 1990: 151). The analogy is pursued by first assuming that human individuals are intrinsically valuable and that there are ethical duties to promote their well-being or at least avoid harming them as claimed by moral philosophers such as Kant. The argument then proposes that the reason we attribute intrinsic value to human individuals is because they have interests, preferences and purposes. In short they have a good of their own that can be either furthered or frustrated by the actions of others. Provided that one accepts that the possession of some such personal attribute or attributes establishes the criterion by which intrinsic value is attributed, then the argument by analogy can be launched. The claim is that if we are consistent, as the good modern moral agent strives to be of course[11], then once we recognise that at least some animals have interests, preferences, and purposes, whether consciously held or not[12], then the argument goes that we should accept that they also possess morally significant intrinsic value (Thompson 1990: 151).

In making such arguments from analogy, it has been recognised as necessary to disable the traditional philosophical criteria employed by authors such as Kant which had successfully blocked the attribution of intrinsic value to other species. This task has usually been attempted by applying the "so-called argument from marginal cases". This argument is based on the observation that the very young, mentally disabled and severely senile people (marginal cases) may not meet the usual necessary philosophical criteria to be regarded as minimally rational. These are capacities of thought, language, self-consciousness and moral agency best exemplified by normal adult persons. If, as most people would demand, individuals lacking these full powers of intellect and rationality should nevertheless be treated with direct moral concern, then it has been argued that the traditional rationality criterion must be too restrictive. It has then been argued that the intrinsic-value-conferring property should be modified so that the so-called marginal cases are included within the class of morally significant beings. And if it is conceded that the intrinsic-value-conferring property should thus be amended to be less cognitively demanding by taking into account these cases, then it is claimed there is reason to reconsider the scope of moral entitlement more generally. A philosophical case is thus asserted for the reasonableness of exploring the possibility that other species and natural entities may also meet the requirements for suitably revised criteria for the intrinsic-value-conferring

[11] See Bernard Williams for a superb account of the expectations that Kantian moral theory has placed on the idealised moral agent (Williams 1985: 54-70).

[12] So-called biocentric theorists such as Paul Taylor or Gary Varner argue respectively that having purposes or interests qualifies organisms as possessing intrinsic (or inherent) value even in the case of plants and non-sentient animals which we presume can have no conscious awareness of such purposes or interests (Taylor 1986; Varner 1998).

property. A good deal of work in environmental ethics has thus involved the proposal and defence of various alternatives for rationality as the critical intrinsic-value-conferring property (Callicott 2002b: 7).

Thompson explains that the second approach to nonanthropocentric environmental ethics has not relied so directly on analogy with morally significant human attributes. Rather those following this second path have sought to persuade individuals in their role of 'valuers' that,

> . . . there are certain things or states of affairs in nature that we as rational, morally sensitive people ought to regard as having a value independent of our needs and interests and that there are other states of affairs (like defoliated jungles or exotic pine plantations) that we ought to regard as having a disvalue. We simply have to come to recognise that these values or disvalues are there.
>
> (Thompson 1990: 151)

Persuading us of the existence of such values is then the creative task of the environmental philosopher. Others must be persuaded that traditional ethical theories that do not acknowledge such values are wrong insofar as they have failed to account for the valid moral intuitions expressed by many environmentally concerned people regarding what they believe to be good or bad, right or wrong. Thompson notes that it is this second approach which was taken by Richard and Val Routley[13], by Rodman and also in some of the arguments proposed by Rolston (Thompson 1990: 151).

1.3 The "methodology wars" of environmental ethics

1.3.1 A brief taxonomy of the major theoretical approaches

Tom Regan was one of the first and most influential philosophers to pursue the nonanthropocentric path. Regan develops a theory that builds on psychologically based criteria for nonanthropocentric value, drawing by analogy on the original Kantian moral superstructure. Regan argues that being a subjectively experiencing "subject of a life" is the intrinsic[14] value-conferring property that underpins the attribution of direct moral value to at least adult mammals (Regan 1983: 327-329). Peter Singer also argued for the direct moral value of individual animals. However, Singer drew on an argument by analogy from the utilitarian tradition rather than the Kantian. His argument in short was that sentience, the capacity to experience pleasure and pain, is the critical property that confers moral

[13] The Routley's both later changed their names respectively to Richard Sylvan and to Val Plumwood. Val Plumwood later became one of the most respected contributors to the eco-feminist tradition discussed in section 1.3.5 (see for example: Plumwood 1993, 1994, 1998, 2002).

[14] Regan uses the term 'inherent' value rather than intrinsic value to refer to the value possessed by individuals with sufficient psychological capabilities to be considered as 'subjects-of-a life' (Regan 1983: 327-329).

significance. Only giving moral consideration to the pleasure or pain of humans was argued by Singer to be a failure of moral consistency. Our disregard for the pleasure or pain of individuals belonging to other species of sentient animal was then claimed by Singer to represent a morally unjustifiable partiality towards our own species. He thus argues that the supposedly established anthropocentric moral wisdom is really what he terms as "speciesism". In doing so he was drawing on analogy with other 'isms' that idealistic liberals have battled against such as sexism and racism (Singer 1990 / 1976: 1-21).

Given that many non-human species have the capacity of sentience[15], Singer's formulation would extend moral significance much more widely across the animal kingdom than Regan's more demanding psychological criteria for "subjects of a life". While Regan's theory sought to provide a philosophical basis for the attribution of 'rights' to animals and thus can rightly claim a seminal role in the development of the animal rights movement, it is Singer's, *Animal Liberation*, that became the popular 'Bible' for animal ethics advocates. Singer's concern for the practical applicability of his arguments even extended to his inclusion of a set of vegetarian recipes in an appendix (Singer 1990 / 1976)!

Regan and Singer's arguments have had considerable influence on the strengthening of the animal rights and liberation movements. The extensions of moral concern that they respectively argue for also created considerable interest and debate within environmental ethics. However, their theoretical positions have largely been rejected as inadequate for the theoretical mission of environmental ethics because they do not provide a basis for extending direct moral concern to simpler forms of animal life and for plants, organisms that are nevertheless of great concern to environmentalists (Callicott 1980; 2002b).

To counter this perceived weakness, the broadly Kantian model of moral philosophy tied to the analogical mode of argument identified by Thompson has been extended even more boldly by philosophers such as Paul Taylor, Gary Varner and others in their respective attempts to morally enfranchise all living beings. These theorists have attempted to provide so-called "biocentric individualist" approaches to environmental ethics. While still restricting the attribution of intrinsic value and hence direct moral concern only to individual beings, they argue for a vast extension of the scope of such concern compared even to the highly inclusive sentientism of Singer. Taylor's theory follows the Kantian deontological model (Palmer 2003; 22-23). However, he employs an analogy from a broadly interpreted Aristotelian position to argue that there is a sense in which all living things can be said to flourish. Individual organisms strive to attain ends, goals or purposes that are inherent to their kind. He argues that this striving towards life goals or a *telos* means that all organisms have a

[15] The level of cognitive complexity of animal species required before they can be said to be sentient is contentious, as is the moral significance of sentience in non-human species (See for example Carruthers 1992).

'good' of their own. Whatever encourages the achievement of these ends and so contributes to the organism's flourishing should be regarded as morally good. Alternatively, something can be said to be 'bad' for the individual if it prevents that individual from attaining the ends of its kind and thus inhibits its flourishing (Taylor 1986: 60-70). Taylor argues that this striving of individual organisms towards species specific ends shows that all living things have a good of their own independent of their value to humans. His claim is then that all living organisms should have moral significance since each one is "the teleological centre of a life"(Taylor 1986: 119-129).

Considerable problems can be anticipated in trying to apply such theories to practice in the (currently unlikely) event that they should become sufficiently widely accepted for this to happen. Applying biocentric ethical theories would result in innumerable ethical conflicts. That is because the interests of so many individual organisms claimed to have moral significance would all need somehow to be taken into ethical consideration. Biocentric theorists such as Taylor have attempted to deal with this application problem by developing quite elaborate sets of secondary ethical principles. These secondary principles are intended to determine relative priorities between the competing interests of individuals of different species (Light 2003b: 637). For example Taylor offers five priority principles for the fair resolution of conflicting interests. Merely as illustrative and without space here for sufficient elaboration of the details, these are principles of: self-defence, proportionality, minimum wrong, distributive justice and restitutive justice (Taylor 1986: 192-198).

However, even though biocentrism seeks to justify a much broader extension of moral concern than the sentientism of Singer or animal rights of Regan, the approach has still been widely rejected within the environmental ethics literature. The reason for this rejection is because biocentric approaches still retain individual organisms as the focal point of moral concern. It has been argued and widely accepted within the programme of nonanthropocentric environmental ethics that as an individualistic approach to ethical concern, biocentrism cannot attribute direct moral value to the subjects of greatest concern to environmentalists and conservation managers. That is, collective entities such as species, biotic communities, ecosystems and even the Earth or *Gaia*[16] as a whole.

The moral significance of individual beings has been the vital concern of animal rights and liberation movements. But the principal concern of many theorists in environmental ethics has been on Nature or wilderness protection[17]. The practical focus of such concern has therefore generally been on the protection of endangered species and wild areas and the restoration of degraded ecosystems rather than the well-being of individual creatures (Callicott 1980; 2002b). This concern leads to a focus that is not so much concerned with protecting the well-being of individual organisms

[16] The *Gaia* hypothesis was outlined by the scientist James Lovelock during the 1970s (See Lovelock 1979).

[17] In more recent years the concerns of environmental ethics have considerably extended beyond the original wilderness protection focus and now include concern with the so-called "built environment"(Brennan and Lo 2008: 23).

as with the ecological 'health' of collective entities such as species, populations, biotic communities and ecosystems. Indeed conservation managers frequently call for interventions to protect endangered species, populations, biotic communities or ecosystems by so-called 'culling' or killing of ecologically disruptive organisms. Such ecologically disruptive or 'pest' organisms are generally members of non-native, introduced species. Prominent authors within the field such as Callicott and Rolston have succeeded in convincing most, but certainly not all[18] in the field that an adequate environmental ethic must be not only nonanthropocentric but also 'holistic'(Varner 1998: 140-141).

Holistic environmental ethics has most frequently been associated with so-called "ecocentric" approaches. Ecocentric theorists seek to establish some basis for direct moral concern for the collections of biotic and abiotic elements that constitute ecosystems and other natural collectives. The grounds for this direct moral concern is typically still sought by appeal to the concept of intrinsic natural value. However, the theoretical model provided by Kantian moral philosophy and the analogical mode of argument has little relevance to this project apart from a continued emphasis on the critical importance of intrinsic natural value. Ecocentric theories cannot plausibly claim that ecological systems are subjectively experiencing beings that can be understood to have a well-being that can benefit or be harmed given current understanding in ecology. There is no recognisable subject that can be argued to 'own' intrinsic value and therefore be due direct moral consideration. Thus the second mode of argument for intrinsic values identified by Thompson has been brought to bear (Thompson 1990: 151)

Callicott's defence and extension of the land ethic originally proposed by Leopold has provided one of the most well-known and controversial versions of an ecocentric environmental ethic (Callicott 1980, 1989; 1987b) [19]. Callicott argues that Leopold's land ethic provides in outline form the critical features of an adequate environmental ethic. He argues that such an adequate environmental ethic must have as its *summum bonum* the integrity, stability and beauty of the biotic community. Thus the good of the biotic community as a whole provides the standard against which assessments can be made of the relative value of the various component parts of the community. Individual organisms may be granted morally significant value-in-themselves in line with traditional ethical theory or the new theories of animal ethics. However, Callicott argues that in circumstances where it is necessary to determine priorities amongst the competing needs or interests of various members of the biotic community, such priority is determined within an ecocentric model by considering the relative instrumental value each member contributes to the good of the whole community. On this

[18] Dale Jamieson in particular has continued to argue strongly for the value of an individualist-based environmental ethic (Jamieson 1998).

[19] Key aspects of Callicott's controversial "triangular affair" paper described here were later abandoned or modified following publication and subsequent strongly critical feedback on its misanthropic themes (Norton 1995: 348-351).

understanding, species that play critical roles in the functioning of the biotic community, such as the role honey bees play as pollinators for flowering plants, should be granted moral priority over less ecologically significant species. For instance animals such as rabbits that may play less important or even deleterious roles in an ecosystem should be given lower moral priority than bees according to Callicott, even though they are psychologically more sophisticated than bees (Callicott 1980).

By arguing that the 'well-being' of the whole biotic community has moral priority, ecocentric theories such as Callicott's have been criticised on the grounds that they readily give rise to misanthropic conclusions. If humans are just "plain members of the biotic community", are too numerous and are causing ecological disruption to the biotic community, then on this account, humans must surely be of only very low or even negative instrumental value to the biotic whole. Thus it is said that if ecocentrism is applied consistently, as is usually expected of a moral theory, then such an ethic would appear to legitimate the 'culling', or at least 'letting die', of human populations that are harming the biotic community, just as many other species are currently culled as part of environmental management practice[20]. Thus Callicott's original defence of the land ethic was strongly criticised, particularly by Regan who suggested Callicott was promoting "ecofascism" (Regan 1983: 362). Callicott then amended later versions of his theory to avoid the charge of ecofascism advanced by Regan and others[21](Norton 1995: 350-351).

Ecocentric theories provide ethical frameworks that appear to best match the practical concerns and intuitions of environmental managers. It is therefore not surprising that those otherwise unfamiliar with ethical theory have been tempted to look to such theories to justify established policies[22]. However, as just noted, ecocentrism has also been subject to considerable criticism from philosophers because of the potentially unacceptable implications of the position for individual creatures, including particularly individual humans (Norton 1995: 348-351). In addition, at the level of practical application, even though many environmentalists and greens may endorse ecocentric positions in private, they do not find this position effective to engage with and persuade environmental non-believers in practical discourse. As a consequence, most environmentalists and

[20] And a number of environmental ethics theorists, notably Holmes Rolston III have indeed argued for such misanthropic conclusions on occasion (Brennan and Lo 2008: 23).

[21] Compare his early and provocative "Triangular affair" article (Callicott 1980) with his later revision in (Callicott 1989: 55-59; 93-94).

[22] See for example the argument of the biologist Clive Marks with regard to vertebrate pest management in Australasia (Marks 1999) and a critical discussion of his argument by this author drawing on Master thesis research (Eggleston, Rixecker, and Hickling 2003: 362-363).

greens, for strategic reasons, largely rely upon arguments drawing on enlightened anthropocentrism when engaging in practical, political dialogue (Dobson 2000: 57-61) [23].

1.3.2 The two dogmas of environmental ethics

The influence of White's thesis regarding the role of anthropocentrism and the initial focus on wilderness protection inspired by Leopold and others contributed to an early convergence amongst many of the original and influential contributors to the environmental ethics literature. That convergence was on the fundamental philosophical goal of providing rational grounds for attributing nonanthropocentric moral value to wild nature. This early convergence on the defining importance of nonanthropocentric over anthropocentric values has been described by Varner as the "first dogma of environmental ethics"(Varner 1998; 142). Much of the earlier literature of the field has thus been concerned with the diverse and conflicting theoretical project only briefly sketched above. Such work has aimed at grounding nonanthropocentric values and defining corresponding ethical responsibilities towards non-human nature (Light 2003b: 633-634).

Varner also identifies a "second dogma of environmental ethics" linked to the early convergence on nonanthropocentrism. This was the conclusion that an adequate environmental ethic, in addition to being nonanthropocentric, would also have to be "holistic" rather than individualistic. As already discussed, both the strictly individualist approaches of theorists such as Singer's utilitarian sentientism, or Regan's case for animal rights, as well as the ethically much more enfranchising individualism of Taylor and other biocentrists, have all been subject to the same objection. The concern is that while the moral worth of individual organisms prevails in such theoretical formulations, direct moral value cannot be attributed to the real subjects of fundamental concern to most environmentalists and conservation managers. After all, it is said that the primary concern of those involved with nature management and conservation or preservation is the 'well-being' of collectivities or wholes such as species, populations, biotic communities and ecosystems. There have of course been many more theoretical responses than the selection covered in this chapter, including hybrid individualist and holistic positions such as that of Holmes Rolston III (Rolston III 1975). Thus Varner's point is that there has been a primary theoretical focus on the value of collectives rather than individual organisms which has been conditioned by the practical focus of the field on wilderness protection. The belief that an adequate environmental ethic must be not only nonanthropocentric but also *holistic* rather than *individualist* has then become a commonly accepted, if not conclusively argued, second dogma of environmental ethics (Varner 1998: 141-142).

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[23] However, it should be noted the field of academic conservation biology which emerged during the late 1980s has been significantly influenced by non-anthropocentric and ecocentric approaches to environmental ethics (Sarkar 2005: 52, 145-148; Soulé 1985).

Much work in academic environmental ethics has therefore been directed towards this seemingly radical holistic and nonanthropocentric values project. However, from the beginning, and consistently throughout, there has always remained a more conservative project. That project is informed by the truth that while much has been made of the pernicious influence of a despotic and purely instrumental anthropocentrism, there are surely many forms of non-instrumental and yet anthropocentric values that provide strong reasons for ethical restraint in dealing with nature (Norton 1984; Passmore 1974: 173-195).

As John Benson has noted, non-instrumental valuation of Nature need not require the more philosophically extravagant claim that some kind of human-independent intrinsic value must be possessed by Nature. Much environmental concern is indeed motivated by the concern that prevailing modern attitudes towards wild nature see no value beyond its instrumental value to satisfy human consumptive and material wants. However, there are many non-consumptive human interests in Nature that provide more benign non-instrumental but still anthropocentric reasons for protection of Nature. Benson lists such interests as hiking, mountain climbing, camping, bird watching and other amateur naturalist activities, nature photography, painting and fundamental scientific study (Benson 2000: 6).

This second more conservative approach to the problem presented by the environmental crisis has thus criticised both the attempts to establish nonanthropocentric grounds for new ethical duties towards nature and calls for more radical social and institutional change such as those of deep ecologists like Arne Naess and Warwick Fox, social ecologists such as Murray Bookchin and eco-feminists like Karen Warren (Bookchin 1995, 2001; Fox 1990; Naess 1973; Warren 1990). This more conservative position was advocated strongly and influentially by John Passmore (Passmore 1974). So-called “enlightened anthropocentrism” continues to be upheld within the field today by most environmental pragmatists and most notably Norton (Norton 1984, 1991; 2005b).

Norton and others believe that there are indeed significant environmental problems linked to despotic anthropocentrism. But they argue these problems can be adequately and more realistically addressed by limited reform of existing practices and institutions and without recourse to radical change to ethical values. Environmental destruction is said to result eventually in harms to humans and will threaten the life opportunities of future generations. Thus people should come to exercise appropriate restraints in the use of the natural environment for prudential reasons. It is then argued that environmental destruction, properly understood from a more comprehensive and rational perspective is morally wrong because it harms other humans. Nature has more subtle but no less important value for humans when it is protected rather than made over completely for human consumption and convenience (Norton 1984; 2005b).

It is this kind of reformed anthropocentrism advocated by Passmore, Norton and others that is at the heart of the now familiar if vague concept of sustainable development introduced by the World Commission on Environment and Development (WCED). Based on the arguments of the *Brundlandt Report*, sustainable development has been classically described as, *"*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*"*[24]. It is this concern for future generations that has provided the normative basis for most of the environmental policy initiatives that have made some degree of progress globally (Postma 2002: 42).

1.3.3 Challenges for the wilderness protection focus: the beginnings of the 'stumble'

An ethics of enlightened anthropocentrism has thus dominated the world of environmental policy and practice while for many years academic environmental ethics retained a primary focus on nonanthropocentric value theory and on the political mission of protecting wilderness areas (Callicott 1998: 340-345). This situation began to change by the 1990s as the focus on protecting wilderness that had dominated North American environmental ethics came under heavy criticism from multiple sources. Southern figures such as Ramachandra Guha played a prominent and telling role in this critique and demystifying of the wilderness preservation focus (Guha 1989). Firstly, it was argued that the primary focus on wilderness preservation failed to adequately address the full range of environmental issues and problems. While protecting wilderness areas was clearly a vital concern of environmentalists and political greens, environmental problems were clearly much broader and had a great deal to do with the urban way of life. A wilderness protection focus somehow left to one side concerns and practices that really seemed to be of central concern (Preston and Corey 2005: 4-9).

Preston and Corey provide a novel update to the standard history of North American environmental ethics in which they seeks to counter the usual strong emphasis on nonanthropocentric values and wilderness protection. They argue that a focus on public health helps draw out the significance of different *ways of life* on the development of environmental issues. To this end they provide an alternative history of the development of environmental ethics through a study of changes to New York urban refuse management and related changes in public health status. Preston and Corey claim that such an alternative focus should help environmental philosophers to gain a better understanding of the real challenges for environmental ethics. They suggest that,

> By giving garbage and public health issues a central place in the making of environmental philosophy it immediately becomes obvious that environmental 'well-being' and human well-being are almost always integrally linked.
>
> (Preston and Corey 2005: 16)

[24] WCED (1987), cited in (Clapp and Dauvergne 2005; 61).

It was also noted that a simplistic goal of wilderness protection was problematic from the perspective of applied conservation management. A philosophical approach that identified the moral ideal of conservation practice as the protection or restoration of a "natural state" without human influence[25] was an ill-fitting ideal when degrees of human influence and interaction now had to be acknowledged as significant factors even in the most remote corners of the world (Callicott 1998: 340- 355). The fundamental theoretical contradictions and practical limitations of the wilderness protection ideal also faced a further and more hotly contended objection as the North American model of nature preservation was pursued in so-called 'developing nations'. The wilderness ideal was criticised as elitist as well as misguided (Stretton 1976). For one thing, much of the New World land that was earlier defined by European conservationists as "wilderness", came to be recognised through better research as land that had previously been subject to intentional human modification for hundreds or even thousands of years by indigenous peoples (Denevan 1998: 414-442).

Wilderness protection policies have had a degree of coherence if not a genuine 'moral high ground' in the case of New World lands where the environmental management practices of indigenous people had been long suspended following the encroachment of European colonisation. The protection of lands largely free from human interference matched the interests and sentiments of a growing middle class during the nineteenth century in wealthy New World nations, and most notably in the United States. The ideal of wilderness lands provided a therapeutic role as large urban populations developed during the industrial revolution. Retreating to wild open spaces during their short vacations had become so popular once cars became more generally available in the middle of the 20th Century that the most iconic wilderness places paradoxically became overwhelmed with visitors (Stretton 1976). However, wilderness protection policies were highly problematic when applied to regions where indigenous peoples were still resident and attempting to pursue traditional culture practices (Callicott 1998; Guha 1989; Sarkar 1999).

A preservationist focus gained a poor reputation when it was applied uncritically within developing countries with little recognition of the needs and cultural practices of indigenous peoples still living on the land in the same manner as they had from ancient times (Guha 1989). Concerns about nature preservation as a form of neo-colonialism expressed by Guha also coincided with growing recognition of the connection between environmental degradation and exploitation and issues of social inequality and injustice within both developed and developing countries. These concerns have since evolved into an influential environmental justice movement challenging the disproportionate loading of environmental harms onto the poor and politically weak, while much of

[25] The development of a management policy in USA national parks that as far as possible allowed "natural" processes to prevail, or be restored, rather than invasive human interventions was introduced through the report of a committee chaired by Aldo Leopold's son, the ecologist Starker Leopold Booker in 1970. This 'hands-off' approach to wild lands management came into effect during the late 1970s (Hargrove 1989: 139-140).

the economic benefit is enjoyed only by the wealthy and politically powerful (See for example: Korton 1995; Wenz 1988; Faber 1998; Dobson 1999; Anand 2003; Schlosberg 2007)[26].

In addition to this criticism of the substantive wilderness preservation focus of environmental ethics, more technical methodological debates also intensified within the field during the 1990s. Of most significance to this discussion has been the debate regarding moral monism and pluralism[27]. As had happened in the crucial formative stages in the development of nonanthropocentric environmental ethics, the key influence in defining this later debate regarding the direction and focus of the field was initiated by a non-philosopher with a strong interest in the field, rather than an academic moral philosopher. That individual was the legal scholar Christopher Stone (Stone 1987).

1.3.4 The monism / pluralism debate: from 'stumble' to near 'fall'

Stone drew attention to the critical influence on the focus of environmental ethics resulting from the generally unexamined assumption that an adequate ethical theory must have what he described as a "monistic" formulation (Stone 2003: 195). Stone argued that the environmental ethics movement up until the late 1980s had, he believes rightly, taken up the task of challenging the prevailing moral orthodoxy with regard to the pervasive presumption of anthropocentrism. However, it had yet to bring clearly into question other more fundamental and perhaps especially problematic aspects of orthodox moral philosophy when applied particularly to environmental concerns. Despite the many controversies in moral philosophy, Stone suggested there had been up to that time:

> . . . a striking, if ordinarily only implicit agreement on a metaethical sense of mission. It is widely presumed, by implication when it is not made explicit, that the ethicist's task is to put forward and defend a single overarching principle (or coherent body of principles), such as utilitarianism's 'greatest good for the greatest number' or Kant's 'categorical imperative', and to demonstrate how it (this one correct viewpoint) guides us through all moral dilemmas to determine the one right solution.
>
> (Stone 2003: 195)

Stone noted that the implication of this presumption, which he referred to as "moral monism", is that an ethical theory should ideally contain a set of coherent moral principles from which can be derived a single 'right answer', thus resolving any particular moral quandary that might arise in practice. Thus the ideal ethical theory is a special kind of algorithm that allows us to determine our moral duties in any particular circumstance. As I will discuss further in Chapter 2, this understanding of the nature and function of ethical theory has of course faced considerable criticism in more recent times, in part

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[26] This linking of environmental problems to issues of social justice acknowledges key social and political dimensions to environmental problems also addressed by the field of social ecology (See for example Robbins 2004).

[27] I will explain the sense in which there terms have been used in environmental ethics in the text shortly.

through the experience of philosophers who have worked in applied ethics in fields such as biomedical ethics.

The significance of Stone's contribution specifically for environmental ethics was to bring into question the prevalence of this monistic presumption by early work in the field, and to suggest that the unique challenges of environmental ethics made such an assumption particularly problematic. Stone argued that there are too many conflicting values already within the realm of intra-human morality for the monistic presumption to be realistic. However, he argued that this problem was only magnified once the highly differentiated and ethically contentious subjects of concern of environmental ethics are taken into consideration. Stone's proposal was then to seek to challenge what he took to be the orthodox ideal of moral monism itself, and then argue instead pragmatically for a form of *moral pluralism*. He states: "My own view is that monism's ambitions, to unify ethics within a single framework capable of yielding the one right answer to all our quandaries, are simply quixotic" (Stone 2003: 196).

Stone has been followed in this conclusion by Norton and quite a number of other environmental philosophers (for example Brennan 1988, 1992; Cheney and Weston 1999; Light 2003a; Wenz 1993; Weston 1985). So-called environmental ethics theory pluralists disagree with each other on very many issues. However, they are in agreement that no single ethical theory or coherent set of principles can surely provide a comprehensive account of all the great variety of potential sources of value in Nature. Even if a theory could do so, the great range of contexts for ethical relationships, both with other humans and between humans and Nature, cannot possibly be encapsulated in one theoretical formulation capable of deducing a single prescription for all possible circumstances (Brennan 1992: 6). Anthony Weston was surely right when he argued that it would seem a serious mistake to attempt to impose a requirement for strict theoretical unity and coherence upon the field of environmental ethics in its formative stages when the very subject matter and approach of the field has continued to be in the process of creative development (Weston 1992: 329-333).

Callicott nevertheless continued to defend valiantly, and in the end I think forlornly, the idea that an adequate environmental ethic needs to be both monistic and nonanthropocentric. He claimed that the monistic approach was surely methodologically superior to pluralist conceptions because it could offer definitive resolutions between conflicting interests and obligations regarding particular environmental management policy decisions (Callicott 1990: 113-124). Callicott argued that adequate (monistic) ethical theories would deductively yield a single prescription in every situation of such conflict, whereas theoretical pluralism would not be able to deliver such unequivocal results. Others such as Wenz noted that the idea of delivering such deductive conclusions in practice was an illusion. Even the version of the land ethic which Callicott consistently advocated for many years with such enthusiasm (see for example, Callicott 1987b; 1987a; 1989, 1999; 2002b), was at least minimally pluralist according to Wenz (Wenz 1993: 72-74). Callicott claimed his theory was

integrated and comprehensive, but as Wenz and others such as Cheney and Norton have noted, his position achieves only a kind of high level unity. And this unity is only gained if one accepts his Humean-Darwinian metaphysical assumptions about the nature of ethics (Cheney 1991: 314-317).

Callicott's theoretical reformulation of the land ethic follows on an analogy with the sequential accretion of growth rings of tree trunks. His later approach[28] draws on aspects of the mixed animal-human community model that Mary Midgley proposed to account for the degree of moral reciprocity between humans and domesticated animals within traditional agricultural communities (Callicott 1987b: 207-208; Midgley 1983: 112-124). Callicott's model assumed there are concentric circles of ethical responsibility. An inner circle of venerable and fundamental family bonds which have evolved through natural selection represents the strongest ethical relations. Weaker social bonds were later extended through social evolution to other less closely genetically related individuals at tribal, village, city, national state and now, most weakly, global levels. Each such accretion has supposedly brought net benefits in evolutionary survival value for humans. Finally, and following his tree growth ring analogy, most weakly, humanity should come to accept a kind of reciprocal ethical obligation to the biotic community. Acceptance of this latest ethical accretion is said to follow wider and better education regarding human kinship and interdependence with other species, informed by evolutionary theory and the modern science of ecology respectively.

Callicott's presumption, shared with Leopold, has been that a more ecologically literate public will thus embrace the land ethic. While there is a significant degree of logical coherence to this model, there is no unequivocally decisive means to determine which particular duty from any particular level of the nested hierarchy of ethical responsibilities should be determinative in any particular practical circumstance. And yet, it has been the supposedly greater theoretical coherence and resolving power of his 'monistic nonanthropocentric' system that has been the great benefit which Callicott has claimed to offer the field of environmental ethics (Norton 1995: 351).

The fundamental problems for a nonanthropocentric environmental ethics were already being well articulated by philosophers such as Richard Watson and Eliot Sober during the 1980s (Sober 1986; Watson 1983). Janna Thompson is another philosopher who has provided a powerful critique of nonanthropocentric environmental ethics (Thompson 1990). Her essential point is that while the writings of environmental philosophers can well motivate justified concern for protection of the natural environment, the theoretical positions that prominent environmental philosophers such as Taylor, Callicott, Rolston and others have offered, do not meet reasonable criteria to be even regarded as serious contenders for the status of ethical theory (Callicott 2005; Rolston III 1975; Taylor 1986). While Sober, Hargrove and Passmore before her have argued that the best option open to

[28] This is the more conservative reformulation of his ecocentrism following the accusations of ecofascism levelled at his original formulation in his "Triangular affair" paper (Callicott 1980).

environmental philosophers is to argue for the intrinsic aesthetic value of wild nature on analogy with the intrinsic aesthetic value of great works of art (Hargrove 1989; Passmore 1974, 1995; Sober 1986), Thompson argues for a different direction[29].

In her 1990 paper, Thompson claims that only anthropocentric and individualist ethical positions are capable of sufficient consistency and non-vacuousness, and are able to avoid overwhelming problems of undecidability making them contenders to be regarded as truly non-arbitrary ethical positions. She then asserts that, "Environmental ethics is not only a dead end, but also an unnecessary diversion" (Thompson 1990: 160). Philosophers concerned to develop a deep approach to environmental concerns should, according to Thompson, pursue a quite different path from that generally trodden by those under the influence of the nonanthropocentrism that initially dominated the mission of environmental ethics. She suggests that:

> We might be able to argue that something is valuable and therefore ought to be preserved because our lives and our conception of ourselves will be enhanced – in a spiritual sense – if we learn to appreciate it for what it is and we learn how to live with it in harmony.
>
> (Thompson 1990: 160)

She notes that although such an approach does not pretend to go beyond the human point of view ". . . it is not confined to a concern with obvious and traditional material and psychological needs, for it permits us to define a new conception of what we are as individuals and what a good life is" (Thompson 1990: 160).

The broad direction that Thompson advocates in her 1990 paper has particular relevance for my later focus on the recent proposals in Norton's *Sustainability* (Norton 2005a). As I elaborate in Chapter 5, Norton argues for the necessity of a focus on what a good life is within a particular community conjoined with an intelligent concern with what is biophysically possible and desirable for such a local community. Significantly, he has less to say regarding Thompson's interest with the perhaps equally important and related task of defining "a new conception of what we are as individuals"[30]. However, before I can finally give brief consideration to the constructive possibilities toward which she points in the "Promising directions for further research" section of the Conclusion, I need to account for the fact that there remains a field of academic environmental ethics that is still

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[29] In a latter article, Thompson argues for an aesthetic basis for nature conservation and goes on to draw the analogy between the intrinsic value of great works of art and that of the great works of natural evolution (Thompson 1995: 299-305).

[30] Thompson has also made what I consider to be another potentially significant and completely underrated contribution in a book which makes no explicit reference to environmental ethics whatsoever. In her *Discourse and knowledge: Defence of a collectivist ethics* Thompson thoughtfully explores the theoretical challenges and possibilities associated with seeking to extend ethical rationality beyond the prevailing focus on individual moral judgment (Thompson 1998). In the final section of the Conclusion to this dissertation, I will briefly discuss the potential of this aspect of her work for extending the scope of rational agreement regarding environmental values.

significantly shaped by the original, nonanthropocentric mould, albeit now a much more diversified and in many ways, less ambitious enterprise. I must also account for the claims of environmental philosophers such as Norton, that they have on offer an adequate alternative to redirect the field without recourse to as deep-going re-evaluation of the human project that Thompson's 1990 paper seems to suggest is necessary.

1.3.5 Greater divergence of theoretical pursuits

This kind of questioning of the utility of the key place accorded to arguments for the intrinsic moral value of nature by Thompson, Norton, Sober and others has not gone unnoticed by environmental philosophers. A number of diverging theoretical approaches have thus emerged during the last twenty years or more that still seek to remain within the mainstream of academic environmental ethics and philosophy[31]. Three major 'radical' approaches to environmental philosophy have also developed. These are; (1) the deep ecology movement, which as already discussed, was significantly influenced by the work of Arne Naess; (2) ecofeminism and (3) social ecology. I will not discuss these approaches in detail, not because I consider that they lack interest or intellectual integrity. My view is quite the opposite. However, this study focuses on the manner in which the theory -practice issue impacts on the presumptions and approaches of mainstream academic environmental ethics. Consequently I provide only very brief accounts of these three approaches which arguably have to a significant degree stepped beyond the existing commitments and discipline of Anglophone academic philosophy.

A very brief account of the key metaphysical, ethical and political commitments of deep ecology has already been provided in section 1. As noted in that section, while deep ecology has had a significant influence on the development of environmental philosophy, the influence of Naess and other philosophical contributors to deep ecology has been probably greater on environmental politics and activism (Brennan and Lo 2008: 9).

"Ecofeminism" is a term which has been used to group a considerable diversity of broadly feminist approaches to theorising about human-Nature relationships. A common feature of such approaches is the linking of what are often referred to as the "twin oppressions" of women and nature (Palmer 2003: 31). Feminist writers have argued that the domination of Nature represents an extension of patriarchal social systems that have oppressed women. It is said that the exploitation of Nature has followed on from its association with the feminine, which had already been defined as

[31] This is not to suggest that the concept of intrinsic value and work on the intrinsic value of Nature has lost all relevance and significance for environmental ethics. As authors such as McShane have argued the concept of intrinsic value continues to be of central importance to much work in both humanistic and environmental ethics (McShane 2007). Rather, what has been questioned is the overriding importance formerly placed on developing rationally persuasive accounts of the intrinsic value of nature for the success of the original practical objectives of many contributors to environmental ethics.

inferior and thus oppressed (Brennan and Lo 2008: 11-12). Ecofeminist approaches to environmental ethics challenge the prevailing focus on developing abstract and universally applicable ethical theories. Criticising what they consider to be a misguided extension of abstract, rationalistic and universalist approaches, ecofeminists have promoted a more particularist environmental ethics, grounded in relationships of care between humans and the biota in particular localities (Palmer 2003: 31-32).

The social ecology movement within environmental philosophy and politics has been much inspired by the writing of Murray Bookchin (Bookchin 1995). Bookchin has developed a comprehensive radical philosophy that draws significantly on the so-called "critical theory" approach of the Frankfurt School and from the work of the post-Marxist philosophers Horkheimer and Adorno in particular. Social ecologists understand the unsustainable exploitation of nature to be symptomatic of wider problems within human society of power hierarchy and oppression. In short they argue that adequate responses to environmental crisis will require a radical transformation of human society towards greater social cooperation, communication and intelligence. For social ecologists, current practices involving the oppression of nature need to be transformed into richer forms of human life devoted to the preservation of Nature (Brennan and Lo 2008: 13-14).

One of the most significant of the more mainstream approaches to environmental ethics has been advocated by the founding editor of the journal *Environmental Ethics* Eugene Hargrove in his own philosophical writing. That is an approach which embraces the conclusion that wild nature does not possess any human independent intrinsic moral value. Rather, it is argued that the nature protection concerns of environmentalists are motivated by aesthetic rather than moral valuation. Nature is said to have values of beauty and/or sublimity that are equal or greater to the value of great works of art. Just as we have an obligation to protect and preserve such works of art, so should we on analogy, have an obligation to protect objects of natural aesthetical value greater than any work of art (Hargrove 1989: 165-205).

Undoubtedly aesthetic value is at the very least an important aspect of environmental concern. Allen Carlson has advocated a strong theory of the aesthetic value of wild nature that he refers to as "positive aesthetics". He argues that natural aesthetic judgments potentially have at least sufficient inter-subjective validity to support quite strong claims for nature protection. Carlson believes that observers who have adequate scientific education about the underlying biological and ecological complexity of natural systems should judge wild nature to have positive aesthetic value (Carlson 1984). But many environmental philosophers argue that there is a significant problem in getting such aesthetic judgments to motivate public concern for environmental protection. This is particularly worrying for the many thousands of largely unknown and un-charismatic species and ecosystems. Certainly, aesthetic responses to wild nature are significant components of environmental concern, but

such responses seem to fall well short of the original strong normative concern that has motivated environmentalists and thus most environmental philosophers.

It is clearly true that wild nature and many non-human species are attributed aesthetic value by many people and arguments based on aesthetic values can certainly exert some influence in attempts to protect this or that natural area or historic landscape. However, it is also true that those values are not well shared by all, and are certainly not on their own sufficient to function as an adequate philosophical response to the environmental crisis. Authors such as Hargrove make much of analogies between the intrinsic value of works of art and the intrinsic value linked to the aesthetic value of wild nature. However, it seems wrong to me that we should liken Nature to a beautiful (and inanimate) artwork that we greatly admire and wish to preserve for our continued aesthetic appreciation. The more apt metaphor I would promote is of Nature as Mother, and we as her foetus. We are attached by umbilical cord, and do not rightly nor rationally stand as if discretely on our two feet beyond her as all powerful 'Man', to use our clever technologies to provide for our ever expanding selfish delights against her will. As ecofeminist writers such as Val Plumwood argue, the latter analogy of 'Man' as callous and exploitative master is surely a perspective of both perversion and delusion (Plumwood 1993: 190-196).

The revival of the ancient ethics of virtue within mainstream moral philosophy in the last 20 years or more has also had some influence on environmental ethics[32]. I welcome this move and the central focus on moral education and the development of good character in human to Nature relations entailed. However, I do not consider that environmental virtue ethics can provide a sufficient philosophical response to the environmental crisis without additional, fundamental and far-reaching revisions at the level of metaphysics, epistemology and political practice. Such considerations are discussed in the Conclusion to the dissertation.

Some environmental philosophers have sought to counter what they regard as the mistaken over-emphasis within the field of environmental ethics on the problem of wilderness protection by turning to the ethical issues arising from the so called "built environment" (Brennan and Lo 2008: 23). For example, Alastair Gunn has argued that environmental ethics can reasonably be expected to achieve two tasks. Firstly, the field should offer a theoretical model of the ethical relationship between humans and the rest of nature. Second, environmental ethics should also provide at least an outline of how we should act in accordance with this understanding (Gunn 1998: 342). His argument is that in a world where over 50 % of humans are living in urban environments, it is essential that environmental ethics addresses the ethical issues associated with planning for such a largely urbanised world. To maintain a primary focus on wilderness and biodiversity protection inspired by Leopold's land ethic is surely mistaken in such a world. He considered that " . . . Leopold's view of humans and their place

[32] See Hull for an excellent overview of work on environmental virtue ethics (Hull 2005).

in nature is largely irrelevant" (Gunn 1998: 343). Gunn and others have then argued that environmental philosophers should devote greater attention to the task of sustainable urban development and urban environmental restoration (Brennan and Lo 2008: 23; Gunn 1998: 360).

Another area of significant development in recent years is the new field of environmental politics. In response to growing alarm at the lack of progress and influence of environmental ethics, a number of theorists have turned from ethical theory to political theory. They have advocated and made significant contributions towards a new field of environmental politics, focusing more on the forms of political institution that might better support the achievement of the aims of environmentalism or ecologism. Like the pragmatists, they question the political value of nonanthropocentric environmental ethics. Andrew Dobson for example argues that developing nonanthropocentric ethical theories has proved to be of little outward assistance to those engaged in political action to promote environmentalist concerns. He acknowledges that many environmental activists and greens engaged in political activity are personally motivated by some kind of concern for the intrinsic value of all living things or for wild nature quite generally. However, Dobson notes that generally such activists accept a pragmatic necessity to frame their arguments for policy changes in terms of anthropocentric values and concerns. Most frequently this involves the interests of future generations of humans. Ecocentric or biocentric beliefs are thus at best part of the private motivational commitments of ecologically motivated political activists. Anthropocentric concerns continue to be central to the public and political engagement of environmental activists (Dobson 2000: 58-61). Linking with developments in environmental politics has also been considerable interest and work on the role of deliberative and participatory democracy[33].

As I highlighted in the introduction however, it is the environmental pragmatists such as Light, Minteer, Norton and others who have become the most alarmed and impatient with what they see as the lack of progress in academic environmental ethics. Environmental pragmatists believe that the urgency of the environmental crisis requires an immediate contribution from environmental ethics that cannot await complete agreement on theoretical and methodological frameworks. Light and Katz in their seminal collection of contributions from environmental pragmatists state that they do not advocate the adoption of an ethical framework based on the canon of classical American pragmatists such as Dewey or more recent neo-pragmatists such as Rorty (Light and Katz 1996: 4-5). While Norton has consistently argued that the focus on the intrinsic value of nature has been a completely misguided mission (Norton 1995; 2005b), Light is a prominent environmental pragmatist who has adopted a more 'pragmatic' and conciliatory tone. He therefore does not argue for the theoretical mission of the field to be abandoned (Light 2003a: 644; See also Minteer 2001: 57-75). Rather, Light argues for the general adoption of what he calls "methodological pragmatism". He proposes that

[33] See Baber and Bartlett for an excellent review of work in this area (Baber and Bartlett 2005).

philosophers concerned with our "mounting environmental problems" set aside their fundamental theoretical differences, and attempt to cooperate in addressing practical environmental issues. The focal point for this cooperation would not be theoretical agreement, but rather recognition of the converging interests of environmental philosophers in the broad goal of protecting nature from further damaging over- exploitation (Light 1996: 325-338). Light's emphasis on the prospects of environmental philosophers converging in their practical concerns irrespective of fine-grained theoretical divergence is very much consistent with the earlier "convergence hypothesis" defended by Norton but which was directed at environmentalists more generally (Norton 1991).

1.4 Chapter conclusion

Fifteen well respected environmental philosophers gathered in February 2007 for two days of meetings at the University of North Texas (UNT) for the express purpose of discussing the future of this field (Frodeman and Jamieson 2007: 117). It is well evident in the nature of their discussions that the dream of original contributors such as Naess, the Routleys, Rolston, Callicott and others for a unified and practically influential theoretical environmental ethics has all but been abandoned. The tone of a minority of the contributors to these discussions was quite self-congratulatory with regard to the 'successes' of academic environmental ethics or environmental philosophy as many now prefer. In just forty years a substantial, diverse and complex academic literature has been developed and there has been a proliferation of environmental ethics programmes, at least at undergraduate level within most North America and other Anglophone universities (Gardiner 2007: 122; Jamieson 2007: 125). However, even the more 'upbeat' contributors acknowledge that all is not well within the realm of environmental philosophy. There is a quite general acknowledgment amongst this representative group, at least of U.S.A. environmental philosophers, that although a considerable body of theory has been developed, there remains a considerable 'disconnect' between that theory and those most immediately engaged in the practice of environmental management policy and decision-making. The problem had previously when well illustrated by Frodeman's comment that environmental ethics too often involves no more than "philosophers writing philosophy essays for philosophers" (Frodeman 2006: 1).

Prominent environmental pragmatist Bryan Norton was one of the contributors to the 2007 UNT forum. Norton used the occasion to continue to advocate for a much greater emphasis on what he calls practical philosophy rather than applied ethics. That is to invest much less in the theoretical disputation that he says has been the hallmark of environmental ethics, and to become more directly

involved in democratic processes of value clarification and consensus-making regarding particular ecosystems[34].

Minteer expresses perhaps the strongest concerns about the current status of the field and thus the greatest sense of urgency for significant and rapid changes in the future direction of environmental ethics or philosophy (Minteer 2007: 132). He reiterates a concern previously noted by Hargrove that the field appears to be falling between two stools (Hargrove 2004: 4-5); on the one hand being seen as too practical to win theoretical creditability within traditional philosophy departments; on the other, deemed too esoteric to be of value to applied environmental science, policy and management practitioners (Minteer 2007: 132-133). His preferred solution is to pursue a more practical environmental ethics along the lines already advocated by Frodeman, Light, Norton and others (Frodeman 2006, 2007; Light 2003a; Norton 1995; 2005a; Norton and Steinemann 2001). Notably he suggests one option to this end of:

> . . . pursuing more solid links with our bioethics cousins (both philosophically and institutionally) . . . There is a revealing story here about the different fortunes of bio- and environmental ethics, and I think we might learn from the success of the former.
>
> (Minteer 2007: 133)

Minteer's speculations regarding the potential for valuable lessons to be gained from bioethics is of course the theme which has been taken as a hypothesis for systematic evaluation in this study. The decision to adopt this approach predates Minteer's comments. However, I certainly acknowledge that the idea bioethics may hold lessons for environmental ethics is certainly not original. I would argue that the original contribution to be made in this dissertation should be looked for with regard to the careful and demanding processes of analogical reasoning to be applied.

Minteer's proposal for a new field of practice-oriented environmental philosophy will later be the subject of a careful evaluation which will itself seek to draw on lessons provided by the bioethics example. However, important preparatory work must be completed before Minteer's proposal for a more effective environmental or "ecological ethics" and also the substantial proposals of Norton may be evaluated by parallel reasoning with bioethics. The first such preparatory work requires a similar outline of the origins of bioethics to that provided in this chapter regarding environmental ethics. A sufficiently extensive account of the methodological debates of that field will also be required. These tasks are now taken up in the next chapter.

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[34] For Norton's comments on the future of environmental philosophy see (Norton 2007). For an example of his practical approach to environmental philosophy see (Norton 1999).

Chapter 2
The engagement of liberal moral philosophy with biomedicine

2.1 Overview

In this chapter I consider the manner in which liberal moral philosophy has come to be so directly and influentially engaged with the ethical concerns of the healthcare services and biomedical research. The principal concern of this chapter is to study the methodological developments that resulted from this engagement. My focus is therefore primarily on the major debates and developments concerning the methodology of bioethics. And of course the overarching reason for studying this engagement of moral philosophy with medicine is to prepare for the later critical evaluation of analogical arguments in which bioethics will represent the source domain. It is nevertheless both relevant and instructive to consider in moderate detail the particular historical and social factors which have allowed moral philosophy to contribute with considerable practical efficacy within bioethics. As I will argue in later chapters, some of the particular historical and social factors that were instrumental to the rise of bioethics need to be understood before valid comparisons can be made with environmental ethics; the field which the environmental pragmatists lament has not attained similar practical relevance and significance.

2.2 Defining the field

Bioethics is a broad and multi-disciplinary field that is both rather vaguely and also contentiously delineated. At its broadest, the scholarly discipline of bioethics is said to include the study of the ethical issues arising from the practice of all biologically based disciplines, including not only the healthcare professions, but also environmental ethics. It is important to note from the outset that such broad definitions of bioethics are not at all universally accepted, with many "bioethicists", and much of the most influential work in bioethics, confined to the ethics of healthcare and biomedical research (Gillon 1998:306)**.** Controversy regarding the boundaries and naming of bioethics has its source from the very beginnings of the field. Of some relevance to the concerns of this dissertation, in 1970 the biomedical research scientist and clinician Van Rensselaer Potter began to promote a vision for a broad new discipline that was not exclusively medically-oriented. He proposed that this field could unite biological knowledge from the sciences with ethical insight from the humanities through a

common concern for the "survival of civilisation". He coined the name bioethics for this proposed discipline[1]. Another less expansive vision for a new field of bioethics focusing exclusively on the new challenges for medical ethics and biomedicine research ethics arose independently at very much the same time. It was this second, medically-orientated conception that came to prevail during the course of 1970s (Callahan 2003: 280; Jonsen 1998: 27).

Those comfortable working within the constraints of the narrower conception of bioethics often prefer to employ the more descriptively accurate term "biomedical ethics". And it is this term which has been used in the multiple editions of the most successful textbook of the field, *Principles of Biomedical Ethics*. In the first edition of this textbook, Beauchamp and Childress make this commitment clear in the preface. They state that:

> We understand "biomedical ethics" as one type of applied ethics – the application of general ethical theories, principles, and rules to problems of therapeutic practice, healthcare delivery, and medical and biological research.
>
> (Beauchamp and Childress 1979: vii)

However, by the time they had come to prepare their most recent edition, the sixth, they had adopted a decidedly relaxed, quite interchangeable usage of the term bioethics. In doing so, their usage seems to reflect what has now become a common understanding within the field that "Bioethics is a popular contraction for biomedical ethics" (Moreno 1995: 4). Nicely illustrating this relaxed usage in the preface to this most recent edition of their textbook, Beauchamp and Childress state:

> *Biomedical ethics* was a young field when the first edition of this book went to press in late 1977– exactly thirty years ago. Immense changes have occurred in the field's literature between our first edition and this, the sixth edition. In these three decades *bioethics* has transitioned from having no systematic work and no meta-reflection to an enormous literature on the subject.
>
> (Beauchamp and Childress 2009: vii, my emphasis)

I will return to discuss this tension regarding both the name and the scope of bioethics in Chapter 5 but in the meantime conform to the common usage and meaning of this term.

Leaving aside the question of names, I believe it is important for this comparative project to understand and broadly categorise the diversity of concerns and modes of inquiry that have come to contribute to this large and rather amorphous field. Prominent bioethicist Daniel Callahan has delineated four main areas and levels of inquiry, helping to clarify the differing kinds of endeavour which all fall under the general description of bioethics (Callahan 2003: 281-282). Those four

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[1] It has been noted recently that the term *bioethics* was apparently first coined in 1927 by the German pastor Franz Jahr (Sass 2007). Jahr's concerns were close to those of contemporary biocentrists. Given that this naming did not become linked to any ongoing body of academic and professional endeavour regarding environmental ethics or biomedical ethics, this fact, while interesting, does not add a great deal to the more common origins story of bioethics.

categories are; theoretical bioethics, clinical bioethics, regulatory and policy bioethics and cultural bioethics.

Callahan describes *Theoretical Bioethics* as academic work focusing on the intellectual foundations of the field. This includes the question of the moral grounds or ethical warrant that can be said to legitimate the moral judgments made by ethicists. Part of this debate concerns the extent to which such foundations are sought from the practices and traditions of the life sciences or alternatively are argued to come from philosophical or theological starting points. Both philosophers and theologians have played key roles in this aspect of bioethics discourse, although it has been necessary for them to draw heavily on knowledge of the history and practices of the life sciences.

Clinical Ethics is concerned with the practical moral decision-making challenges faced by those involved in caring and treating patients. Clinical ethics has necessarily followed the established pattern of clinical practice which focuses on individual cases and the challenge of what action should be taken in particular contexts, here and now. Critical decisions must often be made in situations of great medical and moral uncertainty. Most relevant to the pressing question for this dissertation of the relationship between moral theory and principle and practice Callahan notes:

> Decision-making procedures, as well as the melding of theory and practice – what Aristotle called "practical reason" – come sharply into play. It is the concreteness of the judgment that is central here. What is to be done for this patient at this time? The experience of practicing physicians, other healthcare workers, and patients themselves take a prominent place, yet on occasion can require a collaborative interplay with those trained more specifically in ethics.
>
> (Callahan 2003: 281)

Although this observation may seem commonplace, its significance for the purposes of this study must be strongly emphasised. The experience of the concrete and immediate demands placed on ethical decision-making in clinical bioethics noted above is crucial for the later analogical comparisons to be made with environmental ethics. Unlike environmental ethics, in clinical bioethics the theoretical presumptions of moral philosophy have faced the practical discipline and demands of the clinic. It is experience of this kind of direct and concrete engagement with the disciplines of actual ethical decision and policy-making situations which has generally eluded environmental ethics and which I will attempt to profit from in my analogical comparisons between the two fields.

Regulatory and Policy Bioethics includes work aimed at establishing legal or clinical rules and procedures designed to apply generally to defined classes of case or clinical practice. This work is not directly concerned with individual cases. Callahan notes that regulatory and policy bioethics is necessarily informed by a range of disciplines, particularly the law and policy sciences as well as ongoing dialogue with theoretical bioethics and clinical ethics. This domain of bioethics is very much influenced by political considerations and popular consensus. In the United States it also involves a distinctive focus on achieving practically, rather than theoretically orientated consensus. The central

role of consensus in relation to policy bioethics will also be the subject of further consideration later in this chapter.

Lastly, Callahan defines *Cultural Bioethics* as work in bioethics seeking to systematically relate bioethics to its historical, ideological, cultural, and social contexts. Relevantly, he notes for example the strong emphasis on the moral principle of autonomy in countries like the United States. Callahan argues this emphasis can be understood as cohering with the political and ideological commitments of highly individualist cultural traditions of the U.S.A. and perhaps to a slightly lesser extent in other Anglophone countries such as the United Kingdom, Canada, Australia and New Zealand. In contrast, social solidarity receives greater priority in many Scandinavian, central and eastern European nations. He notes that identifying and interpreting such cultural patterns underlying ethical problems must centrally involve the social sciences, history and other humanities disciplines (Callahan 2003: 281-282).

Callahan therefore provides a useful categorisation of the intellectual landscape of bioethics conceived as a professional academic discipline[2] with contributors from multiple specialities, notably healthcare professionals, lawyers, theologians, social scientists, philosophers and others from the humanities. In addition, Albert Jonsen, in his authoritative insider's history of bioethics, *The Birth of Bioethics,* highlights a further important factor to remember in coming to consider the overall enterprise of bioethics. I quote:

> Only half of bioethics counts as an ordinary academic discipline: the half that has original and borrowed theory, principles and methods. But only part of bioethics lies within the academy, where scholars worry about whether they have a discipline to teach and promote. The other half of bioethics is in the public discourse: people of all sorts and professions talking and arguing about bioethical questions.
>
> (Jonsen 1998: 346)

The significance of the public discourse of bioethics should not be overlooked. As I will describe shortly, it was in response to a "lay" discourse regarding controversial new ethical issues that this academic field has its origins (Jonsen 1998: 13- 19).

2.3 The beginnings of bioethics

2.3.1 Introductory comments on the significance of historical and social influences

I considered that only a very brief account of the historical context within which environmental ethics developed as an academic field was sufficient for the purposes of Chapter 1. In coming to consider

[2] Although, whether or not bioethics has sufficient coherence of purpose and method to be regarded as a discipline remains open to debate (Callahan 1973; Jonsen 1998: 325).

the development of bioethics a similarly brief treatment has not seemed adequate. There is good reason to provide a somewhat more detailed account of the historical and social context that has been instrumental to the rise of bioethics. Bioethics has grown to be a complex field heavily linked with both healthcare services and biomedical research practice and policy. As I will demonstrate, particular historical and social factors have played an essential role in the development path leading to bioethics becoming commonly regarded as the most "successful field of applied ethics" (Almond 1998: 60). The quite different contextual circumstances that allowed an integral role for moral philosophy in the new field of bioethics makes this field of particular value as the source domain for the comparative analysis undertaken in this dissertation. For environmental ethics which has largely remained a purely academic development, there is as yet no similarly complex and interesting story to tell.

However, this is not a dissertation in history or sociology, and I have been conscious of the fact that providing an adequate account of the manner in which social and historical factors have contributed to the very different outcomes to date for the two fields could alone provide the topic for an interesting study. I nevertheless believe that my overall argument requires the presentation of at least a brief synopsis of the key social and historical factors that have shaped Anglo-American bioethics. This account is based only on secondary sources, drawing heavily on the authoritative account of *The birth of bioethics* written by the bioethicist Jonsen, himself a key figure in the rise of bioethics (Jonsen 1998). The reader well versed in the factors influencing the rise of bioethics may safely skip to the later discussion of the methodological debates of bioethics.

Contemporary bioethics, like environmental ethics, is predominantly but not exclusively an American creation. Significant developments and contributions have been made from individuals and institutions from other nations and from international organisations and associations (Jonsen 1998: 377). Nevertheless, the term bioethics was coined in the United States and the first academic appointments in bioethics and the early engagement of theologians and philosophers with the new issues of biomedicine were in that country. Significant for the international influence of the discipline, the U.S.A. has of course also been a dominant economic, cultural and academic force during the period in which bioethics has developed. Therefore, I will focus on the historical and cultural influences relevant to the development of bioethics in that country. This discussion will also be almost exclusively restricted to the role that philosophy has played in the development of bioethics. However, it will be instructive to make some comments on the significant early role of religious moralists and theologians as well as their later exclusion or assimilation within the purely secular ethical discourse that came to dominate bioethics. This is not to denigrate the contributions of other disciplines to the development of bioethics but is purely expedient to the specialised concerns of this dissertation and to the limited time and space available.

2.3.2 The conferences of the 1960s

As in the formative stages of environmental ethics, so it was at the beginnings of bioethics, that a public discourse initiated primarily by scientists and not philosophers, first defined the concerns that would later draw the interest and professional attention of academic philosophers (Evans 2002: 45-61; Jonsen 1998: 13-19). Two sets of ethical concerns came to wider notice in the period after World War II because of rapid advances in the biomedical sciences. At the clinical level, there were new and puzzling ethical dilemmas and controversies for which traditional medical ethics seemed to offer little guidance. But it was the great possibilities as well as potentially terrifying problems presented by the new biotechnological capacities that first received wider professional and then public attention. This new focus centred on the implications of rapid new developments in biotechnology for the future form and direction of human society, considered at the most general level.

During this period questions began to be raised about how the emerging new molecular biological knowledge and biotechnology capacities could be effectively directed for social good. Such concerns were becoming more urgent and of great public interest by the 1960s as it was realised that biological and biomedical scientists were rapidly developing capacities that would effectively allow them to 'play God'. At stake was the prospect of direct and sophisticated manipulation of human reproductive processes that would bring the capacity to control the future biological development of the human species to a degree previously only the subject of science fiction. By the end of the 1950s a number of eminent and farsighted biologists and biomedical scientists had recognised the momentous cultural significance of the rapid advances in biotechnology.

The upshot of this concern was a series of major conferences organised during the 1960s at which the prospects, for good and ill of the new biotechnological capacities were discussed by some of the most eminent and outspoken scientists (Jonsen 1998: 13-19). The most controversial theme of these conferences concerned how human evolution was to be directed given that the biotechnological capacity for greater control was rapidly becoming reality.

Some scientists such as Sir Julian Huxley argued that given many educated people now believed that the existing religious grounds for the meaning and purpose of human life had been discredited; an alternative common focus of meaning was needed. They sought to provide this through what was effectively a scientific humanist 'religion' in which the universally shared purpose of humanity would be the scientific pursuit of the genetic perfection of the species (Evans 2002: 45-57; Huxley 1961: 13-48). However, the greater publicity that this ambition achieved due to the conferences and related publications during the 1960s served more to create public alarm than the sense of awe, excitement and enthusiasm expected by scientists such as Huxley.

It was Liberal Christian theologians and most prominently Paul Ramsay, rather than analytic philosophers, who were the first non-scientists to engage with this discourse. Ramsay argued that the

scientists' discussions regarding the ultimate ends of humanity were outside their area of legitimate scientific expertise and were clearly impinging on the domain of special expertise and competence of theologians. The scientists appeared to be overstepping their socially accepted research jurisdiction, which was said to be no more than pursuing scientific research for the benefit of wider humanity. Engaging in the controversial pursuit and advocacy of ideological goals was well outside that jurisdiction and certainly not a domain of special scientific expertise. For example, Ramsey wrote in 1970:

> . . . taken as a whole, the proposals of the revolutionary biologists, the anatomy of their basic thought-forms, the ultimate context for acting on these proposals provides a propitious place for learning the meaning of "playing God" – in contrast to being men on earth.
>
> (Ramsey 1970: 143)

Considerable public unease developed as the significance of the scientists' arguments and the concerns of the theologians were more widely understood. Prominent scientists became alarmed by the public response to this discourse and began to fear the prospect of politically imposed restrictions on the scope of their research and the withdrawal of public research funding (Evans 2002: 57-61). By the early 1970s, many genetic and biomedical scientists had realised that talk of a new scientific humanistic religion of human genetic perfection was counterproductive to their interests. Sociologist John Evans has argued that there was then a self-conscious shift to promote the objective of human genetic research to be redirected towards discovering purely therapeutic interventions for genetic diseases and disabilities. This refocusing to ease public concerns was then conveyed by the new term "somatic gene therapy". Thus public talk of genetic enhancement and greater ambitions for the control of human evolution were largely abandoned at this time, although such ambitious could be retained privately (Evans 2002: 74-80).

The prominent role of religious moral experts in these early debates should be noted. Up until the 1950s the U.S.A. was substantially a Christian society and the considerations of Church representatives on moral issues were authoritative. This situation was to change dramatically during the 1950s, 1960s and 1970s as a result of a major cultural shift towards secularism. As this process advanced the moral authority of religious authorities in public life and institutions was progressively eroded. This change was to have great significance for the healthcare services and for the rise of the discipline of bioethics (Engelhardt 2002a: 8-9).

Analytic philosophers joined these broad sweeping discussions later than the theologians but then proved to have a more significant and enduring influence. Philosophers joining the conference debates of the 1960s contributed principally by seeking greater clarification and clearer statements of the issues and alternatives discussed. By the end of the 1960s and the early 1970s, both theologians

and philosophers were working to shift the free-floating debate started at these conferences into a more organised and scholarly analysis of the issues (Jonsen 1998: 19-20).

2.3.3 The undermining of traditional sources of moral authority in medicine

Healthcare practitioners were also struggling with more immediate and puzzling new ethical challenges by the 1960s. Most of these new ethical issues and controversies had become pressing as a result of the increased powers of medical intervention already made possible by advances in the biomedical sciences. Thus the second level of ethical issues that came to define the field of bioethics were tied more specifically to clinical healthcare practice and to the direct and immediate demands of ethical decision-making regarding individual 'cases'. These were clearly issues that would have traditionally been the exclusive domain of medical ethics (Engelhardt 2002b: 71; Veatch 1997: xv-xvi).

Rapid advances in biophysical treatment options were bringing into sharp focus fundamental moral issues particularly regarding the moral status of human life at the very beginnings of a human life and at its end. For example, philosophical questions regarding the nature of death and the process of dying had become troubling as a result of advances in resuscitation and life-support. The 'miracles' of organ transplantation also generated new questions about how recipients would be chosen, the recruitment of donors and also seemed to require a new definition of death. Advances in reproductive medicine including prenatal diagnosis and safe abortion procedures also propelled healthcare services into a domain of hotly contested cultural conflict regarding the sanctity of human life versus the wishes, concerns and moral rights of individuals (Engelhardt 2002b: 71). Assisted reproductive technologies raised further complex ethical issues such as eligibility requirements for treatment as well as new issues and concerns for both the parents and their children conceived with the assistance of laboratory technology (Jonsen 1998: 282-313).

Traditional medical ethics failed to provide adequate guidance to clinicians struggling to respond to these new ethical challenges. Worse in fact, the three key ethical commitments of physicians shaped by their understanding of traditional Hippocratic medical ethics and which had previously been highly congruent, now contributed to conflict and confusion. Those ends had been: (1) to prevent the patient's death for as long as possible; (2) to prevent the patient's suffering pain or physical disability as far as possible and (3) to promote the patient's general health and physical well-being (MacIntyre 1972: 38-39). The new treatment technologies often allowed one traditional end such as preventing death to be pursued much more effectively. However this end might then be attained at the expense of violating one or more of the other maxims. Unable to answer these new ethical dilemmas by recourse to traditional medical ethics, external ethical advice suddenly seemed necessary for a professional domain usually closed to outsiders. Some clinicians began to actively invite contributions from other professions, including social scientists, lawyers, theologians and

philosophers as interest increased in the potential benefits of ethical insights from other disciplines (Gillon 1998: 307).

Coinciding with the intensification of ethical demands, the guild and self-regulatory status of the medical profession was being undermined by the application of anti-trust laws in the mid to late 20th Century (Engelhardt 2002b: 71-72). Concurrent institutional changes were also making the profession more dependent on third party funding. Not only did these changes impact on the self-regulatory status of the profession. The new institutional arrangements also altered the traditional physician—patient relationship. Since many patients no longer directly paid for their care, corporate and governmental agencies were able to exert greater control over healthcare delivery in order to control costs. The formerly bilateral physician-patient relationship began to be transformed into a more complex, less personal and at times even antagonistic set of interactions. The relationship could no longer be interpreted simply through the traditional moral norms of the medical profession.

The rising importance of third party payment and the increasingly multidisciplinary and complex nature of healthcare systems combined to erode the traditional moral authority of the physician (Engelhardt 2002b: 71-72). Traditional medical ethics, while still playing an important role, were proving inadequate for the changing institutional and technological systems within which most physicians now worked (Callahan 2003: 280).

At the same time as the moral competence and authority of the medical profession was being brought into question during the 1960s, the other major established source of societal moral authority regarding healthcare services was also being undermined. That source of moral authority was of course that of the Christian tradition and more specifically the expertise and authority of Christian theologians on all ethical matters. Up until the middle of the 20th Century, the prevailing moral values of American society were unquestionably those of the Christian religion and Protestant Christianity in particular. Christianity had been long recognised by United States courts as grounding the common law of the nation, and similarly, most social institutions were regarded as presupposing Christian moral values (Engelhardt 2002b: 74). However, during the 1950s, 1960s and 1970s a dramatic secularising of American society was underway. The previously *de facto* function of a Christian social ethos was challenged on many levels. Many social norms and institutions came under challenge by civil rights, feminist and environmental movements during the 1960s. The liberal individualist freedoms previously proclaimed, if not actualised in American culture, were now asserted by a generation spending more years in education. Science and technology promised liberation from disease and much of the drudgery of manual labour and housework, offering individuals the prospect of greater control over their lives (Callahan 2003: 279). And as the possibilities for new personal freedom and choice began to be more widely recognised, the restraints imposed by traditional moral conventions were inevitably challenged and their authority rapidly eroded.

There were also significant implications from this massive social upheaval for the practice of medicine and the provision of healthcare services. Christian metaphysical assumptions that had formerly grounded the moral assumptions guiding the delivery of healthcare were no longer universally accepted and therefore could not provide a politically legitimate basis for universal healthcare policy. As Engelhardt notes, the consequences of this process for healthcare ethics were momentous:

> As a result, traditional moral commitments regarding reproduction, dying, and death were brought into question, as for instance with respect to abortion, artificial insemination by donors, and the use of physician-assisted suicide. The decision of the American Supreme Court in Roe v. Wade marked this change. The traditional moral culture for medicine had lost its foundations, and a new one required articulation.
>
> (Engelhardt 2002a: 8)

Theologians and priests with their extensive training in practical ethics had initially been significant contributors to the discourse regarding the new ethical controversies of medicine. But as American society and its social institutions including those of healthcare rapidly became more secularised during this period this influence also diminished. Those theologians and priests who were to continue to have a significant influence on the fledgling new discipline of bioethics thus generally also followed parallel personal processes of secularisation. As Jonsen notes, much of the early literature of bioethics was written by theologically trained and religiously affiliated persons, but as the secular field burgeoned the theological basis for their work lost significance and many of these writers repressed, denied or became indifferent to theology as a field[3].

However, this apparent assimilation of a considerable number of religiously trained academics into the new secular discipline of bioethics may nevertheless have led to a significant Christian influence on the initial presumptions and development of that field. Engelhardt has argued that the prevailing presumption in bioethics that there can be a single universal and secular common morality discoverable through reason, may represent the unjustified extension of long established monist commitments of Christian ethics to the fledgling new secular ethics (Engelhardt 2002a: 11-12).

2.3.4 The "ethics centres" and the naming of a new secular moral discipline

By the end of the 1960s there had been a series of major conferences discussing the momentous ethical issues raised by the rapid advances in the biological and medical sciences. And other disciplines, most notably theology and later philosophy had begun to contribute informally to this

[3] This process of personal secularisation of religiously trained bioethicists is exemplified in the career of bioethicist and bioethics historian, Albert Jonsen (Evans 2002: 85-88). Jonsen obtained a release by the Church from his vows as a priest in 1975, married, and although trained in religious ethics, became a prominent contributor to the new secular bioethics (Jonsen 1998: viii-xi).

discourse, bringing greater expertise in the analysis and framing of ethical problems. At the end of the decade a number of more formal organisations and institutions began to be established in collaboration with the medical and other healthcare professions and biological scientists. These organisations were to prove highly influential in the early development of the new multidisciplinary undertaking of bioethics. There were three new institutions or associations that played a central part in collaboration with the medical profession and other healthcare professions in formalising the new moral enterprise that was to become bioethics: The Hasting Centre, known initially as "A Centre for the Study of Value and the Sciences of Man"; the Kennedy Institute[4], initially known officially as "The Joseph and Rose Kennedy Centre for the Study of Human Reproduction and Bioethics"; and the "Society for Health and Human Values" (Jonsen 1998: 20-26).

The key instigator for the establishment of the most influential of these three centres, the Kennedy Institute, was a reproductive medicine researcher, André Hellegers M.D. Unlike the other two organisations which were established and funded separately from the university system, the Kennedy Institute was very much an integrated part of a larger academic institution; the Georgetown University School of Medicine. Hellegers coined the term "bioethics" when the initial naming of the Kennedy Institute was being considered in 1971[5]. Interestingly, Van Rensselaer Potter had already coined and used the term in the title of a 1970 article and then for his book, *Bioethics: Bridge to the Future* published in 1971 (Potter 1971). But whether or not the term was proposed twice (or more) quite independently or not, Potter and Hellegers certainly used the neologism "bioethics" to effectively name two quite different enterprises. Hellegers, as a Jesuit-educated Catholic, had a firm idea of ethics as an academically rigorous examination of the grounds for moral norms. His vision was very much of a secular moral enterprise extending the scope and sophistication of medical ethics to adapt to new biological sciences driven challenges. In contrast, Van Rensselaer Potter used the term ethics as a general term for human values. Potter, like the forester and prophet of environmental ethics, Aldo Leopold, whom he admired, believed that the scope of human ethics needed to be extended to better adapt human civilisation to ensure a global future (Potter 1971: vi). His advocacy was for a discipline of bioethics as a new ethical science, providing a bridge between the humanities and sciences. Potter believed that an ethics informed by contemporary science would help sustain and improve civilisation. This was clearly a much more expansive and also socially radical ambition. It was nevertheless a task that was to some degree being taken up by the Hasting Centre and the Society for Health and Human Values (Jonsen 1998: 26-27). However, as already noted, it has clearly been

[4] The full name came to be the Kennedy Institute of Ethics but it has generally been know as just the Kennedy Institute. The longer title of "The Joseph and Rose Kennedy Centre for the Study of Human Reproduction and Bioethics" was only used in the first few years (Jonsen 1998: 23).

[5] The husband of President Kennedy's sister, R. Sargent Shriver has also been attributed with coining the term "bioethics".

the Kennedy Institute vision for bioethics, very much directed by Hellegers, which most shaped the modern discipline of bioethics.

The Kennedy Institute was to have another significant contribution of greater importance for the emerging field than simply the choice of name. This was a contribution that came from a project initiated by Hellegers which aimed at developing a mid-level principles based approach to applied ethics (Engelhardt 2002b: 78). This collaborative work resulted in what became known as the "four principles approach", "principlism", or was rather less kindly referred to by some as the "Georgetown mantra" (Daniels 1996: 335). Kennedy Institute philosopher Tom Beauchamp and theologian James Childress published their account of this framework in their textbook, *Principles of Biomedical Ethics* (Beauchamp and Childress 1979). Many observers of bioethics have since affirmed how hugely influential this one textbook was for the emerging field of bioethics:

> . . . this one textbook, more than anything else, shaped the teaching and practice of biomedical ethics in this country. . . [becoming] a standard text in courses and a virtual bible to some practitioners. The ethical framework provided by the book shapes much of the discussion and debate about particular bioethical issues and policy, whether in the academy, the literature, the public forums or the clinic.
>
> (Evans 2002: 90)

The extent of the influence of the principles-based approach did not however result purely from the quality of the textbook. Kennedy Institute staff and the Georgetown University philosopher Beauchamp in particular had been significantly involved as a consultant to the first National Commission on bioethics, working on the highly influential *Belmont Report.* It was therefore no coincidence that this report, which came to have a very significant role in the external ethical guidance of biomedical research, incorporated a mid-level principle approach extremely similar to that presented in the textbook of Beauchamp and Childress. The close link between the approach propounded in the textbook and *The Belmont Report* meant that the mid-level principle approach to bioethics effectively received the official legitimation of the United States government. This was a momentous development in the development of bioethics as a discipline, the significance of which cannot be over-emphasised. The socio-political recognition that was granted the new field of secular bioethics was tied to both the invention of the mid-level principles approach and, critically also to the Federal Government endorsement of this secular ethical framework for evaluating biomedical research. This was surely the 'watershed' event in socio-political validation of the secular discipline of bioethics (Evans 2002: 89-92).

The late 1960s and early 1970s had thus seen significant development in the collaborative engagement of theologians, philosophers, lawyers and academics from other fields, all of whom aided health professionals in the extension of the existing theoretical understanding and discourse of medical ethics. The metamorphosis of theologians and philosophers into a new kind of "secular

moral expert" was under way as the field of bioethics was born or rather, as Engelhardt prefers, was "baptised" quite abruptly in the early 1970s (Engelhardt 2002b: 78-80). This development had initially been made possible by invitations for collaboration from other disciplines in conjunction with the health professions and medicine in particular. However, another critical step in the emergence of bioethics as a distinctive enterprise from traditional medical ethics came through the effects of increasing pressure for stronger external ethical influence on the practice of healthcare and biomedical research.

2.3.5 Bioethics and public demand for external regulation

The medical profession was not able to completely dictate on its own terms all of the contributions and changes that were coming for healthcare ethics. A number of ethical controversies which came to prominence during the 1960s and early 1970s raised public alarm and led to calls for greater external regulation of clinical ethics and biomedical research practice. The resulting public pressure helped to drive political processes that sought to apply greater external controls on biomedicine and was thus an important factor contributing to the rapid social validation of the new discipline of bioethics (Jonsen 1998: 148, 334). The legal enshrining of more specific requirements for informed consent in several U.S.A. courts in 1972 was also clearly an important factor in the processes of exerting greater external influence over the practice of medicine and of biomedical research (Jonsen 1998: 356).

Decisions on the ethical propriety of clinical research initiatives had until this time been a matter for the individual clinical researcher to exercise within the context of the clinician-patient relationship. Such consideration was to be disciplined by the traditional Hippocratic ethical principles of care and beneficence. The success and elaboration of biophysical research methods since the 19th century had brought greater scientific sophistication to biomedicine during the 20th Century. As part of this increased sophistication, the use of healthy individuals as 'controls' and even as experimental subjects became common practice. The inherent dangers of a lack of due concern for the interests of experimental subjects in such unregulated practice had at times already generated heated internal discussions within the medical profession. In response to such concern early in the 20th Century, it became accepted practice to obtain consent from volunteers subjected to medical research. However, the requirements were not highly prescriptive, and it remained the case that those undertaking the research were generally the sole judge of the ethical propriety of the research and of the adequacy of the procedures followed for gaining consent (Jonsen 1998: 127-133).

By the early 1970s, growing doubts about the medical profession's self-governance had turned to a widespread loss of societal confidence. This loss of confidence followed publicity of some disturbing examples of professional ethical 'self-governance' in clinical research on human subjects gone badly wrong. Major public outcry developed as details of a number of ethically abhorrent

clinical research trials involving human subjects were publicised, most notably the Tuskegee syphilis trial involving underprivileged African American men (Jonsen 1998: 146-148).

The kind of medical paternalism that had once been assumed an ethically appropriate feature of the relationship of trust between family physicians and their patients no longer matched the greater social and ethical diversity of the community. It also did not match the more impersonal and technologically sophisticated care now being provided largely in multidisciplinary institutional settings (Buchanan 2002: 128-132; Engelhardt 1996: 3-8, 74-84). Indeed, medical paternalism was the common factor raising concerns amongst many people during this period about common attitudes and practices evident in both clinical practice and research. Much of the early work of philosophers contributing to bioethics therefore focused on the issue of medical paternalism[6]. The traditional internal moral competency and hence the moral legitimacy of the medical profession was thus facing a crisis both in terms of the novelty of the ethical problems now becoming common-place in the clinical setting, as well as public unease regarding research ethics, or the apparent lack thereof. Given that medicine was now a major and expensive social institution, external guidance and regulation had become inevitable.

Public concerns regarding research on human genetic engineering, assisted reproduction and also the ethical issues surrounding research involving human subjects were addressed in the Mondale Senate Hearings of 1968. However, no legislative action was taken until the completion of a further set of Senate Hearings chaired this time by Edward Kennedy in 1973 (Jonsen 1998: 90-98). The bill drafted by Kennedy's committee requiring the establishment of the first government commission on medical ethics passed into law in 1974 (Jonsen 1998: 94-98). This commission was to have no direct regulatory power, but it was to make recommendations to the federal agencies that did have such regulatory powers (Evans 2002: 82). Most remarkably, this commission was to be the first government body to be directly charged by legislation to identify and recommend ethical principles rather than just specific policy guidelines or regulations (Jonsen 1998: 98).

This first and for the origins of bioethics, most important government advisory commission was named in full as the National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research (referred to hence as the "National Commission"). The issue of human genetic engineering which had generated so much of the public discourse and alarm regarding biomedical research throughout the 1960s was not addressed by this commission. It was argued these issues could best be deferred to a latter commission since the biotechnologies that were generating public concern were still only under development. On the other hand, the issue of unethical experimentation on human subjects had become a matter of immediate concern for liberals. Foetal research, with

[6] See (Buchanan 1978) for a useful summary of some of the early bioethics discourse regarding medical paternalism.

controversial abortion implications had also come to public prominence at the same time and had aroused the concern of conservatives in the pro-life camp. Thus both sides of the American political spectrum were united in seeking the establishment of this new commission with the principal task of addressing these two quite different sets of concerns. Significantly as will be discussed later, there was also a consensus that what was seen as widely beneficial scientific progress should not be blocked (Jonsen 1998: 98).

The National Commission was required to investigate and report on a number of research related issues, with the issue of foetal research the most urgent task. However, as Albert Jonsen, himself a member of the National Commission reports,

> One congressional mandate required a special process: "identify the ethical principles which should underlie the conduct of biomedical and behavioural research with human subjects and develop guidelines that should be followed in such research".
>
> (Jonsen 1998: 102)

What was unique about this task was that it was through this recommended set of ethical principles that Congress aimed to address public concern about unethical research practice. Once accepted the principles were to be applied by Institutional Review Boards to consider the ethical acceptability of all proposals for federal research funding involving human subjects. This set of ethical principles was thus intended to play the central role in providing the public with greater assurance that all federally funded research involving human subjects was conducted in an ethically acceptable manner. So while the Commission itself had no regulatory power, the principles it was to define would come to exert a significant degree of influence over a very great range of research projects. In fact, the principles recommended by the National Commission were soon to be applied well beyond biomedical research practice. They would come to influence a much wider range of bioethical issues including notably clinical ethics (Jonsen 1998: 104).

The process of developing the report began with requests for discussion papers on ethical principles from prominent moral philosophers. As already noted, a group of philosophers and theologians at Georgetown University had already begun work on developing a mid-level principle approach to applied ethics and to guide public policy. Scholars from this group contributed to this discussion and one of them, the philosopher Beauchamp was hired as a consultant to assist in the later stages of this project (Evans 2002: 84; Jonsen 1998: 102-104). The National Commission's aim was to provide a small number of very clear and concise principles which would be capable of deriving quite specific and tangible ethical rules of practice. They saw no need for wider public consultation in this process, rather seeing the process as simply requiring them to be well informed by adequate academic reflection and then to engage in a dialogue seeking agreement on the best possible set of overlapping, consensual ends, consistent with the prevailing cultural tradition. The significance of the

model of expert commissions and review groups effectively leading public opinion that this first Commission provided, should be noted and will be discussed later in this chapter. In that context I will highlight criticism from some philosophers regarding the role that such small expert groups have come to play within policy bioethics in "leading" so-called "weak consensus" on matters where there are strongly conflicting community values and beliefs (Engelhardt 2002a; Trotter 2002a; 2002b).

The commissioners considered discussion papers on ethical principles from prominent moral philosophers at a weekend retreat at a conference centre known as Belmont House in February 1976. Three principles: respect for persons, beneficence, and justice were agreed at that time. Each of these three principles was then translated into corresponding measurable procedures or rules. Informed consent procedures were to be required to ensure moral obligations of respect for personal autonomy were met for experimental subjects. Risk / benefit analysis was to be required to guarantee the beneficence of any research projects. Fair procedures for the selection of research subjects were also to be required to guarantee their just treatment (Evans 2002: 84). The final version of *The Belmont Report*, as it became known, was completed over two years later in June 1978 and came into effect in 1979 (Jonsen 1998: 104).

The central import of the principles defined in *The Belmont Report* was guaranteed because of the Federal government sanction which the report received and the legally binding role that the principles were then to play in determining the acceptability of biomedical research projects seeking Federal funding. As already noted, the importance of the Belmont principles for the fledgling field of bioethics was further consolidated by the overlapping work on a principle-based approach to applied ethics by Georgetown University academics, Beauchamp and Childress. Their textbook, *The Principles of Biomedical Ethics*, reflected the interplay that occurred between the National Commission's work and this Georgetown University project (Beauchamp and Childress 1979: xiii).

While the approach they follow in their textbook was extremely similar to that of *The Belmont Report*, the proposed scope of its application to practice was much wider. The textbook aimed and succeeded in extending a principles-based approach to applied ethics across a wide range of clinical ethical and healthcare service allocation decisions in addition to the challenges of research ethics which was the mandated focus of the National Commission's work. They proposed four rather than three principles but this was not a major departure from the Belmont approach. Beauchamp and Childress also defined the additional principle of nonmaleficence, "to do no harm". This principle could be argued to function as simply a further specification of the original single Belmont principle of beneficence. They retained the other two principles, respect for persons and justice unchanged (Evans 2002).

Thus by the close of the 1970s a 'moral vacuum' in the ethical regulation of biomedical clinical and research practice that had resulted from the undermining of the moral authority of both traditional

medical ethics and the social *ethos* of Protestant Christianity was being filled by a new, multidisciplinary academic enterprise (Engelhardt 2002a: 7). This field had been 'baptised' by the Kennedy Institute which also played a key role in recruiting and training those who would run the new enterprise. Many of the first bioethicists were theologians and other religiously trained moralists. They were soon joined by an increasing number of analytic moral philosophers. The predominant form of discourse for the new secular discipline of bioethics led to the rapid abandonment of the traditional substantive ethical discourse of the theologians. This was replaced by the much "thinner" and formal rational discourse of the secular moral philosophers (Evans 2002: 99-134). The mid-level principles promoted in *The Belmont Report* and elaborated in the widely influential textbook of Beauchamp and Childress were to play a central role in the new field. They defined the very general ethical framework in which this morally "thin" discourse was now to be pursued in a wide range of ethical decision and policy-making contexts within the healthcare and biomedical research domains.

Given the rapid rise of bioethics as a field carrying real significance for practice in biomedicine and biomedical research and the influence it was soon to have on public affairs, it was inevitable that questions of rational warrant and normative legitimacy would rapidly come to the fore. And given the nature of philosophy, it was inevitable that there would also be a diversity of positions and lively debate. This controversy and the resulting later methodological developments in bioethics is the subject of the remainder of this chapter

2.4 The "methodology wars" of bioethics

2.4.1 The failure of the "top-down" model of applied ethics

Many of the analytic philosophers making early contributions to bioethics were optimistic that their moral philosophical expertise would soon help resolve the ethical confusions and controversies of medical ethics and biomedical research. For example, Danner Clouser, "the first proper professor of bioethics" (Jonsen 1998: 329) asserted that,

> Medical ethics is no big deal . . . it is simply ethics applied to a particular area of our lives . . . and has no special principles or methods or rules. It is the 'old ethics' trying to find its way around in a new, very puzzling circumstance . . . Bioethics would seem to be the response of traditional ethics to particular stresses and urgencies that have emerged by virtue of new discoveries and technologies. Ethics is pressed, not to find new principles or foundations, but to squeeze out all the relevant implications from the ones it already has.
>
> (Clouser 1978: 124-125)

The belief that philosophical ethics would make valuable contributions to an embattled medical ethics was made also with considerable confidence by the prominent British moral philosopher Richard

Hare. Perhaps eventually to be proven prophetic in a way he would never have countenanced, Hare remarked that:

> . . . if the moral philosopher *cannot* help with the problems of medical ethics, he ought to shut up shop. The problems of medical ethics are so typical of the moral problems that moral philosophy is supposed to be able to help with, that a failure here would be a sign either of the uselessness of the discipline or of the incompetence of the particular practitioner.
>
> (Hare 1977: 49)

Hare, as a philosopher very much of the analytic tradition in moral philosophy, did not see the role of the moral philosopher assisting those struggling with puzzling problems in medical ethics to be at all like ". . . an old fashioned general practitioner and his patient" (Hare 1977: 50). Philosophy could not so much provide a "ready-to-swallow pill" to remedy the moral problems of biomedicine, as remedial exercises to be practiced by the professionals themselves. He noted that there are many confusing and contentious terms used in moral debate and it is the philosopher's special expertise to overcome conceptual confusions and discard fallacious arguments through clear logical analysis. Hare claimed that once the logical and terminological confusions surrounding a troubling moral issue in medicine were clarified, the concerned parties would then be able to focus on the practical issues involved. These would no doubt still present significant challenges, but since the issues would now at least be clearly presented, there was the prospect of better ethical decision-making (Hare 1977: 50-52).

To illustrate his understanding of how the moral philosopher will contribute to medical ethics, Hare provides a rather hypothetical discussion of some of the ethical issues surrounding euthanasia. He then states,

> So the philosophical exercise would have resulted, as all good philosophy should, in returning the problem to the non-philosopher for further investigation, but in a form in which it is better understood, clearer, and therefore easier of solution.
>
> (Hare 1977: 56)

Of considerable significance it should be noted, Hare then proceeded to acknowledge that such a purely logical focus on the formal structure of moral arguments and the use of terminology does not address the core substantive ethical questions that had been raised. He accepted that the application of conceptual analysis to moral issues combined with a good understanding of the factual constraints may serve only to partially reduce the range of morally defensible options to be considered. Hare also admitted that he had not indicated how the normative questions involved should actually be determined, or in his words, ". . . how we would decide which state of affairs was 'for the best'" (Hare 1977: 56).

His solution to this challenge draws on the established formula with which moral philosophy has long sought to ground secular normative authority. In order to make a valid substantive contribution

as a moral philosopher, Hare therefore states that, "I shall have to assume for the sake of argument the truth of a theory about moral reasoning which I hold and have argued for in other places and apply it to the present problem" (Hare 1977: 56). Having first noted that he believes a number of other established views on ethics lead to very much the same results, Hare then offers a brief account and justification of his own form of utilitarian moral theory, universal prescriptivism. The alternatives he mentions that might yield similar results include the Christian "Golden Rule", Kant's "categorical imperative", and contemporary "ideal observer" and "rational contractor" theories (Hare 1977: 56-60).

I do not want to debate the merits or otherwise of Hare's particular theoretical position which I acknowledge has significant theoretical elegance. I simply wish to focus attention on the essential role that Hare, as a respected moral philosopher of this time, presumed that normative ethical theory should play in justifying particular ethical decisions in healthcare contexts. The problem with his understanding of the role of moral theory is not so much with the content of his preferred theory, but the general problem for moral philosophy of how normative authority can be claimed to be rationally grounded in any one moral theory when there is nevertheless a plurality of such reasonable theoretical positions. While, as he quite rightly notes, a number of moral theories might considerably overlap in their implications for practice, bioethics was going to require the specificity and precision of making recommendations for particular, very real and immediately demanding cases. Hare's request to allow him "to assume for the sake of argument the truth of a theory about moral reasoning" (Hare's own theory as it happens) is a perfectly reasonable request for the purposes of hypothetical academic discourse. But the demands of immediacy, criticality and specificity of decision-making in clinical ethics was simply not going to afford the same 'luxury' otherwise available to the academic philosopher in the normal course of his or her work.

Hare's presumption that normative ethical theory could perform a central justificatory role in applied ethics, reflected the prevailing understanding that many philosophers first brought to their work in bioethics. And it is the same model of applied ethics that leading protagonists of monistic and nonanthropocentric environmental ethics such as Callicott have assumed, albeit while attempting to develop very different theoretical systems (Callicott 1990, 1994; 2002b). A universally applicable moral theory or set of moral principles is understood to be needed to provide the decisive force in a deductive or "top-down" syllogistic moral reasoning process. A morally authoritative norm, axiom, principle or belief must take the role of the major premise in the syllogism. The minor premise or premises are non-moral, defining the contextual facts or circumstances of a particular case. The conclusion to the reasoning process is determined by what the major premise establishes to be right and good in this particular case (Pellegrino 2000: 666). To illustrate the basic deductive form:

1. Every act of description A is obligatory.
2. Act *b* is of description A. Therefore,
3. Act *b* is obligatory

(Beauchamp 2003: 7)

This deductive or so-called "top-down" approach to moral reasoning has as its ideal the mechanical application of universal formulations with absolute certainty to particular cases. As such it is perhaps more likely to have been inspired by a mathematical ideal than by the model of the experimental sciences (Arras 2002: 46). Of course whether either mathematical or experimental models provide appropriate ideals for ethical reasoning is contentious. Certainly the ethical theory and theorising of the Ancients did not take this form. Much of the more systematic character of modern moral theory can instead be traced to the relatively recent work of Henry Sedgwick in the nineteenth century (Annas 1993: 442-455; Sidgwick 1907).

Despite the early confidence of moral philosophers such as Hare, their presuppositions regarding the form and role of moral theory and principle were radically challenged under the test of genuine and as Hare had noted, relevant, practice. Jonsen notes the theoretic ideals of modern moral philosophy did not fare well as philosophers

> . . . became engaged in actual disputes and in the perplexing decisions forced upon practitioners and patients. They often found that theory, as they had learned it in their original disciplines, was too remote from these concerns, and seldom shed much light on the dark paths of decision.

(Jonsen 1998: 331-332)

The problematic presumptions of the simple deductive or "top-down" model of applied ethics have been candidly described by prominent American philosopher and contributor to bioethics, Norman Daniels:

> When I began work on practical problems in ethics, I held what I believe is a fairly common view, namely, that we solve practical problems in ethics by supplying a description of a particular situation that allows us to subsume it under a relevant moral principle. The principles are ready-at-hand, perhaps delivered to us through work in ethical theory. The details of seeing how to fit them to the relevant facts is a complex but not philosophically challenging task. For example, I thought that the problem of "applying" Rawls theory of justice to healthcare was just such a problem . . . My interest was in "testing" the theory by seeing whether the resulting application yielded more plausible judgments about the distribution of healthcare than, say, libertarian or utilitarian theories. I quickly learned that my working picture of "applied ethics" was useless.

(Daniels 1996: 11)

The "top-down" or simple applied ethics model of ethical reasoning and justification assumed by Daniels and many other philosophers as they first came to engage with the practical ethical challenges

of biomedicine faced fundamental problems at two levels. Firstly at the level of applying theory and principle, moral philosophers presupposing this model of applied ethics faced the greater complexity and indeterminacy of real cases in contrast to the carefully crafted and unambiguous hypothetical examples of academic philosophical ethics. The top-down model grossly underestimates the complexity and uncertainty involved in adequately understanding and fairly describing real ethical problems in clinical ethics. This complexity and uncertainty is confronted even in the empirical context within which these problems are defined. The challenge of understanding a clinical ethical *case* can be usefully understood as a special example of the now generally recognized phenomenon of the "theory-laden nature of observation" within the sciences. An individual will tend to conceptualise an ethical issue and come to interpret what action is right with regard to a particular case consistent with his or her established theoretical commitments (Daniels 1996: 348).

Similarly, how cases are described and presented to others is also strongly influenced by the ethicist's pre-existing theoretical commitments. As Tod Chambers has noted, the cases employed by bioethicists in their articles and books to demonstrate that their conclusions are relevant to 'real' situations are better considered with the assistance of literary interpretative insights. That is, the literary conventions and devices employed in the presentation of a 'case' can greatly influence the reader towards an interpretation framed by the theoretical presuppositions of the author, even if the author is not self-consciously drawing on such devices. By choosing, even inadvertently to emphasize or overlook certain contextual aspects of a case or details about a person's life history or character, the author can greatly influence the reader towards accepting a particular interpretation of the best way to resolve an ethical problem (Chambers 1999: 3-19).

Thus problems of the scope and applicability of moral principles contributed to the rapid discredit of simplistic notions of straight-forward and normatively authoritative application of moral theory and principle to particular cases. Real cases in clinical ethics proved to be vastly more complicated and nuanced than this model required and the top-down or deductive model of applied ethics was rapidly recognized to be inadequate by most bioethics practitioners (Winkler 1993: 354).

A second level of fundamental challenge for the top-down applied ethics model results from the pluralism of both theoretical and popular or folk[7] morality. Even if applying ethical theory and principle to particular cases was unproblematic, the top-down model still faces a further critical problem. There is no consensus in moral philosophy defining a single, uncontroversial normative ethical theory or set of principles. But to be rationally compelling, such an uncontroversial moral theoretic grounding is required to supply the universally applicable moral norm/s applied as the major premise in the deductive syllogism to 'solve' a particular 'case'.

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[7] By "folk morality" I refer to the comprehensive range of non-academic and non-reflective religious and secular moral beliefs commonly held by individuals in contemporary Anglophone countries.

Philosophical ethics is effectively divided into a number of competing research programmes, including various forms of utilitarianism, deontological or Kantian ethics, social contract theory and virtue ethics (Rachels 1998). Under such circumstances, choosing any one of the many competing varieties of ethical theory to apply to practical ethical issues is rationally arbitrary. The conclusions resulting from an analysis grounded by any one such theory may well fail to convince those subscribing to different ethical theories[8]. For the conclusions of an exercise in applied ethics to be widely convincing, "we want to know what really is best, not just what this or that theory says" (Rachels 1998: 15).

The plurality of possible ethical theories or sets of moral principles from which bioethicists may attempt to deduce practical ethical conclusions serves to undermine the normative authority of any one such conclusion. Some theorists in biomedical ethics have continued to seek monistic general theories capable of the kind of "top-down" application presupposed by the simple applied ethics model (Clouser and Gert 1990; Gert 1984; Green, Gert, and Clouser 1993). However, the possibility that any of the currently contending approaches to ethical theory will come to provide a single adequate theoretical framework to support a top-down model of applied ethics is generally regarded by those concerned with practical philosophy as highly unlikely (Beauchamp 2003: 8). However, this cannot of course be ruled out with any a priori certainty (Bayles 1986: 250).

Within academic moral philosophy it remains professionally acceptable to continue to refine and defend the prospects of one or other preferred research programme in ethical theory. For most academic moral philosophers, the fundamental difficulties of the simple theory application model can be set aside while refinements continue to be made and debated in the pursuit of their preferred ideal ethical theory. A notable exception to this pattern is the British analytic philosopher and metaethicist, Jonathan Dancy. Dancy has argued strongly that the pivotal role long assumed for ethical principles under the deductive or subsumptive model of ethical reasoning is fundamentally misguided (See Dancy 2005).

However, for those philosophers who had begun to take on the practical ethical problems of biomedical ethics as their primary professional vocation, the failure of the simple top-down model of ethical reasoning and justification required a rationally satisfactory alternative. As already noted, bioethics had assumed a very practical turn from the outset, and the demands of clinical bioethics in particular raised issues of immediacy and particularity that moral philosophers did not have to confront in the academy (Jonsen 1998: 331).

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[8] However considerable overlapping-consensus is nevertheless often achieved by theoretically eclectic advisory groups and Government working parties, particularly where discussion is centred on case comparison and mid-level principles rather than on general ethical theories (Daniels, 1996; Jonsen & Toulmin, 1988).

Having replaced the theologically based authorities, these newly 'baptised' and 'ordained' bioethicists needed to continue to address the task of providing authoritative secular moral guidance regarding the difficult real life ethical problems of healthcare practice. Their work proceeded despite the absence of unifying rational agreement on a single background moral theory or set of principles to provide the normative authority for their advice and determinations. As already noted, restricting their work to conceptual analysis and informing clinicians of how an ethical issue might be interpreted from the perspective of various normative ethical theories, served a useful purpose of clarifying "the options". But such analytic work provided insufficient ethical guidance for practitioners (Winkler 1993: 350-351). Bioethicists therefore began rapidly to explore methodological innovations intended to nevertheless provide decisive secular moral guidance to practice, while abandoning the false certainty and closure presupposed by the top-down or deductive model.

The first and most significant methodological innovation brought to the field of bioethics from moral philosophy was of course the mid-level principle approach that I have already discussed and which was developed jointly through the work of the Kennedy Centre at Georgetown University and by the National Commission's *Belmont Report*. The development, political authorisation and dissemination of this methodology proved to be essential to the initial impetus and the on-going style of the new field of bioethics (Evans 2002: 99-134).

2.4.2 Mid-level principles: The "Georgetown Mantra" of bioethics

The defining and most influential methodological approach in all areas of bioethics in the United States was that elaborated in the biomedical ethics textbook of Beauchamp and Childress first published in 1979 (Beauchamp and Childress 1979). The fact that this approach significantly overlapped with the mid-level principles approach developed in the government commissioned *Belmont Report* also meant that the approach immediately assumed socio-political legitimacy. "Principlism" or the "four-principle approach" seemed to many an elegant and practical response to the problems that were readily apparent for the simple, "top-down" theory application model of applied ethics. However, principlism certainly did not dismiss the role of normative ethical theory or the continuing value of the contribution of analytic philosophical ethics to biomedical ethics[9]. Beauchamp and Childress offered the mid-level principle approach as a practical solution for applied ethics despite the problems presented by a plurality of philosophical positions on the rational demands of morality. They argued that the ostensibly conflicting general normative theories of philosophical ethics such as utilitarianism, Kantian ethics or social contract theory nevertheless provide overlapping support for the mid-level ethical principles that they identified. Their claim was therefore that despite

[9] This assumption is challenged by many contributors to biomedical ethics. See the next section on atheoretical and particularist approaches for a brief summary of the arguments of philosophers who have questioned the value of the contribution of traditional philosophical ethics regarding real cases.

fundamental disagreement regarding the foundational principles of the various competing substantive normative ethical frameworks, collectively, such high level or abstract moral theories provide a significant degree of independent support for the mid-level principles that they proposed.

The four principles advocated by Beauchamp and Childress, as already noted were respect for personal autonomy, beneficence, non-maleficence and justice. They rejected attempts at the lexical ordering of these principles in contrast to authors such as Robert Veatch (Veatch 1981). Instead they turned to the earlier work of the British moral philosopher W.D. Ross. With Ross, they advocate that each principle should be regarded in the first instance as only *prima facie* morally binding (Ross 1930). If only one such *prima facie* principle is considered to be applicable to a particular case then that principle is said to be morally binding. They acknowledge that in the many circumstances more than one mid-level principle will be considered to be applicable and consequently there will be conflict between the relevant *prima facie* duties. Beauchamp and Childress suggest that such conflict is to be resolved by considering the relevant contextual details of the particular case and applying moral wisdom or *phronesis* to then determine which duty is most pressing. That duty which is judged the most pressing after sufficient consideration is then said to override the other *prima facie* duties. A typical example of Ross's notion of competing *prima facie* duties and their resolution would be the manner in which a duty to keep a promise to meet a friend should be overridden by a more pressing obligation to stop to assist a person injured in an accident.

Beauchamp and Childress accept that their principles approach can only offer very general guidance to practice given that the *prima facie* duty model always leaves open the question of which principle should take precedence in any particular instance of moral reasoning. They are also very general principles. The real work of applied ethics is therefore said to require considerable skill and moral wisdom. Such skill and wisdom is essential to carefully weigh and balance the relevance of their four principles and the more specific rules associated with each principle (Beauchamp and Childress 2009: 397)[10]. That is, while the principles provide broad themes and general guidance for any ethical consideration, very considerable discretion is placed on the individual performing the moral reasoning regarding particular cases.

In the first three editions of their biomedical ethics textbook, Beauchamp and Childress continued to claim that a top-down process of moral justification grounds particular judgments in more general moral rules, which are themselves grounded in the mid-level principles (Nordgren 2001: 28). This deductive interpretation of principlism was abandoned in their 1994 edition in favour of a coherentist approach where ethical justification is recognised to apply in both "top-down" and

[10] But while the *Principles of Biomedical Ethics* may not have provided a lexical ordering of the four mid-level moral principles advocated, there has nevertheless been a strong movement in bioethics in the U.S.A. in particular for the principle of respect for personal autonomy to assume *prima facie* priority (Pellegrino 2000: 663).

"bottom-up" directions (Beauchamp and Childress 1994: 23-37). According to this latter account, considered ethical judgments tied to the contextual demands of particular cases may also influence our understanding of higher order principles and may even require the revision of such principles. Similarly, moral principles should inform our judgments of particular cases and thus may require us to reconsider our initial, unreflective moral intuitions. Following this latter model of ethical justification, we are required not to prejudge whether either top-down or bottom-up influences will inevitably prevail in any particular case. However, by promoting a top-down model of ethical reasoning and justification in the first three editions of their textbook, Beauchamp and Childress had set the stage for the "methodology wars" of bioethics which had begun to "rage" by the 1990s (Daniels 1996: 333-337).

The more recent statements of the four principles approach still retain a decisive role for philosophical ethics in the grounding of bioethics, despite thoroughly rejecting the simple top-down model of applied ethics (Beauchamp and Childress 1994, 2001, 2009). However, notably in relation to the discussions to come, the coherentist methodology that they have latterly and influentially adopted still privileges an individualistic judgment model of ethical consideration.

The coherentism that Beauchamp and Childress have endorsed builds on the Rawlsian methodology of reflective equilibrium. Considered ethical judgments regarding particular moral issues are taken to have epistemic validity. In other words, we can take our more reflectively considered moral intuitions about cases to provide valid data on which to enter into further moral reflection. This position is at odds with comprehensive ethical doctrines such as utilitarianism whose proponents have tended to scepticism regarding the epistemic value of particular moral intuitions. Moral intuitions, even considered moral intuitions, have been considered by utilitarians as liable to reflect unjustified prejudice and unthinking tradition and need to give way to the rational determinations of the theory.

Because of this, principlism has been subjected to strong criticism both on the one hand for abandoning the justificatory standards of a top-down and monist deductivism (Clouser and Gert 1990), and on the other for giving inadequate weight to the influence of bottom-up, contextual factors (Hoffmaster 1993; Winkler 1993). Clouser and Gert have also argued that further work in ethical theory is surely necessary to determine the relative priority of the mid-level principles in ethical decision-making and also to better define the limits and scope of conflicting mid-level principles (Clouser and Gert 1990).

Clouser and Gert also claim that the mid-level principles of the "Georgetown mantra" are not even real ethical principles in any case. Rather they are little more than chapter headings to structure further discussion of ethical concerns. These so-called "chapter headings" do not generate sufficiently clear rules for guiding action, or for resolving dispute about conflict between the

principles. In particular, they highlight the conflict that frequently arises between concern for patient autonomy and consequentialist concerns for beneficent interventions (Clouser and Gert 1990).

Some authors have sought to deal with such concerns regarding the indeterminacy of principles and the consequent unsatisfactory dependence on methods of intuitive balancing of principles. They have advocated instead the use of processes of principle specification (DeGrazia 1992; Richardson 1990). Specification seeks to reduce the need for individual judgment in a process of so-called balancing of principles. This is to be done through work on the more precise definition of the scope of application of a principle to particular ranges and types of cases. In their later editions, Beauchamp and Childress indeed emphasise the benefits of principle specification (Beauchamp and Childress 1994, 2001, 2009).

However, Carson Strong has argued that specification offers no real assistance in solving difficult cases and that it is the case-comparison methods of casuists (to be discussed next) which does the real work in practical ethical reasoning (Strong 2000)[11]. Others have also argued that the specification process remains too dependent on the particular ethical framework and judgments of the ethicists doing the principle specification. Since principlism was developed because the plurality of reasonable theoretical frameworks had invalidated a simple theory application model, if background moral theories nevertheless remain necessary in order to guide principle specification then the original problem for applied ethics has not been solved (Smith Iltis 2000: 274).

The later editions of the *Principles of Biomedical Ethics*, having abandoned the top-down or deductivist model, propose a "coherentist" model of ethical reasoning and justification that draws on John Rawls' method of seeking a "reflective equilibrium" between particular ethical judgments and more general ethical principles or norms (Rawls 1971). Norman Daniels has elaborated on a distinction that Rawls drew between so-called "narrow" reflective equilibrium which involves seeking a reflective equilibrium between particular judgments and norms, and so-called "wide" reflective equilibrium. In contrast with narrow reflective equilibrium, wide reflective equilibrium is recommended as preferable since this method uses moral reflection not only to seek rational coherence between intuitions and established principles or norms. It also seeks a wider coherence with background theories[12], including both normative and non-moral empirical theory (Daniels 1979: 256-264).

Wide reflective equilibrium theory as further developed by Daniels and others and endorsed by Beauchamp and Childress in their later editions of *Principles of Biomedical Ethics* provides a more sophisticated and nuanced theoretical approach to the challenge that practical application within

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[11] See the next subsection for a brief account of the contemporary secular application of "moral casuistry".

[12] Of course the plurality of competing background theories then threatens to undermine claims to the rational unity and completeness of the proposed method.

bioethical practice has presented for moral philosophy. However, I believe this approach has as yet largely failed to bring to centre stage the further significant challenges presented by the demands of interpersonal process and inter-subjective agreement for ethical justification.

2.4.3 The challenge from "bottom-up" or "contextualist" alternatives

The widespread rejection of the simple applied ethics model and criticism of principlism led some authors to adopt anti-theory positions and in some cases complete scepticism regarding the prospects for any form of applied ethics (Baier 1993; Noble 1982). Concerns that abstract and formalist moral theory and theorising has 'colonised' bioethics and greatly distorted the understanding of ethical phenomena have been widely expressed by social scientists (Evans 2002). In particular, it has been said that analytic moral philosophy has had an overly and very unhelpful influence on bioethics which remains too significant and distorts the field (Hoffmaster and Hooker 2009).

While only a minority of contributors to the bioethics literature have rejected the role of higher-level ethical theory and principles completely, there has nevertheless been a significant and broad-ranging movement within bioethics towards more practice and empirically-driven approaches that seek their epistemological grounding in the immediate, "bottom-up" contextual details of particular cases. These broadly "contextualist" approaches emphasise the need for fine-grained understanding of historical, social, cultural and psychological factors in order to determine the best solution for difficult cases (Hoffmaster 1993; Winkler 1993). They reject the presumption that theory and principle provide the primary guides to practical moral decision and action.

Influential amongst this less theory-driven and "bottom-up" approach to biomedical ethics has been the case-based reasoning methods of casuistry. A general casuistic approach is evident in Aristotle's writings on ethics and the methods of casuistry were later carefully refined in the medieval period by religious "confessors" (Kuczewski 1998: 424). Thereafter casuistry played an integral role in the pastoral work of the Christian priesthood. Casuistry became discredited within philosophy during the Renaissance and continued to be largely ignored within secular philosophy until a recent revival in contemporary bioethics largely due to Jonsen and Toulmin's book, *The Abuse of Casuistry* (Jonsen and Toulmin 1988).

All casuistic methods of ethical reasoning involve analogical interplay between the facts of particular cases and antecedent assumptions. These include ethical principles, intuitions and most importantly, other relevantly similar cases, all of which should be brought into the consideration of the particular case. The aim of the interplay or dialectic between contextual factors and antecedent

assumptions is to reach informed decisions on morally acceptable and unacceptable options[13] (Stone 1998: 227).

In contemporary biomedical ethics, there are prominent advocates of a number of quite different variations on the casuists' methods[14]. But despite more specific variations, they all emphasise *case-comparison* and the necessity for the development and exercise of practical wisdom or *phronesis* in the dialectic between particular fact and antecedent considerations (Kuczewski 1998: 425-429). All casuists, along with contextualists such as Winkler, are united in the claim that "whatever moral certainty we have is to be found at the level of the case, not at the level of abstract principles or theory" (Arras 1998: 108; See Winkler 1993).

Casuistry, like common law, does not seek to make judgments about individual cases by appeal to general theory. Rather the focus is on close analysis of the contextual details of particular cases and crucially, to make comparisons with relevantly similar cases. Because of this, it is claimed that casuistry is better able to achieve degrees of "overlapping consensus" despite the inevitable disagreements in pluralistic societies regarding more fundamental values and principles[15]. This has given casuistry an apparent advantage over more theory-driven approaches in the practical worlds of both policy formation and clinical bioethics (Arras 1998: 110). Casuistry also has considerable appeal to clinicians because of the primary focus on particular concrete cases rather than abstract principles. It has thus been seen as a more "common sense" and practical method given that medical practice concerns individual patients or cases. However, the claims of some theorists that casuistry offers a comprehensive methodological approach to applied ethics have been strongly disputed (Pellegrino 2000: 662).

However, it would seem that claiming to reach solutions to practical disagreements without the need of more general theoretical insight is disingenuous, if theoretically informed value positions nevertheless determine ethical judgment, albeit perhaps unconsciously. Daniels illustrates this difficulty with an example where the theoretical assumptions of clinicians regarding equality influenced their understanding of what constituted medically necessary treatment for mental health patients (Daniels 1996: 347-348). Those he termed, "hardline" clinicians, were committed to the view that their services were only to treat diagnosable disorders. However, "expansive" clinicians were concerned to treat any kind of unhappiness they encountered. Daniels argues that the considerable

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[13] Exactly what it means to be sufficiently *informed* and the normative authority grounding determinations of *acceptable* and *unacceptable* moral conclusions are matters of central contention in any practical ethics.

[14] See for example the respective approaches of Brody, Jonsen, and Strong (Brody 1979; 1988a; 1988b; Jonsen 1991; Strong 1988).

[15] Engelhardt provides a very forceful account of the significance of the plurality of substantive ethical positions in contemporary liberal individualist society and the challenges this poses for ethical healthcare provision (Engelhardt 1996, 2002).

disagreement evident in the practice of these clinicians resulted from underlying disagreement at the level of theory about the demands of equality on clinicians. He concludes:

> Thinking we can avoid appeal to theory if we can at least agree on cases, after careful diagnosis, is not helpful if there are systematic disagreements on cases that reflect related disagreements in theory.
>
> (Daniels 1996: 348)

In addition, because the bottom-up methods of casuistry draw on contemporary intuitions and social and institutional practices, they can be criticised as lacking a sufficiently critical standpoint (Arras 1991; Tomlinson 1994; Wildes 1993). It has been argued that it is only through astute use of more general and potentially critical theory that such critical standpoints become possible (Dare 1998). Casuists have nevertheless responded that mature cultures arguably contain the resources for robust self-criticism without recourse to such abstract theory (Arras 1998).

Thirdly, and perhaps most decisively, it has been claimed that casuistic reasoning processes presuppose a deep-seated agreement regarding fundamental values that is lacking in contemporary pluralistic societies (Smith Iltis 2000: 274-275). Agreement could be reasonably assumed by the medieval casuists because of their shared belief in natural law theology, and through recourse to the moral authority of the Church. Agreement is similarly possible using the casuistic methodology of common law because of the defined decision-making authority of judges, and the binding nature of consequent legal precedent. In contrast, bioethical casuists working in secular and pluralistic societies lack an equivalent legitimating authoritative status as "moral experts". And unlike the documented case history of law, the ethical precedents[16] of the bioethical casuist are continually subject to revision by rival commentators (Arras 1998: 112). As Pellegrino notes:

> However one may judge that theology (the natural law theology assumed by medieval casuists), it gave validity to the *praxis* of moral judgment. But a *praxis* without some deeper foundation, . . . loses credibility among competing notions of right and wrong. As a result, ethical discourse is reduced to consensus formation, mistaking a virtue of political practice as a ground for moral choice.
>
> (Pellegrino 2000: 662)

Mark Kuczewski has suggested an alternative basis for the contemporary normative legitimacy of casuistic judgments, historically assured by general acceptance of natural law theology (Kuczewski 1998: 430-431). He suggests that this alternative normative grounding has been pointed to by contemporary advocates of communitarianism such as MacIntyre through their emphasis on the implicit moral dimensions of human relationships and of institutions (See MacIntyre 1990).

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[16] The ethical precedents of casuistry are said to be types of cases that are no longer subject to dispute and can thus be referred to as paradigm cases.

Kuczewski claims that narrative[17] may also play a central justificatory role in contemporary casuistry just as it does in communitarianism. He suggests that when casuists approach particular cases they are not simply dealing with a set of synchronic circumstances. They must construct a case history that is linked to the narratives of the individuals and institutions involved in a way that helps all to come to see how particular solutions could better foster the goods or ends implicit in these existing narratives (Kuczewski 1998: 431). Building on the significance of narrative construction for the task of analysing clinical cases as emphasised by narrative ethicists, Kuczewski suggests that "something similar to narrative construction substitutes for the ethical realism that the medieval natural theologians presupposed" (Kuczewski 1998: 431).

Such a suggestion would shift the task of providing a justification or grounds for the casuistic method beyond the inductivist and empiricist" bottom-up" search for moral certitude that casuists have previously claimed is to be achieved through immersion in the particular "facts" of cases. Instead, casuistry would become a form of ethical constructivism, where creative interpretations of narratives, whether the narratives of individuals or of institutions, are developed to provide the basis for forging "ethical consensus". From this perspective, the boundaries between casuistry and constructivist approaches such as clinical pragmatism (see below) become decidedly blurred and the question of the nature and desirability of ethical consensus must become central[18].

2.4.4 The revival of virtue ethics and the rise of narrative ethics

Related to the revival of casuistry, there has also been increased interest within bioethics in classical notions of ethical virtue. This development draws on the more general revival of virtue ethics within moral philosophy led particularly by the work of MacIntyre and also Bernard Williams (MacIntyre 1981; Williams 1985). A number of contemporary theories of virtue ethics have been developed which aim to offer coherent and plausible alternatives to mainstream consequentialist and Kantian approaches to moral philosophy (Oakley 1998: 86). Virtue ethics approaches represent a considerable shift from the prevailing "quandary ethics" focus of most modern philosophical ethics (MacIntyre 1983: 5-6). Virtue ethics theorists note that this quandary ethics focus on decision procedures to determine the right or wrong action in circumstances of uncertainty and controversy has largely neglected traditional concern for the ethically more fundamental question of what sort of person we ought to be and the kind of lives we should seek to live. Instead, modern virtue ethics approaches focus on defining and developing the qualities of character that would tend to equip the individual to

[17] See the next section for a brief discussion of the role of narrative in practical ethics.

[18]Daryl Tress argues that there is no basis in the Aristotelian origin of modern casuistry and communitarianism for such a significant role for narrative. He claims that to the contrary, there are good reasons evident from ancient philosophy to seriously doubt the wisdom of placing such a significant role on narrative (Tress 2002).

act in an ethically appropriate manner under most circumstances. The presumption is that the "virtuous person" or individual of "good character" can be expected to perform the right action under most circumstances simply because this is in character for them, rather than a matter for agonising quandary over various competing abstract duties (Oakley, 1998).

In response, virtue ethics approaches have been strongly criticised as incomplete without being anchored by some deontological or consequentialist criterion of rightness (Pellegrino and Thomasma 1993; Beauchamp and Childress 1994; Hare 1996). In addition, proponents of the more established approaches to biomedical ethics, particularly the ever adaptable proponents of principlism, Beauchamp and Childress, have argued that virtue ethics approaches need not be regarded as competing in any case. Instead, it is argued that concern for the development of moral virtue should be regarded as a useful supplement, while principles and rules continue to play the dominant role in moral deliberations (Beauchamp 1995; Jansen 2000). Certainly, virtue ethics theory has already influenced bioethical thought (Oakley, 1998, p96), as witnessed by the more prominent place given discussion of virtue ethics in the more recent editions of the influential *Principles of Biomedical Ethics* (Beauchamp and Childress 1994, 2001, 2009).

Linked to his focus on classical virtue ethics, MacIntyre has also played a significant role in bringing about greater recognition of the central role of narrative within ethical understanding and reasoning (MacIntyre 1981). Narrative, as a contending method of bioethics, has common ground with casuistry and other contextualist approaches that seek to better encompass the richness of detail and the ethical particularities of concrete cases. Personal narrative plays a central role in structuring conscious experience and self-understanding and consequently is an essential force in the ethical experience of individuals. Thus an understanding of the narratives, both of patients, clinicians, and of the institutions within which they interact is instructive to the manner in which ethical decisions are made and the impact of particular clinical decisions on the individual's life experience. In addition, narrative understanding plays a vital role in eliciting empathy and sympathy with a person's circumstance. However, as applied to the role of established or paradigm cases in the method of casuistry, a particular narrative account cannot hold normative authority just in the telling. There remains a challenge to distinguish the good and right path that extends a personal narrative into the future (Pellegrino 2000: 664). In traditional society, the normative quality of narrative is drawn from the individual's embrace of the internal goods of customary practices and social roles (MacIntyre 1981: 181-203). However, the normative authority of the internalised goods of customary practice and of social roles no longer possesses the same clear moral force in post-traditional, pluralist and individualist society (MacIntyre 1983: 226-243).

2.4.5 The challenge to principlism from feminist bioethics

Feminist writers have also provided an important critique of the prevailing influence of principlism in bioethics. Initially feminist concern in bioethics focused particularly on reproductive health issues. However, this soon expanded to consideration of all major dimensions of healthcare treatment and policy. Empirical work has informed an influential critique of the often unethical ways in which women have frequently been treated as patients and research subjects in medicine and the biomedical research sciences. This work has contributed to important challenges to the standard focus of bioethics on the abstracted and genderless patient. By showing that gender is a pivotal category for analysis, empirically-oriented feminist studies in bioethics have contributed to wider criticism of the tendency to excessive abstraction in bioethics and of the manner in which the context and individual characteristics of patients were initially largely ignored by the prevailing principlist paradigm of bioethics (Wolf 1994: 395-406).

In addition to the contribution of empirically-oriented work, feminist theory has also turned to wider questions related to healthcare policy and reform (Wolf 1994: 405-406). Susan Wolf notes that there are a number of very different types of theoretical approaches pursued by feminists. However, she notes three important themes emerging from this work:

> The first is that sexism in medicine and science is an ethical problem. This means that the workings of gender are not only appropriate but also inescapable problems for bioethicists to engage. The second claim is that bioethical analysis requires attention to power in biomedical settings: who has it, how it works, and how to fix the current inequities. The third claim is that analysis of power and morality cannot proceed without careful attention to context and difference. Thus we must ask how the problem at hand manifests differently for a woman, for a Latina, for a Latina who is without health insurance, and for this particular Latina by her own account. . . There is no such thing as a woman without race or ethnicity and without resource limitations (or strengths).
>
> (Wolf 1994: 407)

Feminist contributors to the methodology debates in bioethics have of course been critical of the standard principlist paradigm. For example, Susan Sherwin has attacked the rule-oriented and disciplined approach of principlism. She claims that it is a problematic example of rigid "masculinised" thinking that fails to acknowledge the extent to which personal human sympathies will be, and should be, involved in making ethical judgments. She argues that rather than adopting an inauthentic focus on principles and rules, alternative procedures should be developed that aim to facilitate the most satisfactory outcomes possible for all affected parties. Thus instead of attempting to apply law-like regulatory principles and rules in a masculine attempt to exert control over what must always be unruly situations involving pain and loss, the emphasis should be on achieving cooperative interactions and decision-making that is as sensitive and humane as the situation can allow (Sherwin 1992: 76-95; 1999: 198-217).

Sherwin's feminist critique of principlism with its questioning of the role of abstracting and impartial moral judgement models has been strongly rejected by some authors in bioethics as too anarchic or unrealistic and irrelevant to most substantive issues in bioethics (Moreno 1995: 22). What is certain is that the emphasis of feminist perspectives on the need for better empirical understanding of the experience of patients and the actual behavioural patterns of clinicians has helped to strengthen a wider movement calling for a more empirically informed bioethics (Hoffmaster and Hooker 2009; Wolf 1994). The emphasis of Sherwin and other feminist theorists on collaborative and humane process within healthcare ethics also has a degree of overlap with the concerns of the so-called clinical pragmatists and with the wider issues associated with the nature and legitimacy of ethical consensus considered later in this chapter. The feminist critique of bioethics, with its emphasis on the need for empirical work, concern with the embodied and gendered individual rather than the abstract and generalised patient, and also its challenge to the dominant paradigm of principlism, has much overlap with the more broad sweeping social science critique of "philosophical bioethics".

2.4.6 The social science critique of "philosophical bioethics"

The social science critique of bioethics, as just noted, has paralleled and significantly overlapped with the feminist critique (Twine 2005: 287). And like the feminist critique, the central role that idealised reason and abstract moral principle has played in a bioethics dominated by philosophy and law has been challenged. Social scientists do not take for granted the standard presumption of moral philosophy widely assumed in bioethics that "moral norms are binding or prescriptive solely in virtue of their rational justification". Hedgecoe uses the term "philosophical bioethics" in contrast to the "critical bioethics" which he and other social scientists advocate. He also refers to philosophical bioethics to emphasise that the critique of bioethics is a critique primarily directed at the features of the field that result from the strong influence of moral philosophy in the early development of the discipline (Hedgecoe 2004: 122).While not rejecting the relevance of moral theory and principle outright, they are also interested in a much wider range of social and institutional factors influencing normativity (Hedgecoe 2004: 124). Social scientists have also criticised the prevailing presumption of philosophical bioethics that "the individual is the proper measure of all things ethical . . . and that there is a single correct solution for each ethical problem, which is largely independent of person, place or time" (Hedgecoe 2004: 125).

Social scientists also criticise the lack of attention given by ethicists to the socio-economic and socio-political context within which ethical issues arise and decisions are made, which has been linked to the exclusive focus of philosophical bioethics on the individual, (Twine 2005: 287).

Further, it is argued that the applied ethics model has required the assumption that social reality matches the philosopher's preferred theoretical categories. It has thus often been assumed without the benefit of seeking empirical evidence that the moral phenomenon that the philosopher describes in his

or her theorising, such as the doctor-patient relationship, represents all such relationships between doctors and their patients in all settings (Arras 2002: 43-44). By failing to become sufficiently informed about social reality philosophical bioethics is said to lack the tools to resolve real substantive moral problems which are not in fact adequately captured by the philosopher's theoretical abstractions (Hedgecoe 2004: 130).

It may be argued by the (philosophical) bioethicist firstly, that the applied ethics model has been repealed with the turn towards casuistry and other bottom-up and contextualist methods including narrative ethics and pragmatism. Such alternatives have indeed arisen to challenge the hegemony of principlism, but to date they represent only minority alternatives while the mainstream approach continues to be shaped by the abstractions and formalism of principlism (Hedgecoe 2004: 123). It may also be stated that there has been a significant move towards incorporating empirical studies within bioethics (Arras 2002: 44-45). There are now even some ethicists who describe their work as "empirical bioethics" (See for example Hoffmaster and Hooker 2009; Ives and Draper 2009; Leget, Borry, and De Vries 2009). While this shift is welcomed by social scientists, their critique will not be answered simply by bioethicists conducting empirical research within the clinic. As sociologist Erica Haimes has noted, social scientists do not wish to play "handmaiden" to bioethics, providing the descriptive facts regarding moral issues for the bioethicist to perform the critical normative evaluations (Haimes 2002: 89).

In calling for the development of a "critical bioethics", social scientists have in mind a great deal more than supporting an empirically better informed philosophical bioethics. As Haimes argues, social scientists have much to contribute to bioethics in terms of insightful theoretical perspectives regarding social reality and not merely as empirical data collectors. They therefore offer social science theory to help bioethicists to become more critically informed about the socio-economic and socio-political context in which they work. The critical bioethics that many social scientists prefer includes a call for bioethics to become more reflexive. That is to better take into account the influence of social circumstances and professional training on the manner in which ethical issues are defined (or fail to be defined) and addressed as ethical issues[19]. Twine argues that without a sufficiently empirically informed and reflexive self-understanding as a discipline, philosophical bioethics has rightly been open to charges of uncritical complicity with unexamined notions of rationality and scientific progress (Twine 2005: 291).

The development of so-called clinical pragmatism and other approaches to bioethics that draw openly on the legacy of American pragmatism represents a significant alternative to the prevailing

[19] From a European perspective it seems surprising that U.S.A. bioethics has had so much to say about protecting the personal autonomy of the individual receiving health care, but has been largely silent regarding what seems to be the massively pressing ethical question of the lack of access to health care services for up to 40 million citizens (Hedgecoe 2004: 126).

principlism of bioethics. Dewey's pragmatism in particular emphasised social experimentation and social learning and thus provides a philosophical framework which may be more open to the need for the incorporation of social science perspectives (Arras 2002: 43-45). Significantly, pragmatists have also tended to place greater importance on the processes by which ethical decision-making is undertaken than has been the case with principlism. They emphasise collaborative process rather than the moral reasoning of the individual moral expert. I will now consider approaches to bioethics informed by pragmatism, keeping in mind also that it is the so-called environmental pragmatists such as Light, Minteer and Norton who have made the strongest call for a change to a more practically relevant environmental ethics. As will become apparent, approaches to bioethics that draw upon American pragmatism provide the most useful comparative material with which to evaluate these claims and proposals by environmental pragmatists.

2.4.7 Clinical pragmatism and the role of "ethical consensus" in bioethics

I have delayed consideration of the significance of pragmatism for bioethics methodology and the pursuit of 'ethical consensus' until this point, not because these developments are least significant, or that they are entirely the most recent contributions to the "methodology wars" of bioethics. To the contrary, I consider that the pragmatic "turn" and interest in ethical consensus are of the utmost significance to bioethics, just as is a similar pragmatic "turn" in environmental ethics advocated by Norton and others. The influence of pragmatism on bioethics in the U.S.A. may seem only quite recent given that it was only in the mid 1990s that "clinical pragmatism" was advanced as yet another contending methodology of bioethics. But, as John Arras has argued, from its beginnings, American bioethics has been significantly shaped by the cultural legacy of America's home-grown philosophy, pragmatism[20]. Thus it is not so much the influence of pragmatism on bioethics which represents a novel development but rather the more recent overt identification of approaches within bioethics as being "pragmatisms" (Arras 2002: 29)[21].

Clinical pragmatism is a relatively recent and quite specific contending methodology aiming to reform and to some extent incorporate the existing influential contributions to bioethics made by principlism and casuistry. Joseph Fins, Matthew Bacchetta and Franklin Miller have collaborated to promote their understanding of the implications of Dewey's pragmatism for ethical practice at the

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[20] For an example very much in support of the observations of Arras on the pervasive influence of pragmatism, see Jonsen's comments regarding the "instinctive" use of the methods of Dewey and James by the National Commission cited later in this section (Jonsen 1998 115-116)

[21] Arras and others have therefore argued that bioethics methodology is already significantly influenced by pragmatism (Arras 2001, 2002; Moreno 1995, 1999; Wolf 1994). Arras has also highlighted the parallel between so-called "free-standing pragmatism" in legal studies and related developments in bioethics. He contrasts "free-standing" pragmatism as a broadly pragmatic approach to both law and bioethics with "canon-dependent" pragmatism, which includes approaches that make specific reference to the work of the classical American pragmatists or neo-pragmatists such as Rorty (Arras 2001).

clinical level. Pursuing a theme, associated with pragmatism at all levels of bioethical inquiry, they argue that clinicians should pay greater attention to collaborative, interpersonal and dialogic processes of moral problem solving. They recommend clinicians bring participatory democracy to the clinic by actively seeking collaborative contributions from all the people closely and appropriately concerned with cases that are, or might potentially become, ethically contentious.

Informed by Dewey's theory of participatory democracy or "democracy as a way of life", the clinical pragmatists believe that inclusive process is essential to the making of legitimate ethical decisions in clinical practice (Arras 2002: -57-57). Miller et al. thus argue for greater attention to the collaborative processes of ethical decision-making in contrast with what they see as an overemphasis purely on the role of individual moral judgment in bioethics (Miller, Fins, and Bacchetta 1996: 46-47). They attribute the assumption of this individual judgment model to all the most influential approaches to bioethics, including notably principlism and casuistry, approaches that were initially argued to be diametrically opposed. Under this established model, the ethical challenge is to determine the right answer for a given moral problem. The bioethicist or ethically sensitive clinician considers the various relevant ethical principles and/or paradigmatic cases in order to arrive at the 'right answer' for the particular case. The process of ethical decision-making is thus portrayed as though it might be carried out by a single individual in the privacy of their own study, perhaps with the aid of the proverbial "armchair". While Miller et al. accept the importance of critical moral reflection they nevertheless seek to highlight the importance of the *process* dimensions essential to the solution of most bioethical quandaries (Miller, Fins, and Bacchetta 1996: 46-47).

Miller et al. note that most cases in the clinical setting do not involve a single isolated thinker or moral judge who presides over the case, but rather varying combinations of concerned parties, including of course the patient, senior clinicians, junior clinicians and other members of the medical team including those from other health professions, the patient's family, as well as in many cases in the U.S.A., hospital administrators and lawyers concerned with the financial and legal implications of the case. They note that all these parties must work together to some degree through a shared process of discussion, negotiation, compromise and consensus (Miller, Fins, and Bacchetta 1996: 47-50).

I believe the clinical pragmatists' focus on collective and dialogic process may be the most important if problematic contribution of pragmatism to bioethics. That is both because it offers the prospect of improvements in ethical practice and, as will be discussed, because it may also fail to identify and prevent morally abhorrent determinations. The contribution of pragmatism to bioethics thus raises important theoretical as well as practical questions.

Fins et al. claim that many seemingly intractable moral conflicts in the clinical setting result from failings in communication amongst those centrally involved in a case and are due to a lack of mutual understanding of expectations and of personal and institutional narratives and goals. They say that:

> The goal of clinical pragmatism is therefore to reach consensus on good outcomes to cases posing moral problems, by employing a thorough process of inquiry, discussion, negotiation, and reflective evaluation.
>
> (Fins, Bacchetta, and Miller 1999: 30)

To this end, Fins et al. advocate collaborative decision-making processes be followed for "morally difficult cases". They recommend that these processes should involve all affected parties, including the patient or their advocate/s. Clinicians are urged to inquire into the ethical dimension of a case and facilitate discussion of both the medical facts and the moral concerns of the affected parties, concurrent with the consideration of possible treatment courses. They also argue that establishing the moral beliefs and concerns of patients and care-givers should play an equally significant role in the clinical decision-making process along with the application of medical knowledge and technology. Asserting the clinically most strongly indicated action without due consultation and negotiation regarding moral commitments is then seen as a serious failing in the overall professional responsibility of clinicians (Fins, Bacchetta, and Miller 1999: 31-32). Clinical pragmatism aims to provide clinicians ". . . with a workable method of ethical inquiry that bridges the gap between ethical theory and practice by focusing attention on the interpersonal process of moral problem solving" (Fins, Bacchetta, and Miller 1999: 44). Commendably, clinical pragmatism seeks to provide a framework for the potential ethical reform of clinical practice and not merely a model for occasional, detached ethical reflection about particularly contentious cases.

It is the central role that clinical pragmatism attributes to "ethical consensus" which immediately evokes philosophical concerns regarding the dangers of morally abhorrent compromise under circumstances in which power and information imbalance commonly prevail and in the absence of any other authoritative normative guidance. The self-conscious adoption of ethical consensus as the overarching goal of clinical ethics deliberations simply makes explicit what Jonathan Moreno notes has become an increasingly important but only implicit role for consensus in many spheres of contemporary, liberal individualist society (Moreno 1995: 3-4). Moreno notes that despite its importance within bioethics, the role of ethical consensus has until recently been largely unappreciated and unexamined, perhaps because the value of consensus within pluralist societies has become a virtually unquestioned given (Moreno 1995: 11).

Moreno also notes that many of academic moral philosophers contributing to bioethics have little interest in consensus processes for quite understandable reasons. Those working primarily within the academy and mainly contributing to the field through their teaching of students about the central

issues of bioethics, normally use abstract case examples[22] (Moreno 1995: 6-7). Such primarily academic moral philosophers largely use Socratic methods for pedagogical purposes (For an account of the use of Socratic pedagogy see Boghossian 2003). They are most concerned to help their students clarify and elaborate theoretical conceptions in the hope of broadening minds and breaking down prejudices. Thus reasoned disagreement is regarded as an indicator of the healthy development of more sophisticated thought processes. If such academics have a "sufficiently Socratic view of the nature of philosophy in human affairs, [consensus process skills] are even anathema to the moral philosopher's tasks" (Moreno 1995: 147-149).

In contrast, clinical bioethicists who regularly contribute to "clinical case conferences" or so-called ethical consultations within healthcare institutions need to help define actionable ethical solutions for particular real cases. This practical requirement usually leads to ethical consensus becoming the aim of consultations and deliberation, rather than elaborating and better defending contradictory theoretical positions. Thus the practical demands of making constructive contributions to medical practice push the clinical bioethicist towards the goal of facilitating ethical consensus (Moreno 1995: 148).

Moreno's account of the different training and objectives of the academic moral philosopher teaching bioethics in contrast to the bioethicist working in the clinical environment provides an insightful sociological explanation of why ethical consensus is generally not the subject of theoretical concern for the former. At the same time, clinical bioethicists assuming the centrality and validity of ethical consensus in order to function professionally within the clinical setting could also be excused for being less concerned with the theoretical problems associated with consensus, so much as the practical tasks of facilitating and justifying ethical consensus regarding particular cases.

Despite the enthusiasm expressed by the clinical pragmatists, Moreno and others (See Martin 1999) on the prospects of ethical consensus providing a unifying goal for bioethics, there is good reason for circumspection. Aulisio and Arnold for example, urge caution regarding the role of consensus within clinical ethics (Aulisio and Arnold 1999: 330). In particular they note that the concept of ethical consensus requires considerable further development in order to be convincing as a goal with any independent moral value. They note that there are several different forms of consensus that can be achieved. They suggest that at least under some circumstances the pursuit of consensus can be at best Quixotic and, at worst, open to the critique that it amounts to an objectionable form of moral compromise (Aulisio and Arnold 1999: 329).

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[22] Moreno also notes of course that many individuals move between roles in the academy and occasional engagements in ethics committees and policy commissions where consensus processes have prevailed (Moreno 1995: 6-7).

Whether or not clinical pragmatism has sufficient rational or procedural resources to ensure that "ethical consensus" is indeed ethical is an important question for bioethics given the central role consensus has assumed within the field[23]. The clinical pragmatism of Fins et al. embraces Dewey's argument that moral principles should be regarded as working hypotheses to be tested for their utility through experience. Moral principles according to Dewey should not be regarded as universal and normatively binding. Rather, Dewey promoted an experimental emphasis within ethical practice modelled by analogy with scientific method. There is merit in this way of conceiving ethical reasoning and practice which has been captured to some degree in the coherentism of Daniels and others. But as Lynn Jansen argues in her critique of clinical pragmatism, there are also risks for an experimental conception in the absence of clearly defined limits on who is to experiment with traditional moral norms and under what circumstances. She notes that fixed moral principles have, at least in theory, served a vital role in traditional ethics by setting authoritative normative limits on individual action (Jansen 1998: 32-34). And such authoritative limits are surely important given the momentous decisions that often must be made rapidly in healthcare (Arras 2002: 49).

Fins et al. are aware of concerns that they are ". . . promoting expediency at the expense of principle . . ." but claim this is merely ". . . a caricature of pragmatic philosophy and method" (Fins, Bacchetta, and Miller 1999: 30). They accept there is now no legitimate traditional basis on which to measure the "success" of ethical judgment. Instead, they advance procedural standards aimed at ensuring the legitimacy of the consensus process while promoting consensus itself as the overarching goal of ethical deliberation in the clinic. They suggest that an ethical consensus must meet procedural standards requiring a "thorough process of inquiry, discussion, negotiation, and reflective evaluation" (Fins, Bacchetta, and Miller 1999: 30). Thus a great deal of faith is placed in "good process" in the absence of shared conceptions of what the good is, in terms of the traditional meaning this word has held for ethics.

Arras has commented that the clinical pragmatists are significantly at odds with their principal intellectual mentor, Dewey in their advocacy of only a "thin" and purely procedural model of consensus seeking. In contrast to their proceduralism in the absence of any generally shared sense of the ethical goods such consensus might be seeking, he notes that "At the foundations of Dewey's ethics, . . . lie the metaphysical propositions that humans are naturally social creatures and that the good for individuals is a social good" (Arras 2002: 51). Dewey's frankly metaphysical and teleological view of the basis for human flourishing is now out of step with current trends within liberal, analytic moral philosophy. In Rawlsian terms, Dewey's political thought, being grounded in a substantive theory of human nature constitutes a "comprehensive moral view" of a kind that cannot be

[23] And as will be discussed shortly, consensus-making processes have not only been essential to clinical bioethics but also to regulatory and policy bioethics.

imposed by the state and its agents including healthcare professionals on the free and equal citizens of the liberal polity (Arras 2002: 51-52). There is thus a significant question for pragmatists in bioethics regarding whether, stripped of the substantive ethical framework in which Dewey's political philosophy functioned, the "thin" procedural focus they now advocate has lost the very qualities which might render it "ethical" in some stronger sense rather than simply a *modus vivendi*.

The important but contentious role now assumed for ethical consensus in bioethics has certainly not been limited to the level of clinical ethics to which Fins et al. offer their model of clinical pragmatism. Consensus-seeking processes have played a central role at all levels of bioethics, including critically at the level of regulatory and policy bioethics. In fact, consensus-seeking processes at the level of public policy contributed decisively to the very makings of bioethics, although as Moreno emphasises, the central role for ethical consensus in bioethics was largely unnoticed and unexamined until the 1990s (Moreno 1995: 6). Consensus process was essential to the workings of the first National Commission on bioethics in the U.S. and as already described, this commission played a critical role in the rise of bioethics.

Jonsen, who was a member of this commission as well as the later President's Commission, does not explicitly discuss the centrality of consensus processes in his historical account of the work of the Commission. There is for example no index entry for consensus or ethical consensus in his important book, *The Birth of Bioethics*. However, it is clear from his insider's account of the operation of the National Commission just how important an unexamined consensus on the nature and role of consensus processes was, not only for the work of this commission, but also through the National Commission's influence on later developments across the whole field of bioethics (Jonsen 1998). Jonsen confides:

> The National Commission broke new ground. It was the first federal body to be charged specifically to "do ethics". It had no precedents to guide it. None of its members had a clear idea how, in a pluralistic society and within the bureaucratic maze, one might "determine the ethical principles underlying research with human subjects" . . . The commissioners began to do public ethics almost by an American instinct that was inherited from James and Dewey: try to get the facts as fully as possible, talk with well-informed persons, invite all interested persons to have their say, argue in public about what you have learned, and then try to find where each member agrees and disagrees. Formal ethical theories and principles were not conspicuous, although sharp thinking by educated ethicists, working their way through the arguments, was indispensable. The President's Commission benefited from the pattern set by the National Commission and followed it closely.
>
> (Jonsen 1998: 115-116)

The Belmont Report, the most influential product of the National Commission resulted from the thorough and systematic application of this kind of consensus-seeking process to define general moral principles to guide research on human subjects. The resulting three principles became socially and politically validated through this process and then took on a much wider role in providing an ethical

structure for all deliberations in the new field of bioethics. Thus consensus-building process in the absence of fundamental theoretical agreement on grounds for a common secular morality was essential to the very emergence of the contemporary field of bioethics. And the model of scholarly inquiry combined with processes of consensus-seeking provided by the National Commission has also been widely followed by other expert ethics forums and commissions and in the ethics committees linked with particular healthcare and research institutions (Moreno 1995: 75-78).

Significantly, Moreno also notes that this process very much reversed commonly idealised notions of the relationship between academic and policy-making worlds, whereby the theorising of the former comes to shape the policy-making of the latter. In this critical instance ". . . a government commission provided the occasion for the formulation of consensus ethical principles that became the basis for much of the theoretical foundation of an academic field" (Moreno 1995: 76-77). In other words, bioethics as a field is very much the product of largely unacknowledged and unexamined consensus processes. This is certainly an odd circumstance for a field which has otherwise been so much the province of analytic moral philosophy which is itself hardly a domain where consensus-making usually plays a decisive role.

Moreno has done much to clarify the sociological and psychological implications for the role of consensus in bioethics in the first book length treatment of this subject. However, his enthusiasm for the role of consensus, particularly at the level of regulatory and policy bioethics is highly contentious as will be noted shortly. Moreno describes a range of ethical questions in healthcare where he believes the institution of bioethics has achieved a sufficient degree of societal consensus to over-rule public ethical disagreement otherwise blocking the making of public policy affecting all citizens. Among the examples he mentions are commitments such as: (1) expectations that competent adult patients be informed of their diagnosis (overruling previous medical paternalist presumptions); (2) that parents' religious beliefs should not be allowed to prevent life saving treatment for their children; (3) that suffering should be alleviated even at the risk of hastening the dying process; (4) that neurological criteria are acceptable for determination of death; and several others (Moreno 1995: 19). However, he notes that in contrast to a considerable number of such specific issues within clinical and research ethics in which a consensus has been achieved at least within the bioethical community, he acknowledges that " . . . it is more difficult to identify substantive propositions about which modern bioethics has reached consensus concerning healthcare policy" (Moreno 1995: 31). He notes in particular the issue of equity of access to healthcare, which in the United States continues to be caught in political impasse. He also mentions the continuing fundamental ethical and political disagreement regarding abortion. Revealingly, Moreno remarks that:

> . . . debate over access to healthcare requires active engagement of many sectors of society and of all those groups that participate in financing healthcare delivery. By contrast, most of the bioethical issues about which consensus has been reached have been amenable to deliberation and negotiation within a far smaller group of experts and *opinion leaders*, usually followed by acquiescence on the part of the general public.
>
> (Moreno 1995: 32, my emphasis)

Moreno, like many bioethicists, is comfortable with the role that small groups of experts and "opinion leaders" have played within the realm of policy bioethics in driving consensus on substantive ethical matters with only the passive acquiescence of the general public. He also acknowledges that the efforts of bioethicists at consensus-making have generally failed on matters of healthcare policy requiring genuine political consent from all concerned parties, and most significantly, the consent of those with most influence on the funding of healthcare. The most notable and embarrassing example of such failure for U.S.A. bioethicists has been their inability to significantly influence the development of a societal consensus to reform the healthcare system to provide universal access to healthcare (Kuczewski 2002: 27-28).

Other prominent bioethicists do not share in Moreno's liberal cosmopolitanism. For example the more conservative communitarian Griffin Trotter and the libertarian Engelhardt have raised serious concerns about the role of ethical consensus in bioethics (Engelhardt 2002a; Trotter 2002a). Trotter for example attacks what he sees as the over-extended and politically illegitimate role of the prevailing model of "weak consensus"[24] in policy bioethics promoted by Moreno (Trotter 2002a). This debate on the role of bioethics and bioethicists in forging consensus in liberal democratic society on issues for which there remains continuing fundamental ethical disagreement is important. However, I do not have space to expand consideration of this debate in this dissertation.

The role of consensus is therefore both vital and contentious within both clinical and policy bioethics. What is of considerable significance for this study is the increased importance that has been given to *collaborative processes* in practical ethical deliberation in bioethics while at the same time the philosophical models for sophisticated processes of *individual moral judgment* have been largely confined to the philosophy classroom. Under these circumstances there is considerable merit in Moreno's attempt to better understand the nature of such collective processes both in terms of how they may be grounded theoretically in liberal political philosophy and practically through the research of political scientists and social scientists.

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[24] Trotter helpfully contrasts "strong consensus" and "weak consensus" regarding moral issues. A strong consensus is a position on a moral issue accepted across wider society without coercion. A weak consensus obtains when the following three conditions apply: (1) a strong consensus must exist within an authorised subgroup about how a wider target group should behave; (2) there must be a lack of equivalent strong consensus in the target group; and (3) the target group must acquiesce (behaviourally but not as a matter of shared opinion) to the consensus of the authorised group. (Trotter 2002: 39).

2.5 Chapter conclusion

This chapter performs a vital strategic role in this study, providing the necessary background understanding that allows the field of bioethics to serve as the source domain in the analogical evaluations of Chapters 3 – 5. Two critical themes are considered in this chapter to that end. Firstly, I have provided an overview of the key historical and cultural factors instrumental to moral philosophy's influential engaging of the concerns of biomedical ethics and healthcare policy. This work serves to clarify *how* it came about that moral philosophy came to be such a central contributor to the new field which rapidly became the new source of a secular moral authority in the world of biomedicine and biomedical research.

The second investigation reviews methodological developments in bioethics from which carefully considered parallels may be drawn to inform the methodological debates of environmental ethics. I examined the way in which theoretical and methodological commitments long presumed by academic moral philosophy have been tested by direct and relevant practical experience in bioethics at both policy and clinical levels. The resulting lessons gained about *why* grand moral theory and universal principle struggled in this direct relationship with ethical practice in bioethics are explored along with the diversity of methodological responses arising from those lessons.

A confluence of historical circumstance and cultural developments after World War II led to the rapid undermining of the traditional bases for moral authority in the provision of healthcare. The moral authority and self-regulating capacity of the medical profession within its professional domain and the moral authority of religious moral "experts" across wider society and more specifically also in the domain of public healthcare policy and ethics were steadily undermined from the 1950s to 1970s. This erosion of traditional sources of moral authority regarding medical ethics coincided with and was further challenged by the important society-wide ethical questions and patient-specific ethical quandaries arising from rapid advances in biomedical technologies.

An increasingly secular, post-traditional and liberal cosmopolitan society required a matching common secular morality to provide an authoritative normative framework to guide the practice of healthcare professionals and biomedical researchers. Secular moral philosophers along with others were invited to help fill the 'moral vacuum' that these historical and cultural circumstances had created. However, the politically mandated role of the first National Commission on bioethics to establish ethical principles to regulate the use of human subjects in biomedical research gave moral philosophy a uniquely privileged role. The mid-level moral principles propounded in the *Belmont Report* of the National Commission and also in the biomedical ethics textbook of Beauchamp and

Childress published in the same year, 1979, were instrumental to the socio-political validation of secular moral reason in this practical domain.

Post-Enlightenment moral philosophy had long been committed to establishing the grounds for a common secular morality in only that which reason demands of the rational agent. Thus moral philosophy came to play a critical early role in the rise of a secular discipline of bioethics that sought to uncover through rational analysis and sound rational argument, the set of common moral commitments reasonable members of a secular and liberal society should accept (Engelhardt 2002a: 9).

Prominent early contributors to the emerging discourse of bioethics such as Hare were confident that secular moral philosophy could indeed help medical ethics. But as my discussion of the ensuring methodological controversies and developments portrays and also thoughtful commentators have noted, it may well prove in the end that moral philosophy may come to learn more from this engagement with practice in medicine than medicine may gain from moral philosophy (MacIntyre 1972; Toulmin 1986).

A voluminous and diverse literature of bioethics has been developed. There can be no doubt that a much more comprehensive understanding of both the moral issues of healthcare and bioscience has been achieved. And moral philosophers can certainly lay claim to a significant role in the watershed development of the general, at least outward acceptance of the requirements for informed consent in healthcare (Buchanan 1978). It is another question as to whether moral philosophy has contributed as substantively as first hoped to defining, purely on rational grounds, the basis for wider and more substantial agreement on an authoritative common secular morality. I think it fair to say that the opportunity to make such a contribution has been granted and the results so far obtained are negative. I have noted that the role of analytic moral philosophy in bioethics has increasingly come under serious criticism, not only from within, in terms of the continuing proliferation in the methods of bioethics, but also from without. Strong challenges come particularly from feminist and social science critiques of principlism or of philosophical bioethics.

Engelhardt, an admittedly harsh but well qualified commentator on the role of moral philosophy in bioethics, has provided a suitably colourful summary of the aspirations and disappointments of moral philosophy's experimental contribution to modern biomedicine:

> In bioethics, the journey from the religious orthodoxies of the Middle Ages, through the rationalist hopes of modernity, to the disappointment of post-modernity spanned less than thirty years. One has during this brief period been brought to look for theoretical and rational guidance, and then one is shown how little guidance is in fact available . . . This is not to say that there are not regnant fashions or views regarded as correct, according to some bioethical orthodox consensus. It is just that no particular contentful view can be secured as that which is rational and canonical.
>
> (Engelhardt cited in Jonsen 1998: 345)

The great systematic normative ethical theories of moral philosophy, such as those in the utilitarian and deontological traditions, are now widely accepted to be incapable of providing any decisive and legitimate normative role in practical bioethical decision making[25] (Arras 2001: 74). It is surely true that systematic ethical theory can aid practical ethical reasoning through challenging and extending common sense consideration of moral problems. Moral reasoning is also surely improved or at least rendered more sophisticated through the assistance of many methodological innovations in bioethics such as principlism, casuistry, narrative ethics, virtue ethics and so forth (Dare 1998). However, what is not delivered from any of these contributions is any single, ethically and politically legitimate, rationally compelling method for deriving normatively authoritative judgments regarding particular ethical issues in policy bioethics and cases in clinical bioethics.

Moreno and other pragmatists in bioethics have emphasised the vital role that collaborative processes of consensus-seeking have played at both policy and clinical levels in bioethics. Moreno notes that the essential role of consensus in bioethics has received little attention from either the more theory-oriented bioethics teachers in the academy, nor the practice-focused clinical bioethicist actually pursuing ethical consensus on a daily basis. He provides good psychological and sociological reasons for this omission which must be regarded as serious given the obvious centrality of consensus process to bioethics at both policy and clinical levels.

Clinical pragmatists such as Fins et al. have sought to bring participatory democracy to the clinic through an explicit urging for clinicians to employ collaborative processes that would include all individuals relevantly concerned with a particular ethical case. However, they offer only procedural means to assure the ethical validity of group ethical reasoning processes that overtly seek an ethical consensus. Such democracy in the clinic is attractive insofar as it holds the promise of allowing the clinical team, patient and care-givers to collaborate towards the best possible clinical outcomes. The potential for conflict between professional judgment and the patient and family perceptions within an "informed consent "and "patient rights" model may perhaps be overcome. But as I have emphasised, the role of consensus, both at the clinical levels and at the level of social policy on healthcare is highly

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[25] Notable exceptions to this trend are the contributions to bioethics from Leon Kass, H. Tristram Engelhardt, and Peter Singer. These reflect the author's respective theoretical commitments to Aristotelian teleology, Nozickian libertarianism, and utilitarianism (Arras 2001: 74).

contentious. And there are real risks that ethically pernicious outcomes driven more by power imbalance than good argument may result.

I grant that the role of collaborative and collective processes in determining ethical commitments has been and remains contentious within both policy and clinical bioethics. I conclude nevertheless that the central role that such *group process* has come to assume in practice within bioethics provides a salutary lesson regarding what are fundamentally the political exigencies of real practical ethics. I believe that the experimental engaging of liberal and analytic moral philosophy with medicine places an empirically informed demand on moral philosophy to reconsider the historically almost exclusive focus only on the rational basis of *individual* moral judgment. The theoretical questions concerning collective ethical decision-making processes may be of much greater practical significance.

Environmental pragmatists such as Norton and Light have also been arguing for a greater focus on consensus building processes within the environmental domain rather than persevering with the primary axiological and metaethical focus of environmental ethics (Light 2003a; Norton and Steinemann 2001). The role and the normative legitimacy of such collaborative ethical processes will be taken up again in Chapter 4 where I evaluate the proposal of Minteer and Collins for the new field of "ecological ethics". Before that I must provide a detailed account of the methodology to be employed to support the systematic comparisons between bioethics and environmental ethics I have proposed to conduct in Chapters 4 and 5. I will achieve this in the next chapter by introducing an impressive recent model for the formulation and evaluation of analogical arguments in the sciences and then providing a test application of that model.

Chapter 3
Bartha's model and its trial application to the "top-down" analogy

3.1 Overview

Before beginning the central evaluative tasks of this dissertation in Chapters 4 and 5, the present chapter addresses preliminary definitional and methodological issues. Central to this task is my introduction and discussion of Paul Bartha's theoretical model for formalising and evaluating analogical argument outlined in his recent monograph, *By parallel reason: The construction and evaluation of analogical arguments* (Bartha 2010). In the second part of the chapter I provide a test application of Bartha's model to an analogical argument claiming the relevance of bioethics methodological experience for environmental ethics. The analogical argument that is constructed and evaluated in this chapter concerns the significance of the early demise of the "top-down" applied ethics model in bioethics for contemporary methodological understanding in environmental ethics.

3.2 The vital but chequered role of analogical reason

I acknowledge that my interest in the potential value for the practical mission of environmental ethics of analogical comparisons with the more "successful", or at least more established field of bioethics, requires an unusually heavy reliance on the role of analogical reason in contrast to prevailing practice within the Anglo-American analytic tradition in academic philosophy. Certainly analogical reason has played a significant and often decisive role in human affairs since the beginnings of recorded history. But disconcertingly for the contemporary philosopher making significant use of analogical reason, the historical employment of analogical reasoning has also frequently been associated with the magical and mysterious, including notably the interpretation of dreams and omens. Such mysterious or supposedly 'divine' applications of analogical reason appear frequently in the narratives of the Bible and of the ancient Greeks. Further, analogical reasoning continues to play a central role in the magical thinking of traditional cultures as well as the everyday thought of moderns. This long and distinguished if mysterious pedigree of analogical reason, while intriguing, quite understandably does not provide a suitably reliable model of reasoning to allow it to be the rational mainstay of the modern

philosopher. Analogical reason it might seem, is a feature of non-scientific thought, to be treated with suspicion by the scientifically sophisticated modern mind schooled primarily in the rigours and limits of deductive and inductive logic.

However, despite what might be considered a historically chequered career outside science, since antiquity analogy has nevertheless played an essential role in scientific thought. Indeed, it would seem that analogical reasoning has been absolutely essential to the development of science. Firstly, analogy has been and continues to be a powerful heuristic tool for the formation of new scientific theories. For example, the plausibility of Darwin's famous contribution to the theory of evolution depended greatly on his employment of an analogy between the established role of artificial selection in the development of new varieties of domestic animal and plant species and his postulated mechanism of natural selection. Thus Darwin provides an instructive example of the creative and heuristic use of analogy in the 'evolution of science'.

Analogies have also been put to important predictive use within the sciences. If two physical systems can be described in similar mathematical terms then it may be possible to predict exactly, from known and measurable phenomena in one system unknowns or difficult-to-measure phenomena in the other. For some phenomena, such analogical modelling can provide both powerful and highly efficient means to make predictions about much more complex or expensive systems. An instructive example of such modelling is provided by hydrodynamic analogies. Through such modelling, engineers are able to predict the stress at a point in a twisted metal bar simply by measuring the velocity of fluid in a cylinder and applying mathematical equations of identical form (Bartha 2010: 267).

Analogies in science and mathematics have also served important roles in conceptual unification. For example, Franklin's use of analogies between the 'electric fluid' which could be generated in the laboratory and lightning aided the eventual recognition of one 'substance', electricity. And finally, overlapping these established heuristic, predictive and conceptual unification roles, analogical reason may also play a role in the justification of scientific theory. Analogies have thus been employed in some circumstances to strengthen the plausibility of novel scientific hypotheses. And in fields like archaeology, where the direct testing of scientific hypotheses is not possible, analogical reasoning may provide the strongest possible justification for hypotheses (Bartha 2010: 2).

The utility of analogical reason is thus not in question. However, the often mysterious character and role that it has played in magical thinking means that philosophers, concerned as they rightly have been with reliable reasoning methods and the procedures for securely conveying truth through argumentation, have focused on deductive and probabilistic inductive argument forms. I frankly acknowledge there is good reason for the reader to be circumspect regarding the heavy role placed on analogy in this dissertation. Despite the potential heuristic benefits of my application of analogical

reason, I have also potentially invited difficulties linked to the inherent limitation of analogical argument to at best be indicative of strong plausibility rather than deductive logical necessity. Nevertheless, given that my central hypotheses are dependent on the application of analogical reason, I have attempted to at least make my employment of analogical reason and argument as explicit and self-critical as possible. To this end, I have thus sought to indicate the suggestive benefits analogical argument may reasonably offer, but at the same time to be as careful and honest as I can be in recognising and acknowledging the clear limitations of this approach. As already noted, I have been fortunate in undertaking this task to have been able to draw on the recent excellent and very comprehensive book on the evaluation of analogical reason and argument written by Bartha (Bartha 2010).

Bartha's *By Parallel Reasoning* is the first comprehensive philosophical examination of analogical reasoning and argument published since Mary Hesse's *Models and Analogies in Science* first published over forty years ago (Bartha 2010; Hesse 1963). Bartha aims ambitiously to provide a theory capable of doing more than just improving the description of the logical structure and thus the means of representation of analogical arguments within science and mathematics. He also seeks to defend high level principles for the normative evaluation of such argument. Bartha acknowledges that major advances in understanding the processes of analogical reasoning have been achieved in the process of developing computational models by artificial intelligence and cognitive science researchers over the period since the writing of Hesse's book. And he seeks to draw on the improved descriptive understanding of analogical reasoning made possible through this research so as to incorporate relevant insights into the descriptive elements of his theory.

However, Bartha also argues that there are major limitations in the value of this extensive research programme for his project due to the important differences between the fundamental objectives assumed by artificial intelligence researchers and those to which he is dedicated. Because the artificial intelligence project has been interested in analogical reasoning through a concern to better simulate human analogical reasoning processes, there has generally been little concern with establishing an improved normative theory regarding the legitimate use of analogical argument in science. In fact, Bartha suggests that the success of artificial intelligence research has if anything served to reduce interest regarding normative evaluation. The reason for this is that this research points to the conclusion that much if not all our analogical cognition is being performed by "microprocessors" operating below the level of conscious and abstract reason. High-level logical evaluation drawing on the discipline of the kind of normative principle that Bartha seeks is aptly and metaphorically represented by cliché as "merely the tip of the iceberg" (Bartha 2010: 86). If analogy-making seems best understood as largely involving the sub-conscious perception of patterns and thus properly modelled on lower-level cognitive processes, then it may be argued that the interest of

philosophers of science such as Bartha in high-level cognitive processes for the normative evaluation of such reasoning is quixotic.

Thus enhanced understanding of analogical reasoning in terms of low-level cognitive processes gained through artificial intelligence and other research within the cognitive sciences has encouraged many to adopt what Bartha considers as psychologism regarding the use of analogies in reasoning. That is to reject the possibility of normative evaluation of analogical reason as a mistaken ideal and simply to focus on improving modelling of the evolved reasoning capacities of humans by machines. However, Bartha argues such improved descriptive understanding of analogical reasoning processes does not end the need for a logical and evaluative model of analogical reasoning. To the contrary, he argues that it remains important for artificial intelligence models to be able to justify how any particular program output constitutes a good analogy. Bartha notes that artificial intelligence researchers such Hofstadter and Mitchell, the designers of the impressive Copycat program, do not offer a general theory of what makes a good analogy (Hofstadter and Mitchell 1995). Instead they emphasise the role of standard scientific epistemic ideals such as "elegance" or "simplicity" and "minimal departure from the source domain", all of which the program is designed to execute. Rejecting the sufficiency of this approach, Bartha states:

> Regardless of how an answer is produced, we are entitled to ask for and receive a justification. If we respond to the question, "Why is this a good analogy?" with "It is the output of the Copycat program," or (analogously) "It is just what I came up with," we confuse causes with justifications.
>
> (Bartha 2010: 87)

Bartha therefore argues that despite the considerable advances in artificial intelligence research and cognitive science, enhancing the normative evaluation of analogical reasoning and argument remains an important challenge. In order to take up this task, he returns to the philosophical literature on this subject. In brief he concludes that there has been little significant advance in the sophistication of our philosophical understanding of the role of analogy in reasoning beyond that outlined by Aristotle and thereafter up until the work of Hesse in the 1960s. After summarising the conventional rather *ad hoc* and non-systematic commonsense guidelines for the evaluation of analogical argument, Bartha then presents Hesse's work as the definitive contemporary point of departure for his own theoretical developments.

Bartha's thesis is developed with special reference to the use made of analogical reasoning in the sciences and mathematics. But while he develops the idealisations of his theory within these restricted and specialised domains, he does this with the aim in mind of providing both a general descriptive model and an overarching set of evaluative principles which he argues should have a degree of relevance to all employments of analogical argument. Indeed, in his final chapter he extends his discussion to a more general consideration of the relevance of this theory to other

domains, including briefly philosophy itself (Bartha 2010: 320-326). However, his only direct focus on the role that analogical reasoning plays within philosophical argument is restricted to its heavy contemporary deployment in thought experiments (Bartha 2010: 320-326) and thus does not appear to be of direct relevance to my focus on inter-field comparison[1].

I acknowledge that the primary focus of Bartha's project is well removed from the immediate concerns of this study. Nevertheless, I believe I share a common commitment with Bartha in recognising both the value and the limitations of analogical argument and in seeking to maximally improve the quality of our inevitable usage of this fundamental human cognitive capacity. Thus I think that my selective employment of Bartha's theory is consistent with his objective of achieving the greatest possible normative discipline in the use of analogical reasoning within any application, including everyday reasoning and in this case, for the rather specialised and uncommon purpose of comparison across two fields of applied ethics.

I believe that Bartha's broader normative ambitions should be of considerable interest particularly for philosophers of science. However, my engagement with his work in the present dissertation is restricted to the employment of his descriptive formalisation and general evaluative principles for the purpose of improving the formulation and evaluation of a number of provisional analogical arguments. I have found his theory of considerable benefit for the purposes of better explicating and evaluating my analogical reasoning. However, I will only draw on his insights insofar as I believe these relevant to this particular project. Further discussion and analysis of his normative framework is outside the scope of the present work. My primary concern herein has been with the construction of a series of interrelated substantive analogical arguments and not with the more general academic project which Bartha is pursuing. However, I acknowledge that this is an important project worthy of wider research attention and to which Bartha has already made a very significant contribution to which I am indebted.

In the next section I will provide a brief outline of the theoretical framework that Bartha has developed. His framework includes a specialised notation and a simple tabular schema which must be briefly explained and demonstrated. To this end I will first discuss some of the simple and quite stylised examples of analogical argument provided by Bartha. I will also provide a brief account of his evaluative criteria insofar as they are relevant to this study.

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[1] However, I later argue in Chapters 5 and 6 that Norton's theoretical sustainability model functions as a kind of extended thought experiment. My evaluation of his model therefore combines inter-field comparison and the normative evaluation of a thought experiment.

3.3 Bartha's model for constructing and evaluating analogical argument

It is useful to start with a clear definition of analogy, analogical reason and analogical argument. I draw here directly on Bartha's definitions:

> An analogy is a comparison between two objects, or systems of objects, that highlights respects in which they are thought to be similar. Analogical reasoning is any type of thinking that relies upon analogy. An analogical argument is an explicit representation of analogical reasoning that cites accepted similarities between two systems in support of the conclusion that some further similarity exists.
>
> (Bartha 2010: 1)

Analogical argument is therefore the explicit reconstruction of acts of analogical reasoning. And as Bartha notes, such acts of analogical reasoning may themselves be more or less opaque, not only for those who may act as "critic" to that reasoning, but also for the "enthusiastic advocate" of such reasoning themselves. Bartha makes use of a rhetorical device to illustrate his epistemic commitment to the public justification of analogical reasoning. That device is:

> . . . to imagine that the analogical reasoning is presented by an enthusiastic advocate to a polite but moderately skeptical interlocutor, the critic. The reasoning succeeds if it survives the critic's scrutiny. The framework of advocate and critic helps to set a standard of justification that can be varied to reflect the demands of different settings. It also provides a vivid way to appreciate the requirement of publicity.
>
> (Bartha 2010: 5, my emphasis)

Bartha argues that expressing analogical reasoning in more precise argument form may lead to significant benefits, not just insofar as others may be more effectively persuaded, but also to help the advocate of an analogical argument to check his or her own analogical reasoning and thus to become their own critic. It is the prospect of such improved critical evaluation and refinement of my use of analogical argument that is the principle reason for my focus on Bartha's work.

The general schema for representing individual analogical arguments employed by Bartha is as follows:

(1) S is similar to T in certain (known) respects

(2) S has some further feature Q.

(3) Therefore, T has the feature Q, or some feature Q* similar to Q

The lines (1) and (2) are premises. Line (3) is the conclusion of the analogical argument which falls under a broadly inductive form since the conclusion is not assured through the truth of the premises. That is, this argument does not possess deductive validity. S and T refer respectively to the "source"

and "target" domains respectively. The domain of the analogical argument is the set of objects, properties, relations, and functions together with the set of accepted statements regarding those objects, properties, relations and functions (Bartha 2010: 13).

Bartha later introduces an improvement to this initial simple representation of analogical argument. This representation is based on an approach introduced by Mary Hesse which he refers to as the tabular representation of an analogical argument (Hesse 1963). This involves listing corresponding objects, properties, relations and propositions side-by-side in a table with two columns, with the source on the left and target on the right. As a simplified example he presents Huygens' analogical argument for the existence of an ethereal medium through which light travels. Very briefly, this argument is that because there is a material medium for sound waves, and since light has similar properties to sound, then light must also have some form of material medium through which it is propagated (Bartha 2010: 13-14). The argument is thus represented as:

Table 3.1: An example of Hesse's tabular representation of an analogical argument

SOUND (S)	LIGHT (T)
Known similarities:	
Echoes	Reflection
Bending around corners	Diffraction through slits
Volume	Brightness
Pitch	Colour
Inferred similarity:	
Material medium (air or water)	-» material medium (ether)

(Bartha 2010: 14)

Bartha draws on some useful terminology also introduced by Hesse linked to the tabular format above.

> The *horizontal* relations in an analogy are the relations of similarity (and difference) in the mappings between the source and target domains, while *vertical* relations are those between the objects, relations, and properties in each domain. The correspondence between echoes and reflection is a horizontal relation; the relation between echoes and bending around corners (if any such relation exists) is vertical.
>
> (Bartha 2010: 14)

The horizontal relations within the reconstruction of an analogical argument are those most obvious and familiar within informal analogical reasoning and argument. However, the vertical relations within an object domain may play a crucial role in determining the plausibility of the hypothetical conclusion of an analogical argument. The vertical and horizontal relations distinction therefore assumes considerable importance to Bartha's theory as he attempts to define an improved basis for the critical evaluation of analogical argument[2].

Bartha then augments Hesse's tabular representation by the addition of a further block of horizontal comparisons that are employed to represent other accepted (or known) differences between source and target domains. He asserts, prior to later justification, that "Although it is common for people to suppress points of difference between domains being compared, I shall urge that some of them ought to be made explicit" (Bartha 2010: 14).

This augmented formulation is then represented here directly from Bartha as follows:

> ***Positive analogy***. Let *P* stand for a list of accepted propositions $P_1, \ldots, P_n$ about the source domain *S* such that the corresponding propositions $P_1^*, \ldots, P^*_n$, abbreviated as *P**, are accepted as holding for the target domain *T*. *P* and *P**, represent accepted (or known) similarities. We refer to *P* as the *positive analogy*.
>
> ***Negative analogy.*** Let *A* stand for a list of propositions $A_1, \ldots, A_r$ accepted as holding in *S*, and *B** for a list $B_1^*, \ldots, B^*_s$, of propositions holding in *T*. Suppose the analogous propositions $A^* = A_1^*, \ldots, A_r^*$ fail to hold in T, and similarly the propositions $B = B_1, \ldots, B_s$ fail to hold in *S*. We write *A*, ~*A** and ~*B*, *B** to represent accepted (or known) differences, and we refer to *A* and *B* as the *negative analogy*. Note that r and s can be 0.
>
> ***Neutral analogy.*** The *neutral analogy* consists of accepted propositions about *S* for which it is not known whether an analogy holds in *T*.
>
> Finally we have:
>
> ***Hypothetic analogy.*** The *hypothetical analogy* is simply the proposition *Q* in the neutral analogy that is the focus of our attention.
>
> (Bartha 2010: 14)

Bartha's "general but compact schema for representing analogical arguments" is then as follows:

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[2] See Figure 3.1

Table 3.2: Bartha's "augmented tabular representation" of an analogical argument

SOURCE (S)	TARGET (T)	
P	P*	[Positive analogy]
A	~A*	[Negative analogy]
~B	B*	[Negative analogy]
Q		[Hypothetical
	Q* (plausibly)	analogy]

An analogical argument thus takes the form:

> It is plausible that Q* holds in the target because of certain known (or accepted) similarities with the source domain, despite certain known (or accepted) differences.
>
> (Bartha 2010: 15)

Bartha's reference to "It is plausible that Q* . . ." in his statement of the generic form of analogical arguments above immediately highlights the critical role that the concept of plausibility plays in his theory and thus requires at least a brief explanation. Bartha notes that the concept of plausibility is complex, having implications for the purposes of both discovery and justification. To say that a statement is plausible conveys a sense that a degree of epistemic support is being claimed and that there is therefore some reason to warrant belief in the statement even prior to it being subjected to any empirical test. For example the statement, "There may be life on Mars" has been regarded as having a degree of plausibility prior to any prospect of empirical confirmation on the basis of a number of positive analogies between the Earth and Mars[3] (Bartha 2010: 20, 112-113).

At the same time, to say that a hypothesis is plausible also appears to have a pragmatic significance. The claim that a hypothesis is plausible is typically also associated with the implication that we may have good reason to further investigate this hypothesis. The Mars example is again relevant to this point. It was because the hypothesis regarding the existence of life on this planet had long been thought plausible that testing for this possibility was assumed justified once the technological capacity to voyage to Mars became a reality. In addition, Bartha also notes a degree of ambiguity as to whether an assertion of the plausibility of a statement is categorical or a matter of degree. His response to the complexity and ambiguity of this central term in his theory is to

[3] The original argument by analogy for the possibility of life on other planets which has attracted considerable interest from logicians was presented by Thomas Reid in the 18th Century (Bartha 2010: 20, 41).

distinguish two distinct conceptions of plausibility, both of which have importance for analogical arguments (Bartha 2010: 15).

The first conception of plausibility considered is what Bartha calls the "probabilistic" conception. In this conception plausibility is identified with "reasonable credence or subjective degree of belief". This conception takes into account the uncertainty implicit within the term plausibility and conveys the sense in which plausibility may be understood to be a matter of degree. Analogical arguments can clearly become more or less plausible depending on commonsense factors such as the existence of multiple and correlated source domains or the identification of additional positive analogies between the source and target domains. Similarly, subsequent testing of the hypothetical analogy of an analogical argument may also be said to increase or decrease the plausibility of the hypothesis depending on the outcomes of the testing. Bartha later explores the relevance of this probabilistic conception for his theory specifically in regard to Bayesian concepts (Bartha 2010: 279-303). However, his principal focus throughout most of his book is on the other conception of plausibility which he defines as the "modal" or "*prima facie* plausibility" conception.

Bartha states:

> On the "modal" conception, "it is plausible that p" is not a matter of degree. The meaning of "It is plausible that p", roughly speaking, is this:
>
> (Prima facie plausibility)
>
> It is plausible that p
>
> ≡ there are reasonable grounds for taking p seriously.
>
> (Bartha 2010: 16).

Considering that "there are reasonable grounds for taking p seriously" means for Bartha that there is good reason for further investigation of the hypothesis if both the hypothesis is interesting and investigation is feasible. The claim of *prima facie* plausibility proposes that the hypothesis meets certain minimal criteria to place it above the mass of logical possibilities within a domain and to make it sufficiently worthy of further consideration. That is, ". . . a good analogy is sufficient to establish that a hypothesis is "valuable", even prior to testing". However, while Bartha considers this conception of plausibility is of particular importance when evaluating analogical arguments, he notes that historically it has not been as widely discussed as the probabilistic conception (Bartha 2010: 16-17).

Further consideration of his justification for a primary focus on this modal conception of plausibility is beyond the scope of this dissertation. However, the further critical feature of Bartha's theory which must be discussed is the theoretical basis he provides for the normative evaluation of analogical arguments in order that such plausibility judgments can be made. The account I outline

here is necessarily superficial given space constraints. However, it is intended that the level of detail provided should be sufficient to at least indicate the major challenges associated with the evaluation of analogical argument, key historical approaches and then the significant potential advances claimed by Bartha.

Bartha summarises the existing "textbook" guidelines for evaluating analogical arguments that have commonly been offered by logicians and philosophers of science, some of which date back to Aristotle. He offers the following list of the "commonsense" (CS) guidelines he regards as of most importance:

(CS1) The more similarities (between the two domains), the stronger the analogy.

(CS2) The more differences, the weaker the analogy.

(CS3) The greater the extent of our ignorance about the two domains, the weaker the analogy.

(CS4) The weaker the conclusion, the more plausible the analogy.

(CS5) Analogies involving causal relations are more plausible than those not involving causal relations.

(CS6) Structural analogies are stronger than those based on superficial similarities.

(CS7) The relevance of the similarities and differences to the conclusion (i.e., to the hypothetical analogy) must be taken into account.

(CS8) Multiple analogies supporting the same conclusion make the argument stronger.

(Bartha 2010: 19)

Commonsense guidelines, informed as they are by a long collective historical experience with the application and evaluation of analogical argument clearly have relevance. However, Bartha notes three major weaknesses with these guidelines. Firstly, they will often be too vague to provide any decisive guidance regarding the evaluation of particular analogical arguments. Secondly, they all pertain to the degree of plausibility and therefore to what he has described as the probabilistic conception of plausibility. As already noted Bartha argues for a modal conception of plausibility in terms of *prima facie* plausibility and thus contends that this traditional focus by philosophers on degree of plausibility represents a major weakness of commonsense guidelines. Thirdly, such a collection of maxims fails to offer any material guidance under such circumstances, which he notes are all too likely, that the principles should serve to pull against each other. Bartha notes for instance the aforementioned example provided by Thomas Reid's analogical argument for the possibility of life on other planets. Some philosophers have considered that this argument is "suggestive" and "not implausible" because only a weak conclusion of mere possibility is made (CS4), whereas J.S. Mill

finds sufficient rational grounds for its rejection on the basis of our vast ignorance of the properties involved (CS3) (Bartha 2010: 20).

Further, the main attempts of philosophers historically to provide more decisive inference rules for the evaluation of analogical reasoning have also been unsatisfactory. That is because philosophers from Aristotle onwards have been drawn to evaluate analogical arguments according to common but only partial conceptions of analogy. It has been contended that analogical arguments can be effectively reduced primarily to one of two competing formulations. That is as either special types of deduction or of induction. These two forms of reduction of analogical argument have been perhaps most clearly exemplified in the respective inference rules developed by Mill and by Hempel.

Mill claimed that analogical argument could best be understood as a competition between known similarities and differences between source and target domains. The key principle to evaluate such arguments was then to compare the degree of material similarity and difference. As Bartha notes, this view effectively reduces analogical arguments to enumerative induction. Thus on Mill's "sampling" or "inductive conception" of the process of evaluating analogical argument,

> Just as we might sample a small population of *A's* to find out the proportion that share the attribute *B, w*e sample a small population of properties of the source domain to find out the proportion that belongs to the target domain [4].
>
> (Bartha 2010: 21-22, 50)

Bartha refers to the second view as the "structuralist" or "deductive conception". One version of this conception has been developed by Hempel who stresses that plausible analogies are grounded by relations of formal resemblance. An ideal analogy is then one where the source and target domains are isomorphic, meaning that they can be described by identical mathematical formulations. The process of evaluating analogical arguments is then said to require an assessment of how close the two domains are to isomorphism. At the limit of complete isomorphism the analogical argument can be inferred by deduction. The plausibility of analogical arguments in general is then said to be established by how closely such arguments conform to this idealisation[5] (Bartha 2010: 22).

Bartha provides extensive and I believe convincing criticism of both the inductive and deductive conceptualisations insofar as they are presented as adequate for a general understanding of analogical argument (Bartha 2010: 46-52). However, he offers a simple observation which he suggests is

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[4] Contending inference rules for enumerative induction such as the "straight rule" can then be applied. This rule is as follows: "Let *A* and *B* be classes of objects and events. Suppose that out of *n A*'s that have been observed, *m* have been *B*'s. In the absence of defeating reasons, infer that the proportion of *A*'s that are *B*'s is approximately *m/n*" (Bartha 2010: 21).

[5] Bartha argues in considerable detail for the position that it is the link between analogy and symmetry that provides the basis for the degree of legitimacy owed the "deductivist" analysis of analogical reason (Bartha 2010: 58, 265-303).

sufficient to undermine these two prevailing but contradictory accounts. Both accounts are surely correct insofar as they highlight the fact that analogical arguments tend more towards deductive logical form at one limit and towards the form of enumerative induction at the other. But for philosophers to have largely attempted to force all analogical argument into one or the other of these two opposing forms can be taken as indicative that perhaps the core logical structure that unites all analogical argument has yet to be adequately captured (Bartha 2010: 22). It would seem fair to conclude that the essence of Bartha's project reflects a deep dissatisfaction with such existing accounts and a keen interest to seek a more adequate account of what he believes to be the unique logical structure appropriate to all analogical argument. And in so doing, he also hopes to advance the prospects for improved normative evaluation of analogical argumentation more generally.

Bartha looks particularly to Mary Hesse's study of the role of analogy in science and her discussion of the evaluation and justification of analogical argument as he begins to develop his theory. He does so because he argues that her work is the "sharpest contemporary expression" of the commonsense understandings of analogical argument since the original contributions of Aristotle. Although Bartha identifies significant weaknesses in her account of the logic and evaluation of analogical argument, he nevertheless considers his own theory as best understood as a refinement of her position (Bartha 2010: 35, 40-46). His main criticism of all approaches to the evaluation and justification of analogical argument that he has considered, including that of Hesse, is that they provide no basis for discriminating between relevant and irrelevant similarities between the source and target domains. He aims to address this weakness by developing enhanced models for the representation or reconstruction of analogical arguments in the sciences and mathematics leading to refined evaluative criteria (Bartha 2010: 57).

Bartha's central objective is to develop principles of sufficient generality to evaluate all forms of analogical argument and yet for these principles to be superior to the existing rather *ad hoc* commonsense guidelines and inference rules. He acknowledges the difficulties for this objective resulting from the very considerable variety of analogies and analogical arguments. No single model of evaluation can be expected to accommodate such diversity adequately even if the scope is initially restricted primarily to the sciences and mathematics as Bartha does. However, his proposed solution to the problem of diversity is to provide a two-part theory which he refers to as an "articulation model". The first part of the theory, and the most relevant for my purposes, consists of two general normative principles. The second part consists of a classification scheme based around the main forms of logical, causal and explanatory relationships recognised within the sciences and mathematics. Separate descriptive and evaluative submodels are proposed for each such set of logical, causal and explanatory relationships (Bartha 2010: 24-26, 95-149). Given that the models developed in the second part of his theory are informed and designed specifically for the sciences and mathematics, it may appear that this part has less direct relevance for my dissertation. However, by

investigating some of the best examples of strong analogical arguments, his models still have a degree of relevance to this project as will become apparent in the coming discussion.

The critical advance Bartha claims for his theory relates to his focus on so-called "vertical relations". As already noted, his central criticism of existing approaches is that they fail to provide adequate criteria to evaluate the relevance of the various terms and properties implicated in an analogical argument. Instead, existing classifications have focused primarily on the so-called horizontal or similarity relations between source and target domain objects, terms, properties and propositions[6]. Bartha's innovation is to focus on the vertical relations in the target domain which he argues then helps to clarify the relevance for a particular analogical argument of similarities and differences between the source and target domains (Bartha 2010: 24-25, 57).

The contrasting roles of horizontal and vertical relations within analogical argument are illustrated by Figure 3.1. This tabular representation is based on the Table 3.2 tabular schema but has been further simplified through the omission of the negative analogies illustrated in that figure.

Figure 3.1: Bartha's simple tabular representation of the relation of terms within an analogical argument

Source (S)				Target (T)	
P	←	Horizontal relations	→	P*	[Positive analogy]
↑				↑	
Vertical relations				Possible vertical relations	
↓				↓	
Q	←	Possible horizontal relations	→	Q*	[Possible further analogy]

(Bartha 2010: 24, amended).

Bartha refers to the pivotal vertical relation in the source domain that should be the focus of the analogical argument as the "prior association". The importance of the vertical relations in the source

[6] Table 3.1 represents a simplified example of Huygens' analogical argument for the existence of an ethereal medium through which light travels. This provides a good example of an analogical argument that focuses exclusively on horizontal relations of similarity between the source and target domains described, sound and light.

domain then underpins the first of his two general principles for the evaluation of analogical arguments. That is:

> Principle 1: Requirement of Prior Association
>
> The description of the source domain must include an explicitly stated vertical relation which the analogical argument is supposed to extend in some way to the target domain.
>
> (Bartha 2010: 25)

His idea is to require the "advocate" of a good and plausible analogical argument to provide a well-defined model of prior association. And by arguing that the nature of the prior association is the first and most critical feature of an analogical argument to be evaluated, he also justifies his own project of seeking to provide a classification of the main types of analogical argument based on the canonical forms of prior association. Thus, as already noted, Bartha proceeds to define a number of models for the evaluation of analogical arguments in the sciences and mathematics centred around the main varieties of prior association operative in these domains.

Bartha refers to his second key evaluative principle as the "potential for generalisation". He derives this terminology from Poincaré who claimed that analogies allow us to perceive "possibilities for generalisation". His second principle is as follows:

> Principle 2: Requirement of Potential for Generalisation
>
> A good analogical argument is one where, at minimum, there is no compelling reason to deny that the prior association that obtains in the source domain could be generalised in a way that extends to the target domain.
>
> (Bartha 2010: 25)

His second principle therefore requires that for an analogical argument to be plausible, it must have analogs in the target domain of the key features operative in the prior association of the source domain. And further, these target domain analogs must also be known to hold, or at least not be known not to hold. Bartha emphasises that if there is some crucial difference apparently blocking the possibility of the pattern of association in the source domain from being generalised, then the analogical argument has failed to demonstrate the plausibility of its conclusion. Alternatively, the argument can be considered to be stronger insofar as the relevant features of the prior association are known, or are at least believed, to hold in the target domain (Bartha 2010: 25-26).

Bartha's special focus on analogy in the sciences and mathematics and the foundational evaluative role attributed to the identification of a (scientifically) recognised model of prior association would seem to rule out the relevance of his theory to the much more open-textured analogical investigation attempted in this study. However, in his final chapter Bartha admits the need for a significant weakening or "liberalisation" of the initially strict idealisations described in his

theory. In any case, he is forced to recognise the need for such a liberalisation even within the domain of science. That is because of the central importance of analogical arguments in so-called scientific revolutions. Revolutionary analogies, such as Darwin's argument for the plausibility of natural selection by analogy with the established mechanisms of artificial selection, by definition cannot draw on established models of prior association from within a discipline. They are either informed by models from another, potentially quite remote domain of science or mathematics, or, as in Darwin's case, they draw on relatively well understood models of prior association from non-scientific sources. Bartha's response to the challenge presented by revolutionary analogies for his normative theory of analogical argument parallels the adaptation he sees as necessary to make his theory of wider relevance for the evaluation of analogy outside of science (Bartha 2010: 309-311, 314-317).

Bartha's approach to this necessary liberalisation of his theory is firstly to emphasise that his core theory should be understood only as an idealisation. He concentrates on analogy in the sciences and mathematics to provide the most clear and straight-forward demonstrations of logical structure and means of normative evaluation and justification. Bartha acknowledges that his idealisation is limited in its direct applicability[7] but nevertheless hopes to achieve considerable heuristic benefit through improving the clarity of understanding of analogical argument more generally. Bartha's claim to such wider relevance is dependent upon the significance of his emphasis on the identification of the nature of prior association in the source domain; formalised in Bartha's principle of prior association, and thereafter, the determination of the possibility of the generalisation of this form of prior association to the target domain; formalised in his principle of generalisability.

The critical concession Bartha makes in order to allow the wider applicability of his theory therefore centres on his idealised demand for the initial identification of an established model or template of the prior association within the source domain. This requirement simply cannot be met in the case of revolutionary analogies in science or generally in analogical arguments outside of science. The weakened but more generalised version of his theory requires only that a prior association that conforms to some valid general pattern must be identified by the advocate so that generalisation to the target domain may be rendered plausible. He states:

> To show that an analogical argument is plausible, you (the advocate) have to be able to construct a general model. Such models require justification, but they may be provisional. There is no favouritism here for scientific models.
>
> (Bartha 2010: 315, my parentheses)

[7] And he also acknowledges that the models for the principal forms of prior association relevant to the sciences and mathematics that he has provided are neither complete in scope, nor beyond further refinement (Bartha 2010: 315).

Although the demand for pre-existing templates is therefore dropped for applications outside normal science and mathematics, Bartha claims that the most critical insight of his theory is still pertinent. That is the requirement that the vertical relationships within each domain are carefully scrutinised and justified. He contrasts this expectation with the prevailing Humean view in which the primary focus is on assessing the strength of analogical arguments based on the degree of similarity of the two domains and without any explicit requirement for the careful scrutiny of the vertical relations. In addition, Bartha emphasises that the commonsense norms that he defines or reaffirms on the basis of his analysis of the role of analogy within sciences remain instructive under this more generalised and softened interpretation of his theory (Bartha 2010: 315-316).

In the next section I will introduce an analogical argument drawing comparisons between environmental ethics and bioethics which I will evaluate more formally with the assistance of Bartha's theory. It is intended this application of his theory will serve the dual purposes of both better illustrating the potential value of Bartha's work, as well as at the same time also improving the quality of my practical employment of analogical argument in this and the following chapters.

3.4 An illustration: the failure of the "top-down" applied ethics model

3.4.1 The informal analogical argument

I will first provide an informal, verbal description of this argument developed before I became familiar with Bartha's model. Following this informal description of the analogical argument, I will then reconstruct the argument using Bartha's tabular format. This reconstructed analogical argument is then evaluated more systematically using the framework provided by Bartha's theory.

What I will call the "top-down" theory application analogy provides what I believe to be the least controversial argument that may be obtained through this form of analysis with regard specifically to comparisons between bioethics and environmental ethics. That is because the conclusion to the analogical argument that I will construct is in any case consistent with the conclusions on this matter already accepted by most, although not all, environmental philosophers[8]. This argument therefore does not yield a novel or controversial conclusion that might stimulate new understanding regarding applied ethics methodology. Nevertheless, it is valuable for the purpose of illustrating Bartha's model in action. The argument may also help convince the minority of environmental philosophers who

[8] James Sterba proposes drawing on the resources of traditional normative philosophy to ground an environmental ethics to *demand* the sacrifices needed to respond to the threat of climate change. Sterba would likely not accept this conclusion regarding the insufficiency of the traditional understanding of the "top-down" function of moral theory and principle (Sterba 2007).

may yet require persuading. However, my primary purpose in employing this example is to persuade the reader of the value of this form of analysis before proceeding to use it again in relation to more novel and potentially controversial analogical comparisons between the two fields in the next two chapters.

The informal analogical argument which I will evaluate regards the potential relevance of the early rejection within bioethics of a "top-down" applied ethics model of ethical decision-making and justification for the contemporary methodological debate within environmental ethics. As I discussed in Chapter 2, a "top-down" or deductive model of ethical reasoning and justification was presupposed by many moral philosophers when they first sought to contribute to the emerging discourse of bioethics. However, this theoretical presumption did not stand up well to the test of practice in clinical bioethics. As I have explained in Chapter 2 this model was rapidly brought into question and then largely rejected.

My hypothesis has been that the greater degree of empirical discipline placed upon methodological considerations within the practically engaged bioethics may provide valuable insights for an environmental ethics that remains largely "all theory and no practice". The suggested informal analogical conclusion is therefore that the wide-spread rejection of the "top-down" model of theory application in bioethics can be plausibly extended to a similar, but untested role of such high-level theory and principle in environmental ethics. My claim will be that such an inter-field comparison might contribute to the admittedly now rather dated controversy in the environmental ethics literature between monism and pluralism discussed in Chapter 1[9].

To recap, Callicott was one of the most dogged and outspoken protagonists for a theoretical monism in environmental ethics, insisting that an adequate environmental ethic needs to do more than just present a plurality of reasonable alternatives to the anthropocentric moral establishment. Rather, he has argued that an environmental ethic also needs to provide a monistic rather than pluralist ethical framework. One of Callicott's supposedly most compelling reasons for resisting what others saw as the reasonableness of a more pluralist understanding of environmental values was, he contended, that "only a monistic theoretical framework embedded within a unified world view or metaphysic can possibly inform a coherent and consistent approach to the diversity of ethical concerns and duties we should now recognise" (Callicott 1990: 113-124).

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[9] Norton argues that a recent seminal co-authored book has effectively put to bed the pluralism-monism debate, along with the entire original focus of environmental ethics on meta-ethical debates, replacing it with an authoritative call for pluralist and deliberative approaches. That book is *Environmental Values.* One of the co-authors of this book, Alan Holland, was formerly the long time editor of the journal of that name, and is thus particularly well placed to offer such a broad-sweeping and definitive assessment and prospective recommendation for the field (Norton 2008: 72-87; O'Neill, Holland, and Light 2008).

However, Norton argues that Callicott's position presupposed a top-down or deductive applied ethics model whereby philosophers in the academy develop the moral theoretic 'tools' which others such as environmental activists and managers should then apply in practice to solve particular moral controversies (Norton 1995: 342-345). In holding to this belief, as Stone has argued, environmental philosophers such as Callicott have surely followed the more general presumption in favour of monistic theory that has prevailed in moral philosophy (Stone 2003: 195; See also O'Neill, Holland, and Light 2008: 87).

Thus if this analogical comparison is successful, in addition to illustrating the application of Bartha's model, it would also provide a further challenge to the methodological presumptions of Callicott and others who have argued for the monistic theoretical approach to environmental ethics. The hypothesis to be evaluated is that even if the currently "radical" metaphysical commitments of Callicott and others were to one day become widely accepted, no theory of environmental ethics can possibly have the capacity for the decisive determination and justification of the (environmentally) ethically right and wrong presupposed.

3.4.2 Applying Bartha's tabular representation

The core explanatory terms of Bartha's idealised tabular representation of the logical form of analogical argument are the positive analogy/ies $P_{n;}$ relevant negative analogy/ies A_r , B_s*; the accepted conclusion to the relations in the source domain Q, and the hypothetic analogy postulating a related conclusion in the target domain, Q*. Each of these terms is represented in Table 3.3 below.

Only one positive analogy is defined in this argument, that between the source domain properties, P and the target domain properties, P*. As previously described, this analogy focuses on the common initial presumption of both fields that ethical theory must be monist and capable of delivering decisive, "top-down" or deductive solutions to particular moral quandaries.

Two negative analogies are stated. The first negative analogy is between the properties A of the source domain and those of ~A* in the target domain. It focuses on the significant differences in the concerns and moral desiderata of the two fields. The ethical theories which moral philosophers could bring to bear in bioethics were conservative, insofar as they were drawing on established theoretical traditions that already had some degree of familiarity and consistency with widely held ethical beliefs[10]. Notably, such theory presumed an anthropocentric orientation and individualistic focus as foundational to ethical thought and action. By contrast, the ethical theory developed in environmental ethics has frequently diverged quite deliberately from these previously prevailing ethical assumptions

[10] Of course consequentialist ethical theory in particular, although "traditional" and "established" in this sense has nevertheless often been employed to yield quite radical or controversial conclusions that challenge customary ethical beliefs.

and thus presents a radical challenge to customary ethical belief and practice. This radicalism is driven by the nonanthropocentric and holistic ethical concerns which have been explored in environmental ethics.

The second negative analogy is between a feature of the target domain B*, the pursuit of broad-ranging consideration of the ends of human existence and alternative conceptions of human flourishing and so forth in contrast to ~B in the target domain. That is generally in bioethics there has not been a matching broad-ranging discourse regarding the ends of humanity and alternative conceptions of human flourishing, at least not since the early debates in the major conferences of the 1960s.

The conclusion, Q, in the source domain simply notes the outcome of the exposure of the presumptions of P to the realities of practice in bioethics. That is the widespread conclusion that the top-down model of applied ethics was inadequate and that alternative methodological approaches needed to be considered. Likewise, the hypothetical conclusion Q* in the target domain proposes that top-down applied ethics presumptions in environmental ethics should be considered similarly misguided and would be proven so if they too were put to the test of practice. That is, should there become greater opportunities for the application of environmental ethical theory within the relevant domain of practice, environmental policy and management, a similar rejection of the top-down model would rapidly be forced through the demands of practice.

The tabular representation of the argument is as follows:

Table 3.3 Schematic tabular representation of the "top-down analogy"

Source (S)	Target (T)
Bioethics	Environmental ethics
P Initial presumption of a "top-down" theory/principle model of applied ethics	P* Similar "top-down" methodological presumptions as originally prevailed in bioethics
A Conservative, anthropocentric and individualist ethical assumptions and pre-existing theoretical frameworks applied	~A* Radical, nonanthropocentric and holistic ethical concerns that have extended existing theoretical frameworks or even required completely novel frameworks to be developed
~B Very little speculative ethical discussion regarding wider societal ends and alternative conceptions of human flourishing since the "Conferences of the 1960s". Instead a thin and pragmatic discourse has prevailed (Evans 2002)	B* Considerable speculative ethical discussion (and literature) on the fundamental ends of civilisation and of alternative conceptions of human flourishing
Q (Conclusion) Presumptions of the "top-down" model have been tested in practice, found wanting, and now generally rejected	
	Q* Hypothetic conclusion that "top-down" and monist theoretical presumptions in environmental ethics would similarly be proven mistaken if tested in practice

I will firstly defend the *prima facie* plausibility of the overall positive analogy between P and P* which suggests that the field of environmental ethics emerged with a similar emphasis to bioethics on the centrality of hierarchical, complete and monistic theoretical frameworks. As previously noted, the legal scholar Christopher Stone was struck by the fact that although environmental philosophers saw the need to break with the anthropocentric presumption of the liberal moral philosophy tradition, they nevertheless generally retained the presumption that an adequate environmental ethics theory should provide a single, unified theoretical framework (Stone 2003: 195-197). In Chapter 1 I noted that the

first generation of major contributors to environmental ethics developed a range of contending, monistic ethical theories, each drawing on different core ethical values and concepts. Some draw on extensions of individualist ethical theory to include some greater range of nonhuman species in the circle of moral considerability. Still others seek the theoretical means to extend moral consideration to all animal species or all living beings, entire biotic communities, ecosystems and even the biosphere.

The fundamental similarity of the structural characteristics of ethical theory developed in environmental ethics with the major types of theory of the modern liberal moral philosophy tradition is hardly surprising despite the very different moral desiderata of the two domains. Most of the main contributors to the academic field of environmental ethics were of course trained within the liberal moral philosophy tradition. Grounded in this tradition, when they turned their professional attention to the new concerns of environmental ethics, they quite naturally drew upon the existing stock of humanist moral theory. Various theorists in environmental ethics drew upon the existing approach that they considered most rationally satisfying as well as best fitted to the mission of environmental ethics. The presumption that an adequate theory of environmental ethics would be monistic did not begin to be questioned in earnest until the 1990s[11]. Until then, environmental ethics, despite often being a self-consciously radical enterprise, nevertheless largely employed theoretical means still presupposing the central ambition of modern moral philosophy to deliver rationally compelling, monistic and algorithmic normative devices (O'Neill, Holland, and Light 2008: 91-92).

The first generation of theorists in environmental ethics thus sought to emulate the general structure of formalised, rigorous, "top-down" and monist ethical theory of their parent discipline of liberal moral philosophy. Richard Sylvan (then Routley), in his most well known and supposedly radical article, argues for the necessity to develop a quite new variety of nonanthropocentric ethical theory. But despite his apparent radicalism, Sylvan nevertheless makes very conservative stipulations regarding the structural characteristic of that new theory (Routley 2001). On Sylvan's understanding any genuine ethical theory must have a particular reductive structure, modelled in his case on logical theory rather than scientific theory. Ethical theory should have a set of basic postulates or principles from which other lower order ethical claims can be derived. The challenge for nonanthropocentric ethical theory according to Sylvan is to replace the mistaken basic postulates of traditional anthropocentric ethical theory with new nonanthropocentric postulates. The contents of ethical theory will change, but the formalised structure should be retained (O'Neill, Holland, and Light 2008: 92).

[11] As discussed in Chapter 1 and to be addressed shortly, this debate also centred on whether environmental ethics should be both monistic and nonanthropocentric, with Callicott the main proponent of this conjunction and Norton the primary antagonist (Callicott 1990, 2005; Norton 1995, 2005).

Environmental philosophers such as Callicott have continued to advocate such comprehensive and monist theoretical systems to this day[12], long after this approach had fallen out of favour in bioethics, which has become a largely 'pragmatic' discipline (Arras 2001: 81). Thus there is good reason to take the positive analogy regarding the initial methodological commitments between bioethics and environmental ethics seriously. I therefore conclude that the proposition P* in the target domain of environmental ethics does indeed represent a set of relevant similar assumptions and ambitions to those which initially informed moral philosophy-cum-bioethics.

3.4.3 Defining the "prior association"

The first critical step in evaluating the plausibility of the analogical argument represented in Table 3.3 following Bartha's model for the evaluation and justification of analogical arguments, requires the identification and justification of an accepted model of prior association in the source domain (Bartha 2010: 315-317). This requirement focuses on the nature of the vertical relationship in the source domain between the elements of the positive analogy, P, and the conclusion, Q. My challenge is to identify the important factors within the source domain which contributed to the rapid rejection of the "top-down" model of applied ethics within biomedical ethics practice. Explaining how these factors interacted to produce this outcome may then be instructive for the target domain of environmental ethics.

In Chapter 2 I described the manner in which many of the first moral philosophers to engage with the issues of biomedicine presupposed an authoritative role for high-level moral principle and theory in both guiding and justifying the making of particular moral judgments and policy recommendations. In that chapter I also outlined the major theoretical and practical problems that approaches based on this presumption encountered once moral philosophers began to engage with the practical ethical dilemmas in bioethics. My approach to defining the prior association requires first revisiting and if necessary, sharpening my account from Chapter 2 of the reasons for the early demise of the "top-down" model of applied ethics in bioethics. This should allow me to identify the prior association of this analogical argument.

What is required in order to define the prior association in the source domain for this argument is a clear understanding of the presuppositions regarding the nature of moral theory and principle which it was believed could be applied decisively within medical ethics practice. This understanding must then be allied with a corresponding insight into how these presumptions interacted with the realities

[12] Although Peter Wenz has argued that the form of ethical theory that Callicott proposes is best understood as at least "moderately pluralist" in any case. Wenz notes that Callicott attempts to provide a single theoretical system which contains a number of independent ethical principles that are not reduced or derived from a single master principle (Wenz 1993: 224-227 in Light & Rolston).

encountered within both clinical and policy bioethics domains as moral philosophers (along with theologians) enthusiastically engaged with medical ethics[13].

I will firstly consider in more detail the particular characteristics of the modern forms of ethical theory which were drawn on by philosophers and others in relation to the novel ethical challenges of biomedicine. To do this I will refer to the work of the prominent but controversial British moral philosopher, Alasdair MacIntyre. Drawing largely on an historical perspective on developments in Western ethics, MacIntyre has provided a broad-sweeping analysis of the general mission of modern moral philosophy (MacIntyre 1981). Such an arms-length and reflective examination of this topic is very helpful for my own rather broad-sweeping consideration of the manner in which the presumptions and theoretical "tools" of analytic moral philosophy came to interact with the ethical dilemmas of modern biomedicine[14]. MacIntyre describes the initially prevailing "applied ethics" approach as dependent upon a peculiarly modern understanding of morality. This is an understanding of the institution of morality which has emerged since the Enlightenment and which has also shaped the corresponding understanding of the role of modern philosophical ethical theory.

From this dominant point of view, the "ethics" to be "applied" to particular domains of practice such as biomedicine depend on a conception of a common morality that defines the set of requirements each individual human being must respect simply on account of their rational nature. In order to achieve such universal relevance, morality must be grounded at a level of abstraction and generality which needs to be detached from reference to particular social roles or institutional forms. However, MacIntyre notes that despite being abstracted from such particularity, this prevailing philosophical conception of morality nevertheless incorporates some very significant social content. In particular, society is represented as a domain in which social actors compete for the fulfilment of their often conflicting personal interests. Given this conception of society, morality then performs the essential role of providing rules from a neutral or impartial perspective which define the civilising parameters within which these competing interests are pursued.

The critical assumption here is that rational persons should accept the normative legitimacy of these "neutral" and "impartial" rules, provided they successfully detach themselves from the distorting influence of their particular interests. It follows from this understanding of the role of morality and thus of ethical theory, that in formulating such impartial rules, only concepts which are available to any rational person can be employed. Such rules can therefore only draw on concepts that are necessary to the evaluation of any rational discourse such as commitments to "consistency, truth, universality, necessity and the like". Alternatively, they may include concepts which specify

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[13] See for example my discussion in Chapter 2 of Hare's enthusiastic promotion of benefits of moral philosophy for medical ethics (Hare 1977: 49).

[14] MacIntyre personally engaged in discussions regarding ethical issues in biomedicine within hospital settings during the 1970s (MacIntyre 1984: 512).

supposedly universal, or near universal desired states of affairs, such as "being found pleasant" grounding classical utilitarian forms of ethical theory, or universal or near universal objects of desire such as the liberty to pursue what one has a right to, grounding some Kantian forms of ethical theory (MacIntyre 1984: 498).

Highlighting what has been a central concern of his later major works in moral philosophy (see MacIntyre 1981, 1988, 1990, 1999), MacIntyre also draws attention to a critical aspect of traditional ethical concern which is absent from this modern emphasis on an impartial or neutral morality. As already noted, the domain of universal morality is concerned with imposing reasonable limits on the pursuit of individual interests. However, society is not only a domain of competing interests, but also of competing substantive views, both religious and non-religious, on the best way for humans to live. According to the dominant view of morality, either agreement on the nature of the "good life" for humans cannot be rationally achieved, or simply as a matter of fact it has not been achieved. Alternatively, such agreement should not even be sought since it is believed to be a critical part of the freedom of each individual to be able to pursue their own understanding of what constitutes a good life. As a result, moral priority is placed on the right of the individual to be free to express and pursue their own conception of the good life. And from this priority there follows the prevailing expectation of liberal moral philosophy for the rules that constitute morality to be *neutral* between alternative and conflicting views of the good life. Thus, "pluralism about the good is to coexist with rational agreement on the rules of morality" (MacIntyre 1984: 499). As will become clear later, this "privatisation" of the good unfortunately institutionalises major barriers to our capacity to respond intelligently and fairly to the challenge of living in an ecological sustainable manner.

Julia Annas also helpfully describes characteristics peculiar to modern ethical theory[15]. Like MacIntyre, she has also gained a measure of objectivity or distance from the internal concerns of contemporary moral philosophy, in her case through a comparative perspective informed by her study of the ethical theory of the ancients (Annas 1993). Annas argues that:

> . . . studying theories that are not hierarchical and complete may open our minds to the possibility of kinds of theories that are different in form from the ones we are used to … It may encourage a more critical attitude to the common assumption that the model for an ethical theory must be that of a scientific one, with basic and derived concepts, and with reduction and theoretical simplicity as major aims. We may come to find alternatives other than accepting this picture or rejecting theory altogether as an aim in ethics.
>
> (Annas 1993: 11)

[15] For an excellent brief description of the common commitment amongst each of the dominant research programmes of contemporary moral philosophy; consequentialist, deontological and virtue ethics approaches, to reduce all ethics to a preferred set of primitives modelled after scientific theory, see the recent *Environmental Values* (O'Neill, Holland, and Light 2008: 82-83).

Thus she emphasises the significance of the fact that ancient ethical theories, unlike many modern theories, did not look to scientific, logical or mathematical theories for instructive models. And of course scientific theories were in any case not at all well developed in the ancient world. From Aristotle on, philosophers also did not attempt to develop ethical theories based on a mathematical model which would have been taken to be completely unfitted for practical knowledge. Instead, the model of practical skill or craft (*techne*) was considered a more apt model for ethics. Ancient theories were nonetheless coherent theories, with systematically connected concepts which included notions of happiness and virtue as primary concerns. However, they did not attempt to provide a hierarchically interrelated structure in a manner matching modern scientific, logical or mathematical conceptions of ethical theory (Annas 1993: 10). Thus ethical theory was not concerned with providing specific answers to ethical questions or quandaries. Rather, ethical theory was understood to arise from the reflection of intelligent people regarding the shape and course of the good life. Ancient ethical theories are thus more compatible with modern theories that reject a commitment to hierarchy and completeness such as Rawls' method of reflective equilibrium[16], where the aim is to unify, order and modify intuitions, rather than establish first principles from which applications can be rigorously derived (Annas 1993: 444).

In contrast, Annas cites a self-confident explanation by the modern philosopher Richard Brandt, regarding the nature and purpose of moral theory. He states "What is ethical theory about? Someone might propose an answer: 'Everyone knows what an ethical problem is: ethical theory must be about the solutions to such problems'" (Brandt 1959, cited in Annas 1993: 443). From this prevailing modern perspective, so different from that applied over most of the history of philosophy in the West since Plato, the primary function of ethical theory has been the solution of ethical problems or quandaries (Pincoffs 1983: 95). Thus, in contrast with ancient theory, it has been assumed that modern ethical theory must be both hierarchical and complete.

An ethical theory is said to be hierarchical insofar as some set of notions, postulates or principles are taken as basic, and other elements of the theory are derived from these basic notions (Annas 1993: 7). That is, when the theory is considered as a whole, it is apparent that these basic elements or "primitives" explain and justify the other elements and not vice versa. For example, in consequentialism, it is the production of good states of affairs that supposedly explains what is the right action. Actions and states of character are only instrumentally valuable as means to produce the best state of affairs, and not the other way round. Likewise in deontological theory, the primitives are

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[16] See Chapter 2 for a description of the method of reflective equilibrium and also for Daniels' argument for the importance of the extension of this method to what he describes as "wide reflective equilibrium". That is a method in which consideration of more encompassing background theories are added to the primary iterative process of seeking reflective equilibrium between moral principles and the "empirical data" of intuitions regarding particular cases or moral problems (Daniels 1979: 256-264).

the acts of agents, and states of affairs are right if they are the outcomes of morally just acts. Reversing the structure of consequentialist theory, having as an end the achievement of a good state of affairs does not necessarily make a particular act morally just. For modern virtue theories, the theoretical primitives are dispositions of character. A right action is simply the act that a virtuous agent would perform and the best state of affairs is one that the good or virtuous agent would aim to bring about (Annas 1993: 8; O'Neill, Holland, and Light 2008: 82).

In addition, the completeness of a theory refers to the capacity of the theory to account for all relevant moral phenomena. The claim to completeness is of course essential given the ambition of modern moral theory towards providing "universal algorithmic decision procedures" (Wenz 2003: 221). The expectation, if not reality, has been that an adequate ethical theory possessing these necessary qualities of formalism, hierarchy and completeness will thus be able to respond deductively to the "inputs" of the particular contextual details of moral quandaries with rigorous and fully determinate judgments. It is this ambition to provide a single unified and algorithmic basis to deliver decisive, "top-down" answers to moral quandaries to which the legal scholar Christopher Stone refers as "moral monism" (Stone 2003: 195-197). But as Wenz notes, this kind of rigorous, determinate moral decision procedure has been an ideal which has not been achieved in practice by any of the major ethical frameworks (Wenz 2003: 220-222).

I have drawn on the accounts of both MacIntyre and Annas to illustrate the prevailing abstract, impersonal and systematic form of the modern moral theory which informed moral philosophers as they began to engage with medical ethics in the later 1960s and early 1970s. What must also be emphasized is the key role that such theoretical abstractions were expected to perform by moral philosophers given this prevailing understanding of morality and ethical theory. The common expectation was that such high-level moral principle and abstract ethical theory would serve to underpin the normative legitimacy of the moral judgments and policy recommendations that might be made by philosophers and others. As my citation of Clouser in Chapter 2 reflects, the expectation was that the existing canon of general moral philosophical theory and principle had merely to be applied to the particular issues of biomedicine. No major or fundamental rethinking was required of moral philosophers in order to contribute helpfully and decisively on these issues. And as Engelhardt has emphasized, the assumed strength and adequacy of this existing canon of moral theory was essential to the socio-political authority that moral philosophers-cum-bioethicists were able to quite rapidly assume beyond the academy. He notes:

> Bioethicists or ethicists assumed a socio-political authority that placed them as experts before courts and guides for clinical and public-policy decision-making. The social authority of these moral experts was embedded in the imputation of an ability to disclose the morality that rational persons should embrace. That is, their socio-political authority presupposed the possibility of disclosing a consensus in the strong sense of that set of moral commitments that rational and unbiased persons should embrace.
>
> (Engelhardt 2002a: 9)

This completes my brief consideration of the particular characteristics of moral theory relevant to the "top-down" applied ethics model which failed in bioethics. I will now consider the realities of the moral phenomena which this conception of the role of ethical theory confronted as moral philosophers engaged with the new ethical challenges of biomedicine. Chapter 2 described two major reasons why moral theory and high level principle proved to be unable to support the "top-down" or deductive model of applied ethics. The greater complexity and subtlety of the ethical problems in medicine contrasted with the stylised hypothetical moral problems that philosophers were accustomed to discussing where their concern was primarily to illustrate theoretical problems of academic interest.

Further complexity was encountered in the real ethical issues faced in biomedical ethics that stemmed from the multiple actors and concerned parties involved with particular cases. There are commonly a number of different healthcare workers with differing professional status and power, concerned spouses and other family members and also representatives of hospital and insurance companies concerned with financial and legal risk. Each such "stakeholder" brings differing perspectives and concerns that may fuel ethical conflicts of much greater complexity than would normally be considered in the standard and stylised scenarios considered in the moral philosophy class.

The second major problem that was noted is the devastating problem posed by both theoretical and practical moral pluralism for the "top-down" model of applied ethics. On the theoretical side, given the fact of a longstanding diversity of contending moral theoretical frameworks and with no decisive agreement amongst philosophers on how this plurality might be reconciled, particular judgements informed by any one such theory must lack a compelling rational legitimacy. Conclusions offered to particular moral quandaries drawn from the implications of the various moral theoretical positions frequently conflict. For example, there is a common tension between consequentialist concerns with maximising happiness or satisfying preferences and deontological concerns with respecting personal autonomy. Engaging such theoretical models certainly has a degree of heuristic value for those considering ethical problems (Dare 1998). However, as Rachels notes, "we want to know what really is best, not just what this or that theory says" (Rachels 1998: 15). Under such circumstances, accepting the practical conclusions of any one theory becomes effectively an arbitrary choice, not a matter of rational decision.

But the problem of plurality for the applied ethics model extends beyond the confusion resulting from the plurality of contending ethical theories and principles within the one discipline of moral philosophy to the fundamental challenge resulting from moral pluralism within society. A central feature of the work of the first generation bioethicist, Engelhardt, has been to highlight the great challenge for a practice-oriented moral philosophy presented by the moral diversity of present day post-traditional and multi-cultural societies. There is of course very considerable diversity and plurality of actual substantive moral or ethical practices embraced by ordinary people. There are as Engelhardt notes, a diversity of moral communities, both religious and secular. People with shared commitments to some particular substantive moral community and hence potentially "thick" conceptions of the good life such as Engelhardt's own Texan Orthodox Catholic Church, relate to each other as "moral friends" (Engelhardt 1996: xi). The shared commitments of moral friends to common conceptions of the good, bind them to quite determinate sets of moral commitments and duties.

In contrast, when people, who do not share in such a substantive moral community, interact with each other, as is the case under most circumstances for healthcare providers and their patients, they do so as "moral strangers". They cannot presume wide-ranging agreement on moral concerns. And it is as moral strangers that most of us now engage with each other in the complex and often impersonal world of modern healthcare systems (Engelhardt 1996: 3-17). This analysis is highly relevant to the issue of medical paternalism which has been the focus of some of the most celebrated and practically relevant work in bioethics (Buchanan 1978). Medical paternalism is essentially a problem where healthcare professionals presume the status traditionally conferred on family physicians as moral friend in their dealings with patients when under prevailing modern circumstances they are in fact moral strangers.

The decisive practical role for ethical theory first assumed by moral philosophers when they came to engage with medical ethics was thus found wanting when tested by practice. It had not been a matter of moral philosophers putting their theoretical 'tools' to work in a domain far removed from the central concerns of moral theory, a claim more easily argued with regard to the application of traditional moral theory in the domain of animal ethics and environmental ethics (Gunn 1983). Rather, a plurality of formalised, hierarchical and reductive moral theories, modelled on mathematical, logical or scientific theory and proclaiming neutrality with regard to any particular conception of the good could not, in good faith, be applied to practice in bioethics in the decisive manner initially promoted. The real moral phenomena within biomedicine did indeed concern moral issues in a general sense familiar enough to traditional moral philosophy. However, when these issues were actually engaged in all their particularity and with the complexities inherent to multiple health professional and lay actors as well as institutional influences, they proved not to be amenable to this

kind of decisive, "top-down" resolution. And worse, a plurality of moral theoretical 'tools' came up against the realities of an even more considerable diversity and multiplicity of lived moralities.

The failure of the "top-down" model of applied ethics within bioethics was therefore surely not a minor problem encountered in some very peripheral domain of practice. This practical lesson for moral philosophy from its engagement with medicine can be interpreted as a striking natural experiment that could quite reasonably have been expected to have stimulated a deep-going reappraisal of the modern self-understanding of the constructive function of the discipline.

Of course, as discussed in Chapter 2, the story of bioethics does not end with the rapid abandonment of the "top-down" applied ethics model. Rather, this early aspect of the history of modern bioethics was effectively only the beginning of the emergence of a seemingly flourishing and influential new field that has led to some philosophers even coming to work directly within healthcare institutions as "clinical bioethicists". But, as I will elaborate shortly, the field which has emerged over the last 40 years has also necessarily taken on a decidedly 'pragmatic' and pluralistic character in order to attain this degree of practical utility. And as a consequence, concerns have quite reasonably been raised regarding the legitimate sources of normative authority in bioethics, given the failure of the major theoretical programmes of moral philosophy to underwrite the socio-political authority which has been conferred on the discipline (Pellegrino 2000: 665-673).

To summarise, I have argued that the prior association in the source domain of bioethics should be understood to be kind of sociological causal relationship between a model of moral theory that was presumed to have relevance to practice, but when put to the test of practice, was proven impractical. The top-down model did not fare well up against the complexity of actual moral phenomena and the plurality of substantive ethical views within post-traditional and multicultural societies. Within the real domain of biomedicine, such a conception of ethical theory was very rapidly proven unfitted to achieve the kind of decisive application to particular cases or rational guidance on more general policy initially presupposed.

3.4.4 Two negative analogies

Having completed this outline and clarification of the nature of the prior association in the source domain, bioethics, I will now address the next stage of Bartha's evaluative procedure. This involves considering whether there are particular properties of the target domain which are so dissimilar to the source domain that they may prevent the generalising of the prior association. I will therefore now turn to consider the negative analogies listed in Table 3.3.

The *first negative analogy* listed in Table 3.3, that between A and A*, highlights three major aspects of the methodologies of the two fields which are indeed very different. In brief, the ethical theories which moral philosophers attempted to apply within bioethics were all conservative, well-established theories. They were also both anthropocentric and individualist in their ethical

orientation. In contrast, the ethical theories that came to define environmental ethics were generally radical new constructions or extensions upon existing theoretical forms. Much theory in environmental ethics, although not all, has been both nonanthropocentric, and also, despite an early dominance of individualist theory, frequently also holistic in ethical orientation.

I do not believe that the contrast between the conservative and established nature of ethical theory in bioethics and the radical, often experimental form of theory in environmental ethics threatens the generalisation of the prior association in this analogical argument. The prior association in the source domain of bioethics concerns the mismatch between initial ambitions for the determinative application of formalised theory and the complex and plural moral phenomena actually encountered once the practice of biomedicine was engaged. Theory in environmental ethics has generally carried over the same basic assumptions regarding the structure of ethical theory despite the novelty of subject matter. And environmental ethics theory has been developed in response to a practical domain in which the moral phenomena are necessarily of only greater complexity. The mismatch between any ambitions for determinative application and the inherent challenges presented by the actual moral phenomena addressed by environmental ethics can therefore only be greater than those of bioethics.

Environmental ethics theory has had to deal with the added factor of ecological complexity and uncertainty as well as a multiplicity of human ethical and aesthetic concerns regarding the natural environment, not to mention generally antagonistic economic considerations. Regarding the challenge for a "top-down" applied ethics model resulting from a plurality of theoretical frameworks discussed with regard to bioethics, again here the circumstances are only to be more challenging given the confusing range of potential moral desiderata that environmental ethics has addressed and the diverse range of human interests and valuations of the natural environment. Similarly, the plurality and diversity of human values and interests regarding the natural environment create greater difficulties for environmental ethics than does the considerable plurality of moral belief with which bioethicists must contend. Therefore, I conclude that the radical and innovative form of environmental ethics only serves to strengthen the plausibility of generalising the negative conclusion regarding the top-down model from bioethics to environmental ethics[17].

The *second negative analogy* I have noted in Table 3.3 is between ~B in the source domain bioethics and B* in the target domain of environmental ethics. B* highlights the considerable focus within the discourse of environmental ethics on speculative explorations regarding the fundamental

[17] However, I acknowledge that I have not addressed an important question here regarding the extent to which the various novel aspects of the focus and methodology of environmental ethics may have contributed to the restriction of this field primarily only to academic discussion, research and teaching. I will take up this question in the next chapter when I begin to evaluate the environmental pragmatists' positive proposals for methodological reform within environmental ethics.

ends of civilisation and of alternative conceptions of human flourishing (Peter Wenz, pers. comm., 2010) . ~B highlights the contrasting virtual absence of such speculative ethical discussion regarding wider societal ends and alternative conceptions of human flourishing in bioethics since the more wide-ranging discussions of the early bioethics conferences of the 1960s[18]. Instead, following the marginalising of initially considerable theological contributions to the field, a decidedly "thin" and pragmatic discourse has prevailed (Evans 2002: 99-151).

Such broad-ranging discussion on the ends of human life and on the nature of human flourishing obviously address matters of substantive or "thick" ethical concern in contrast to the "thin" discourse of bioethics. Conceptions of the good life and even theological concerns which have largely been marginalised within the discourse of bioethics have found their place in environmental ethics journals. However, this form of deep-going and fundamental discussion may be engaged without the writer harbouring aspirations to gain some immediate influence on environmental policy and management practice. Such discourse may therefore have been quite independent of ambitions to develop an algorithmic and top-down theory application model of environmental ethics. Rather, such work, beyond pure academic interest, is concerned with facilitating a fundamental shift of world view, of attitudes and expectations regarding human interaction with other species and with natural systems[19] (Callicott 2002a: 107).

Therefore, although the negative analogy between B* and ~B represents a considerable difference between the two domains, this difference need not be considered to weaken the relevance of the top-down analogy for environmental ethics. Such deep-going discussion can have very little immediate relevance for current environmental policy and management debates, dominated as these usually are by economic analyses and assessments of consumer preferences and the shadow pricing of environmental values. The suggestion that a more speculative discourse is a weakness of environmental ethics that stands in the way of the field achieving greater influence on practice will be considered in Chapter 4[20]. However, I believe it reasonable to conclude here that such free and broad-ranging discussion, however intellectually creative and academically disciplined, certainly does not improve the immediate prospects of some kind of top-down and decisive theory application to practice. In the short-term, this discourse appears as just another attribute of environmental ethics that

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[18] See my discussion in Chapter 2 of "The conferences of the 1960s".

[19] While Callicott has been criticised by Norton as the mistaken champion of a top-down applied ethics model of environmental ethics, Callicott is best understood as one of the most persistent and effective advocates of this more expansive role for philosophical consideration regarding the environment, both within philosophy and wider society (See for example Callicott 2002b).

[20] A quite different and even contrary possibility will also be explored later in this dissertation. That is the possibility that rather than such discussion simply being a handicap to the practical relevance of environmental ethics, such an extended philosophical discussion may be urgently required within bioethics and the sciences and policy arena more generally (See for example Frodeman 2006: 13-14).

for now confines the work of most environmental ethics to the purely academic realm of ". . . philosophers writing philosophy essays for other philosophers" (Frodeman 2006: 3).

I thus conclude that the negative analogies identified in Table 3.3 do not pose any serious barrier to the generalisation of the prior association from the target domain to the source domain. To the contrary, if anything, the negative analogies serve to add to the problems confronting any advocate of a top-down applied ethic approach in environmental ethics. I therefore further conclude that the way in which the prior association has functioned within the source domain of bioethics can be reasonably generalised to the target domain of environmental ethics. Thus any continuing advocate of a top-down applied ethics model of environmental ethics[21] must contend with the plausible hypothetical conclusion Q*. That is, should an opportunity arise whereby top-down and deductive application of environmental ethics theory is invited, the process is almost certain to fail, or at the very least, lack normative legitimacy[22].

3.5 Chapter conclusion

The overview of Bartha's theory in the first section has provided the background understanding required thereafter to support a trial application of his theory in a domain beyond his principal focus on the sciences and mathematics. As I have emphasised, this implementation of Bartha's descriptive and evaluative model has had a dual function. It has served first simply to illustrate and trial the application of Bartha's model in a philosophical context. At the same time, Bartha's model has also allowed me to achieve a considerably more self-critical and systematic analysis of an analogical argument which I had previously developed in only a quite informal manner. The overall benefit has then been to show the value of a more rigorous evaluation of informal analogical reasoning and argument under relatively favourable circumstances before using the same approach to consider a more challenging question in Chapter 4.

The conclusion reached regarding top-down theory application presumptions in the current chapter at best functions only as further collaboration of a consensus largely already reached in the environmental ethics literature regarding the impracticality of a top-down and monistic conception of ethical theory and principle in that field. However, in Chapter 4 I will explore the prospects for a more speculative informing between the two fields, bioethics and environmental ethics. The analogical argument just considered claims only a *negative* conclusion reinforcing doubts regarding the conjunction of decisive and legitimate normativity as well as practical relevance for high-level

[21] Although I have said that most environmental philosophers would no longer see themselves as pursuing such a project, as already noted, James Sterba would appear to be a contemporary exception.(Sterba 2007).

[22] As noted previously, the claim to be "applying" an ethical theory can disguise and justify exercises of power and protection of existing privilege (MacIntyre 1984: 512).

moral theory and principle within environmental ethics. The question to be considered in the next chapter is the extent to which the shift towards pragmatic methodological commitments now prevailing in bioethics[23] should be mirrored in environmental ethics. Bartha's theoretical framework will then be used to evaluate a reconstructed analogical argument regarding a *positive* thesis advanced by Minteer and Collins that a parallel shift toward pragmatic and pluralist methodologies may similarly help advance the practical relevance of environmental ethics.

[23] Arras notes that while only a minority of moral philosophers working in bioethics draw directly on the canon of classical American pragmatism, the majority can now be described as conforming with what he describes as "free standing" pragmatism. The methodological commitments of free standing pragmatism includes a focus on the complexity of the context within which moral problems are embedded, achieving the "best results", eclecticism regarding the competing philosophical "grand theories", flexibility regarding moral principles and the denial of foundationalism (Arras 2001: 69-70).

Chapter 4
The pragmatic "ecological ethics" of Minteer and Collins

4.1 Overview

In this chapter I will address the recent proposals of philosopher Ben Minteer and ecologist James Collins for the development of a new or at least significantly reformed applied field of environmental philosophy which they refer to as "ecological ethics" (Minteer and Collins 2008; Minteer, Collins, and Bird 2008; Minteer and Collins 2005). These authors make quite explicit reference to the model provided by contemporary pragmatic bioethics in their articulation and advocacy for their proposals for an ecological ethics. They suggest that by adopting similar methodological commitments as have come to prominence in bioethics this new field should be able to serve a similar function for ecological researchers and environmental managers as bioethics has done for clinicians and biomedical researchers. I will use analogical comparison with bioethics, again following Bartha's model to aid an evaluation of their proposal. As will become apparent, although I see the possibility of considerable benefits from their approach, I also raise some significant concerns.

4.2 A proposal for a new field – "Ecological Ethics"

Bioethics has served at least informally as the model for a more practically relevant applied ethics discipline for a number of environmental philosophers, including notably environmental pragmatists such as Norton and Light (Light 2003a; Norton 1991; 2005a; 2008a). In addition, the "policy turn" advocated by Frodeman and embraced by the environmental philosophy programme of the University of Northern Texas may have also been influenced to some extent by the bioethics model although he does not draw explicitly on pragmatism or the bioethics model in recent publications (Frodeman 2006; 2008b; Minteer and Collins 2008: 490). I will discuss Norton's promising but controversial work in relation to sustainability and the adaptive management paradigm in some detail in the next chapter (Norton 2008a: 590-591).

I do not have space to give similar detailed consideration to the positions of other prominent environmental philosophers also advocating reforms of environmental ethics driven by concern for greater practical relevance. However, I believe that aspects of the discussion in this chapter may have

some relevance for the position of Light in particular. Frodeman advocates a quite general reform of the practice of environmental philosophy and indeed academic philosophy more generally. While I believe his position is very well motivated and relevant, I do not have space here to critically assess the details of his proposals adequately[1]. In addition, Robert Hood has also speculated on the potential benefits for a more practically relevant environmental ethics by drawing parallels with bioethics methodology, and particularly the case-based casuistry which Jonsen and Toulmin have championed (Jonsen and Toulmin 1988).

The proposal of Minteer and Collins is based on the correct observation that academic environmental ethics has pursued a primary mission of trying to provide rationally compelling, very general, and most commonly nonanthropocentric moral grounds for the protection of wild nature and biodiversity. They suggest that one casualty of that very general and ambitious project has been the limited attention paid to the more immediate and specific ethical problems that exercise ecological researchers and conservation managers. Thus environmental ethicists have largely neglected to consider the practical ethical dilemmas troubling the biologists and conservation managers responsible for carrying out the nature protection role that nonanthropocentric ethics has usually been thought to underpin (Minteer, Collins, and Bird 2008: 475-476; Minteer and Collins 2005: 1804).

Minteer and Collins note that ecological researchers and conservation managers have become increasingly conscious of the centrality of the philosophical and ethical challenges faced by their professions. Finding themselves more frequently immersed in vexing ethical debate, some have turned to philosophers in the hope of assistance[2,]. Minteer and Collins consider that the ethical issues facing ecological researchers and conservation and environmental managers can be placed largely into two general categories. Firstly, many conservation measures or research activities aimed at the protection of populations or ecosystems meet opposition from animal welfare and animal rights advocates concerned about the impact of these activities on the welfare of individual organisms (Minteer and Collins 2008: 493-495). The classical examples of such conflict involve conservation management plans to 'cull' (kill) significant numbers of individual animals to reduce populations to levels that will not damage the ecological 'health' of a particular biotic community or ecosystem.

The other major category of ethical issue which they identify centres on the rightfulness of ecological interventions motivated by conservation research interests and often more specifically, indigenous species conservation management goals, when such interventions come with a significant

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[1] Frodeman's claim that philosophy needs to fulfil an essential role as transdisciplinary intermediary and facilitator of dialogue across disciplinary boundaries overlaps considerably with Norton's project discussed in Chapter 5. I will also return to discuss Frodeman's important work briefly in the Conclusion to this dissertation.

[2] However, as the philosopher Michael Nelson notes, philosophers are not always perceived by those from other disciplines as proving themselves to be useful. Indeed, he says that he was informed by an ecologist colleague ". . . that it is sometimes hard to tell the difference between a philosopher who is trying to be helpful and one who is not" (Nelson 2008: 611).

degree of risk of further disruption and even the local extinction of wild species. Minteer and Collins give a classic example of such concerns arising in relation to "heroic" interventions to relocate individual species threatened with extinction to a completely new location in order to "save the species". Such relocations can effectively cause the local extinction of the species in what was its natural habitat (Minteer and Collins 2008: 495).

Minteer and Collins state that they intend their proposed new field of ecological ethics to be much more than just ". . . opening up a new line of inquiry emerging out of environmental ethics" (Minteer and Collins 2008: 490). Clearly reinforcing the formative influence of the bioethics model for their proposal, they state that the new field should be:

> . . . more interdisciplinary and problem-focused than traditional environmental ethics; it is not simply an isolated disciplinary evolution in philosophy but emerges out of the intersection of the environmental research and management sciences (ecology, conservation biology), applied ethics (especially environmental, animal, and research ethics) and the social and policy sciences. Furthermore, ecological ethics is presented as displaying a stronger orientation toward case-based analysis and a general empirical temperament and approach. *These are hallmarks of analogous approaches to ethics in other areas of science and technology such as biomedical ethics and engineering ethics* – but are attributes rarely found in conventional environmental ethics.
>
> (Minteer, Collins, and Bird 2008: 477-478, my emphasis)

Thus the authors claim that ". . . ecological ethics is a logical next step in developing a pragmatic ethics for the environment" (Minteer and Collins 2008: 490). They continue:

> Just as bioethics provides a critical *intellectual and problem-solving service* to the biomedical community, ecological ethics can help inform and improve ethical decision making in the ecology and conservation communities.
>
> (Minteer and Collins 2008: 483, my emphasis)

Thus Minteer and Collins envisage a growing force of ecological ethicists contributing an analogous but specifically relevant "service" to ecologists and environmental managers. And their proposed field, like bioethics will also need to be pragmatic, pluralist, case-oriented and have a general empirical temperament and approach. These are all qualities which they note have generally been absent in an environmental ethics that has had a prevailingly axiological and metaphysical emphasis, and a monistic, holistic and nonanthropocentric theoretical orientation (Minteer and Collins 2008: 486-490).

Based on my review of the "methodology wars" of bioethics in Chapter 2, I certainly concur with their conclusions regarding the contemporary dominance of pluralist, empirically oriented, case-focused and broadly pragmatic methodological approaches in bioethics. What I believe must be carefully examined is the plausibility of the assumption that adopting similar methodological commitments virtually guarantees the emergence of a similar degree of practical relevance for the

proposed new field of ecological ethics. Bioethics is not a field of unmitigated success and universal satisfaction. There are ongoing and important fine-grained concerns and controversies regarding methodology and ethical justification in bioethics which I have described in Chapter 2, some of which I will argue suggest at the very least significantly greater challenges for the new field of ecological ethics than those that Minteer and Collins acknowledge. Bartha's model will be used to evaluate more rigorously the implicit analogical argument which Minteer and Collins assume when they seek to draw on bioethics experience to both inform and support the development of ecological ethics. I will thus explore the possibility that the bioethics model may indeed yield crucial lessons for those seeking to reform environmental ethics but not necessarily just the most obvious and welcome lessons that Minteer and Collins identify.

4.3 Evaluating the implicit analogical argument

I now turn to evaluate the role that analogy with bioethics performs for the proposal of Minteer and Collins for a new field of ecological ethics. Bartha's conventions and procedures described and trialled in Chapter 3 will again be employed in this evaluation. I will first restate the implicit analogical argument in the tabular format of Hesse as adapted by Bartha. My representation of that argument again involves the specification of the relevant positive analogy between the two fields, P and P*; negative analogies, A_r and A_r*; the source domain argument conclusion, Q, and the hypothetical conclusion of the target domain argument, Q*. The negative analogies are listed later in Table 4.2 when I turn to consider possible critical differences between the two domains. I believe that the implicit analogical argument assumed by Minteer and Collins can be fairly reconstructed as follows:

Table 4.1: Tabular reconstruction of Minteer & Collins' informal analogical argument (Following Bartha 2010: 14-15)

Bioethics (S)	Ecological ethics (T)
P A pluralist, contextualist, empirically orientated, case-focused and thus broadly pragmatic methodology has rapidly evolved during the last 30 years	P* The proposed new field is to *adopt* similar pragmatic methodological commitments and practices
A_r Negative analogies – see Table 4.2	$\sim A_r$*
Q (Conclusion) Analytic moral philosophers have contributed significantly to the rise of a strong and practically influential discipline which provides a valued "ethical advisory and problem-solving service" to biomedical clinicians and researchers	
	Q* Environmental philosophers will become key contributors in the emergence of a strong and practically relevant field of ecological ethics that will provide a similar "ethical advisory and problem-solving service" to ecologists and environmental managers

4.3.1 Defining the prior association

Following the procedure applied in Chapter 3, the first step in evaluating this reconstruction of the implicit analogical argument assumed by Minteer and Collins is to identify and detail the nature of the prior association in the source domain, bioethics.

Minteer and Collins clearly seek to gain a greater degree of credibility for the proposed field of ecological ethics by highlighting the fact that the methodological commitments they are recommending for this new field have already played a critical role in the practical relevance and effectiveness of bioethics. They seek to gain support for their proposal by an analogy with the later

evolving, positive developments in bioethics methodology in contrast to the negative conclusion drawn through analogy with the failure of the top-down model of applied ethics discussed in Chapter 3. The conclusion of their informal argument asserts that the influence and apparent success of bioethics in providing a needed service to clinicians and to biomedical researchers will be replicated for environmental scientists and practitioners by the new field of ecological ethics by emulating the pragmatic methodological commitments of bioethics (Minteer and Collins 2008: 483).

This reconstruction of the analogical argument suggests there must be some form of causal relationship between the positive analogy, P, and the source domain conclusion Q as illustrated in Figure 4.1 below. By this I mean that the prior association appears to presume that it has been the adoption of the pragmatic and pluralist methodological commitments that now prevail in bioethics that has caused the "success" and "practical influence" of philosophical bioethics. It is only by presuming such a causal relationship in the target domain that greater credibility and confidence can be claimed for the proposal to adopt the same methodological commitments in the new field of ecological ethics, irrespective of the obvious differences in subject matter and social context involved. By adopting the right methodology as demonstrated by bioethics, the suggestion is that the new field of ecological ethics will be assured to attain a similar degree of practical relevance and influence. This assurance is then only justified in this sense if there really is a strong causal relationship in the source domain between what may be termed broadly as a pragmatic methodology and the development of a practically relevant and influential role for moral philosophers within bioethics.

Figure 4.1: Tabular representation of the causal direction of the prior association

Bioethics (S)				Ecological Ethics (T)	
P	←	Horizontal relations	→	P*	[Positive analogy]
Vertical causal relations				Possible vertical causal relations	
↓				↓	
Q					
	←	Possible horizontal relations	→	Q*	[Hypothetical analogy]

(Bartha 2010: 24, amended)

The rise of pragmatic methodological commitments in bioethics was a practical response to the recognition that monist and top-down approaches were inadequate. Moral philosophers already immersed in the ethical issues of biomedicine sought workable alternatives. Thus as I described in Chapter 2, a range of alternative methods, from the most influential, principlism, to various forms of casuistry, contextualism, narrative ethics, feminist ethics, virtue ethics and others were ventured as alternatives to the unworkable top-down applied ethics model. Explicit reference to pragmatism in bioethics did not become prevalent until the 1990s and came to greater prominence particularly following the article of Miller et al. which proposed a "clinical pragmatism" and Glen McGee's substantial *Pragmatic Bioethics*[3] (McGee 1999; Miller, Fins, and Bacchetta 1996). However, as Arras has argued, a decidedly pragmatic methodological bent significantly predates more recent explicit advocacy for a "new pragmatism", as yet another official contender to be "the methodology" of bioethics (Arras 2002: 56-58).

Arras, drawing comparison with the model of "free-standing legal pragmatism", identifies a significant grouping of bioethicists who subscribe to at least some of the main methodological commitments of pragmatism although without necessarily making explicit reference in their work to the canon of the classical pragmatists; Peirce, James and Dewey or the neo-pragmatism of Rorty. He

[3] Susan Wolf's 1994 article is one of the first explicit discussions of the significance of pragmatism for bioethics (Wolf 1994).

suggests that such bioethicists are engaging in free-standing pragmatism in bioethics [4]. He notes that the key features of such a "pragmatic", but not explicitly "pragmatist" bioethics include[5]:

> . . . paying heed to the richness of factual detail in which moral problems are embedded, achieving the "best results" in concrete circumstances, an eclecticism with regard to competing philosophical "grand theories", flexibility with regard to the use of moral principles, the denial of foundationalism, and in some instances a stance of solidarity with the marginalised and oppressed sectors of our society.
>
> (Arras 2001: 69-70)

The process by which pragmatic methodological commitments have come to the fore within clinical bioethics can itself be usefully understood as providing an example of "social learning" consistent with the empirically-oriented methods of democratic social inquiry advocated by Dewey. Belief in the prospects for top-down applied methods were initially "trialled" by moral philosophers contributing to medical ethics and lessons were rapidly learnt as a result of this engagement with practice. As Norman Daniels has candidly remarked on his personal attempts to apply such top-down methods in early engagements with medical ethics ". . . I quickly learned that my working picture of "applied ethics" was useless" (Daniels 1996: 11).

The range of methods that did "work" at the clinical level tended to be much more attuned to the empirical and contextual details of ethical issues, more concerned about the relevance of similar cases and often drew on methods such as Rawls' method of "reflective equilibrium" which fosters negotiation in both directions between the "top-down" implications of principles and particular "bottom-up" judgments regarding individual cases. Thus those methods proven to work in practice did so because they had incorporated pragmatic methodological commitments, most necessarily, a degree of eclecticism and instrumentalism regarding grand theory and flexibility regarding the application of principles[6].

There was also an essential need for moral philosophers engaging in this domain to develop the necessary practical understanding and skills to be able to contribute within the healthcare services environment. That is, engaging effectively with practice was surely not just a matter of assuming the right methodological commitments but also required the development of the necessary skills and relevant knowledge to work in this area. And as Moreno emphasises, these skills have included the ability to work cooperatively with patients and healthcare professionals and others, often with the

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[4] The contrasting group of explicitly pragmatist philosophers he refers to as "canon dependent pragmatists (Arras 2001: 70).

[5] I add an additional critical feature to this list shortly. That is greater concern with collaborative process rather than the more traditional focus on the task of the individual moral judge.

[6] As I note in my discussion in Chapter 2 regarding the role of the influential textbook on biomedical ethics by Beauchamp and Childress, the key achievement of this book was to incorporate moral philosophy into medical ethics in just such a "pragmatic" manner.

expectation of reaching a working consensus regarding a case rather than personally delivering a definitive ethical judgment (Moreno 1995: 147-151).

The principlism attributed to Beauchamp and Childress which has become the common target of criticism not only for pragmatists but also notably casuists, feminists, narrative ethicists and social scientists can itself be argued to be "pragmatic" within this more inclusive sense. This claim is made even more compelling since there is good reason to consider that the method of reflective equilibrium which was co-opted by Beauchamp and Childress from their 1994 edition onwards is itself a distinctively pragmatic method (Beauchamp and Childress 1994; Arras 2001: 75-77).

Critical elements of pragmatic methodology without the canon of pragmatism also effectively came to the fore at the policy level in bioethics at its very beginnings, with the first government commission on bioethics as described in Chapter 2. Broadly pragmatic procedures were adopted at the level of policy-making in a manner consistent with the way in which the commitments of pragmatism (and those of Dewey in particular) evolved at the level of clinical bioethics without explicit reference to the classical or neo-pragmatist canon. An emphasis on collaborative, consensus-making process has since prevailed to varying degrees throughout the institutions of bioethics, from federal and state bodies to hospital level ethics committees and institutional review boards (Moreno 1995: 88-103).

My attempts to define the prior association up to this point, has centred on explicit features of pragmatic method that are effectively inversions of the commitments of the failed top-down model of applied ethics. That is "pragmatic" methods are pluralist rather than monist; empirically focused rather than primarily abstract in orientation; flexible rather than rigid regarding the role of principles; coherentist rather than foundationalist and so forth. Notably, in Chapter 2, I also described in some detail the manner in which a number of social, political and institutional factors combined to create a moral vacuum in the healthcare services by the 1970s leading to the strong demand for, and social legitimation of, the contributions of moral philosophers.

That discussion was most relevant to understanding how moral philosophy of any variety first came to have a significant influence on the new field of bioethics. It did not focus on the constraints of the wider social and political environment that have influenced the on-going 'adaptation' of bioethics methodology. But it surely must be in response to such on-going constraints that the more 'adaptive' features of pragmatic methodology must have proven their mettle in competition with other methods in the "methodology wars" of the field.

I am therefore concerned with identifying the critical *implicit* social and political constraints under which bioethics operates and also perhaps the more specifically positive features of pragmatic approaches to bioethics that may have played an important role in 'adapting' bioethics and bioethicists to the resulting 'environment' of contemporary biomedical practice. Fortunately,

supporting that end, Christopher Tollefsen has identified what I believe are the critical aspects of the specifically moral and political context within which pragmatic methods have emerged and thrived in bioethics (Tollefsen 2000). Firstly, Tollefsen highlights the significance of an implicit background agreement that influences all levels of bioethics in relation to the most general aims of the field. It is this implicit consensus which he argues guides the considerable consistency of policy and of moral decision-making achieved in the field despite acrimonious methodological controversy[7]. He describes that crucial context-setting framework which so influences the way bioethics is pursued in practice in these terms:

> A broad anticipation and approval of a steady and progressive dialectic between scientific advancement and human well-being sets the dominant framework within which consensus is sought as the impetus for specific decisions and policies. Within this framework, the expectation that science *will* not be held hostage to ethical or political concerns and the slogan that science *must* not be so held blur together. It is then left to the various interested parties, precisely insofar as they accept the blurred slogan and expectation, to arrive at a consensus as to which advances are to be accepted when, and which are to be put off to the future. Those who occupy a position outside the framework are, needless to say, not part of the resulting consensus.
>
> (Tollefsen 2000: 78, his emphasis)

Callahan also provides a succinct description of the historical and social challenges conditioning the implicit consensus Tollefsen discusses. He notes that bioethics evolved in response to two fundamental and interrelated developments in the U.S.A. and other leading industrial societies by the 1960s. The very broad-sweeping developments that Callahan emphasises were, on the one hand the great advances in the biomedical sciences and resulting biotechnological innovations and on the other the great social transformation of the traditional family and other social institutions towards the greater liberation of the individual. Callahan argues that the decade of the 1960s then:

> . . . brought together the medical advances that seemed to foreshadow the eventual conquest of nature and the cultural changes that would empower newly liberated individuals to assume full control over their own destinies. There was in this development both great hope and ambition, and perhaps great hubris, the prideful belief that humans could radically transcend their natural condition . . . The advent of bioethics can be seen as the principal social response to these great changes.
>
> (Callahan 2003: 279-280)

I believe that Tollefsen's and Callahan's descriptions can be combined to sharpen understanding of the most pertinent aspects of the social and political 'environment' in which pragmatic methodologies have proved well adapted. That is, the discourse and methods of bioethics have needed to be 'fitted' to easing the tensions between the demands of established moral frameworks and traditions and the

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[7] Daniels for instance, rather dismissively refers to the sometimes heated methodology debates in bioethics as the "methodological wars" (Daniels 1996: 333-352).

opportunities and threats that are posed by powerful new biotechnologies and related great expectations for improved human welfare and individual freedom. There is an important point that should be noted here because of its significance for later discussion. The implicit consensus regarding scientific progress and human freedom that Tollefsen highlights, and also the hubristic belief in the benefits of human dominion of nature that Callahan ties to the origins of bioethics, are both attitudes and beliefs that contributors to environmental ethics have frequently sought to challenge.

Tollefsen also identifies the critical philosophical commitments of a pragmatic bioethics making it well adapted to the prevailing social and political constraints within which the field must operate. These commitments are identified through his critical review of the contributions to the explicitly pragmatist work, *Pragmatic Bioethics*, edited by Glenn McGee (McGee 1999). Tollefsen diagnoses the extent to which the positions of the various contributors to McGee's book align with the more anti-realist side of pragmatism regarding "truth", represented by Rorty's views, or the realist side represented by Susan Haack's position, which owes more to the classical pragmatism of Peirce than to Rorty (Tollefsen 2000: 85; Haack 1998; Rorty 1979). In his assessment they largely tend towards the Rortyan rejection of realism with regard to the "truth" and likewise objectivism with regard to the "good". Given he takes the views expressed in this book as indicative of the direction that an increasingly pragmatic bioethics is moving towards, Tollefsen is concerned by this assessment, as he is by many of the substantive views the authors express in the book (Tollefsen 2000: 87-99). However, what I find immediately instructive to my interest here is the manner in which he achieves this diagnosis.

In brief, Tollefsen argues that Rortyan (anti-realist) pragmatism makes a strong distinction between the private and public domains and between respective modes of individual and social intelligence. Given this understanding of the social and political domain, consensus is the only direction in which inquiries and deliberations in social contexts can move. But when our inquiries and deliberations concern more private matters such as the meaning of life, religious or moral belief and so forth, the other form of intelligence applies. It is then said that there can be neither consensus nor any external guiding standard beyond what works (Tollefsen 2000: 86). Significantly also, according to Rorty the form of social consensus that we have actually achieved through our social deliberations is precisely the contemporary form of a liberal democracy according to which,

> Human perfection becomes a private concern, and our responsibility to others becomes primarily a matter of permitting them as much *space* to pursue their private concerns – to worship their own gods, so to speak – as is compatible with guaranteeing an equal amount of *space* to all[8]. The tradition of religious toleration is extended to moral toleration.
>
> (Rorty 1998: 24, cited in Tollefsen 2000: 86-87, my emphasis).

Tollefsen then suggests that biomedicine is a domain ripe for analysis by Rortyan style pragmatism since medicine raises so many issues at the intersection of the private and public, "between social forms of theoretical and practical inquiry, and private concerns with human perfection" (Tollefsen 2000: 87). He notes that many debates in bioethics shift back and forward between the "public" boundaries of wider social concern and the "private" concerns of more personal and substantive commitments and concerns. And these boundaries refuse to be tightly drawn. Tollefsen suggests that a pragmatic bioethics that helps medicine to clarify these borders in socially and politically acceptable ways will be instrumental to that field's ability to develop a self-understanding that facilitates its own progress. And of course such progress must be consistent with the implicit underlying framework assumptions of bioethics already discussed, which assume the happy conjunction of continuing biotechnological developments and improvements in individual well-being and freedom (Tollefsen 2000: 87).

I conclude that a pragmatic bioethics has 'evolved' into an effective, one might say even pragmatic fit with the wider social and political context outside the clinic as well as the more immediate demands of practicality and effectiveness within the clinical setting. And two factors have been most essential to that adaptation. Firstly, there has been the need to work within the broad but largely implicit consensus that Tollefsen describes regarding the beneficent role of biotechnological developments in supporting progress that improves individual human well being and freedom. Secondly, there has also been an implicit understanding of the need for a strong distinction between public and private domains and between the respective modes of social and individual intelligence to be applied within these two domains. Consensus has been the object of inquiry in the public domain. In the private domain of clinical ethical decision-making it is the individual patient's often unexamined conception of the good and what "works" that is determinative[9] (Tollefsen 2000: 86).

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[8] I will argue later that the liberal and pragmatic solution to the problem presented by competing conceptions of the good as describes here by Rorty as requiring the simultaneous pursuit of potentially incompatible conceptions of the good within private spaces, is also unfortunately a ticket to inevitable conflict with regard to our common and thus "public" natural environment.

[9] The commitments of the clinical pragmatists to bringing an explicit focus on consensus as the end of ethical "problem-solving" within the clinic would seem to contradict this contention. However, in the common circumstances of the absence of a shared substantive conception of the good amongst the contributors towards "ethical consensus" regarding a particular case, it is of course the patient's (private) conception of the good which can be expected to have the most weight in contemporary society.

The main points from this exposition of the prior association of the analogical argument from Table 4.1 need to be summarised. The overall task has been to explore the hypothesis that there is a direct causal linkage between pragmatic methods in bioethics coming to prominence and the practical relevance and success of the field.

In the first part of this discussion I sought to justify the assumption of Minteer and Collins that the methodology of bioethics is indeed pragmatic. I made the point that although many bioethicists do not explicitly identify themselves as "pragmatists", Minteer and Collins are right in their assessment that most bioethicists do adhere to a set of methodological commitments that are broadly speaking "pragmatic". I also noted that the methodological commitments that have become virtually defining of the contemporary field — pluralism of theory and principle, contextualism, coherentism, and an empirical and case-focus — are largely the inverse of the important commitments of the failed top-down model of applied ethics. Thus I argued that the ubiquity of these explicit methodological commitments today can be understood to reflect the successful operation of a process of Deweyan social learning in bioethics. This process of social learning has led to the better adaptation of the methods of the field to the particular constraints of clinical practice. Bioethics is indeed a pragmatic endeavour and pragmatic methodological commitments appear intimately related to the practical relevance and effectiveness of the discipline.

Above, I have also sought to emphasise a more subtle but no less important feature of the 'adaptive fit' of bioethics methodology to the pressures and constraints of the bioethical 'environment'. Most of the discussions on bioethics methodology in the literature focus on the explicit methodological commitments described above. But largely implicit assumptions regarding political philosophy have a defining influence on the social and political constraints within which bioethics methods are enacted. Most significant here is widespread acceptance of a strong division between public and private domains and a related distinction with regard to the kind of inquiry relevant to each domain. Forging some degree of consensus, always constrained by an overarching concern for the protection of personal autonomy, is taken as the sufficient goal for ethical issues that are regarded as of public significance. For those matters which can be regarded as private, the goal is simply to find solutions that work to satisfy rationally unconstrained notions of individual human happiness. I also argued such background commitments in political philosophy are consistent with the anti-realist pragmatism of Rorty. These broad and implicit presumptions regarding public and private domains effectively supply the cultural 'operating instructions' or 'political skills kit' necessary for the specific deployment of the explicitly acknowledged and significantly pragmatic methodological commitments of bioethics in practice.

I suggest that these largely implicit 'operating instructions' informed by a pragmatism that is comfortable within the cloak of liberal individualist political philosophy, play an essential part in the effective functioning of bioethics. That is these implicit social and political commitments may be just

as necessary to the practical relevance and success of this field as the frequently debated explicit methodological commitments. Making the role of background commitments informed by political philosophy explicit is important to my preparations for evaluating the plausibility of generalising the prior association from the source domain bioethics to the target domain, ecological ethics. This is because, although the implicit role of a pragmatic and liberal individualist political philosophy along the lines advocated by Rorty may have been instrumental to the practical relevancy of bioethics, whether or not the same or similar kinds of background assumptions will work for or against an explicitly pragmatic ecological ethics is another matter.

My explication of the prior association is now complete. I conclude that there is indeed a causal relationship between the evolution of broadly pragmatic methodological commitments in bioethics and the continuing practical relevance and effectiveness of the field. I caution however, that within this causal relationship, there is a significant role also played by particular social, political and institutional factors and of the 'adaptive fit' between bioethics practice and a set of largely implicit 'cultural operating instructions' or a 'political skills set' as much as a pragmatic methodology "tool kit"[10].

4.4 Identifying critical factors and possible negative analogies

Continuing to follow Bartha's procedures as trialled in Chapter 3, the next step in evaluating the informal analogical argument is to determine which, if any, features of the source and target domains are relevant to the argument. This involves distinguishing between critical features which play an essential part in the prior association and secondary features which play a part but are not essential (Bartha 2010: 102-104). Working on this requirement will then lead into, and to some degree overlap with Bartha's final step which involves the assessment and justification of the potential for generalisation of the prior association to the target domain (Bartha 2010: 102-105).

The current step therefore requires an assessment of factors in either the source or target domains which may have critical relevance to the argument. And firstly, I must determine if there are critical factors thus far unacknowledged that may undermine the prior association which I have defined as a set of causal relations between P and Q. I must also identify any features of the target domain that might block the generalisation of the prior association to that domain. These would be negative analogies of such critical relevance that they rule out the prospect of a similar causal relationship

[10] Minteer and Collins make explicit reference in their proposals for the new field of ecological ethics to include the task of "building a new tool kit for ecologists and biodiversity managers" (Minteer and Collins 2005: 1803, my emphasis).

between P*; the adoption of pragmatic methods in ecological ethics, and Q*; the expected necessary development of an equivalent practical relevance of ecological ethics to that already achieved by bioethics. The potential negative analogies to be discussed are summarised using Bartha's revised tabular format below in Table 4.2.

Table 4.2: Tabular representation of the potential negative analogies (Following Bartha 2010: 14-15)

Bioethics (S)	Ecological ethics (T)
P [Positive analogy, see Table 4.1]	P*
A_1 A unique series of contingent social, political and institutional factors led to the "secular ordination of bioethicists" (Engelhardt 2002b: 78-80)	$\sim A_1$* Increased interest in ethics from ecological scientists but the wider socio-political and institutional context less favourable than it was for bioethics
A_2 An emphasis on the value of individual patient autonomy enables many ethical issues to be moved to a private realm where the individual's conception of the good is sovereign	$\sim A_2$*The special character of environmental issues involves open access and collective action problems which are necessarily public
A_3 Agreement on ethical issues within pragmatic bioethics has been achieved within the supportive context of an implicit societal consensus on the benefits for individual well being and freedom that result from biotechnological progress	$\sim A_3$*The related implicit societal consensus that continuing economic growth and exploitation of natural resources benefits individual well being and freedom defines an antagonistic context for ecological ethics
Q [Conclusion] See Table 4.1	
Q*	

4.5 The relevance of "originary" historical-cultural factors

The first significant feature of the source domain that must be assessed for criticality to the argument ($A_1 : A_1$*) is not a feature of contemporary bioethics but rather the historical confluence of social, political and institutional factors which brought the field into being. I have described the relevant social, political and institutional changes and developments in Chapter 2 which allowed moral philosophers to rapidly gain a socio-politically legitimated status as secular moral experts in the domain of biomedical ethics and biomedical research ethics. The key question is just how critical the particular circumstances which brought bioethics into being were in terms of allowing its rapid establishment, and then its ongoing evolution as the most "successful branch of applied ethics". My concern is that the ecological domain may lack parallel favourable social, political and institutional circumstances to those supporting the rapid rise of bioethics. I acknowledge that ethical issues and ethical controversy have certainly begun to press ecologists and ecological managers in much of their work. And Minteer and Collins note that a major symposium on ecological ethics was held at the 2006 Annual Meeting of the Ecological Society of America. Both prominent ethicists and ecologists contributed to that symposium, considering the various challenges for ecological ethics as a new area of inquiry. A tangible outcome for example has been the publication of enough key contributions to that symposium to make up a full issue of the journal, *Science and Engineering Ethics* (Minteer, Collins, and Bird 2008: 478).

No doubt some people in the environmental and ecological sciences and management fields may consider that academic philosophers, along with professionals from other disciplines outside ecology such as social scientists and lawyers, may be able to make constructive contributions in response to the ethical challenges they face. However, the social and political forces which brought moral philosophy to prominence in the formerly exclusive domain of medical ethics were not limited to the internal concerns of the medical profession with better addressing the new ethical dilemmas spawned by biotechnological advances in treatment methods. As I discuss in Chapter 2, there were also important social, political and also institutional[11] pressures which led to the socio-political legitimation of bioethics as performing the role of an external ethical authority within this domain. I am not aware of a similar socio-political pressure for an external, ethical oversight of the ecological domain. This is therefore a potentially relevant aspect of the negative analogy.

The essential requirement highlighted by Bartha's evaluative criteria is to be confident that a negative analogy does not violate the requirement that there be "no-critical-difference" between

[11] Institutional pressures include the concerns of corporate medicine to minimise legal risk and financial costs.

source and target domains. Should a critical difference be established, the plausible generalisation of the prior association from the source to target domains may well be blocked.

A number of very significant social and institutional changes and political developments were described in Chapter 2 which all contributed to the rapid emergence of the new field of bioethics during the 1970s. These included factors such as: (1) the widely acknowledged challenge presented by novel ethical dilemmas resulting from advances in biomedicine; (2) the less widely acknowledged significance of the undermining of the traditional ethical self-regulation of medicine along with traditional religious moral authority regarding healthcare; (3) concerns regarding the risk of costly litigation for health institutions in relation to these new ethical uncertainties; (4) highly publicised scandals regarding abuses of patient autonomy in biomedical research projects; and (5) a bi-partisan political commitment to establish ethical guidelines to prevent such abuses and defuse public outcry regarding other contentious issues in healthcare and biomedical research, particularly the use of embryos in research. Exactly how this complex of social, institutional and political factors combined in the rise of the new discipline of bioethics would require a much more sophisticated historical analysis than the historical sketch from secondary sources which I have provided in Chapter 2. Nevertheless, I think it reasonable to assume that there were indeed a number of contingent social, political and institutional factors that played significant causal roles along the way to moral philosophy's quite abrupt attainment of an influential and socially and political legitimated position within the new secular discipline of bioethics (Engelhardt 2002b: 76-80).

Recognition of the central causal role of the particular constellation of factors contributing to the rapid rise of bioethics issues a strong challenge to the one-way causal model offered so far in my reconstruction of the prior association of Minteer and Collins' analogical argument. The causal pathway discussed, presumes that the adoption of pragmatic methodological commitments (listed under the positive analogy, P) contributed to the acceptance of an influential and practically relevant role for moral philosophy in bioethics. The disturbing suggestion emerging from this discussion is that the significance of the particular set of social, political and institutional factors might be such that the causal pathway might better be understood as working in reverse to that so far assumed. That is, following the constellation of social, institutional and political factors noted, moral philosophy was allowed to take on an influential practical role in biomedical ethics. The rapid failure of the initial top-down model of applied ethics then placed the newly socially and politically legitimated discipline of bioethics under pressure to justify an influential role that had already been granted on the understanding that moral philosophy would be able to apply a rational and coherent methodology. On this alternative causal model, pragmatic, pluralist and case-focused methodological commitments then rapidly emerged and evolved as a response to the demands of practicality and not vice versa. Assuming that there is no similar confluence of social, political and institutional factors in the domain

of ecological ethics, this re-interpretation of the prior association would reflect a critical difference between the two domains and thus threatens to invalidate the analogical argument.

As I have noted, Bartha makes good use of a rhetorical device in his evaluations of analogical argument. That is to imagine the evaluative process as involving a dialogue between an enthusiastic but reasonable advocate for the virtues of the analogical argument, and a reasonable but sceptical critic. The analogical reasoning is said to succeed if it survives the critic's scrutiny (Bartha 2010: 5). Following the argumentative model offered by this rhetorical device, the 'advocate' for this reconstruction of Minteer and Collins' analogical argument could surely be expected to provide further arguments in its defence.

I think it is reasonable for the advocate to concede that the historical circumstances that led to the rapid rise to prominence of moral philosophy in bioethics may well not be replicated in the ecological domain, but to nevertheless argue that the catastrophic significance of these historical circumstances for the validity of the original argument has been overstated. They can assert that methodological developments have surely been important to the success of bioethics. The fact that a top-down model of applied ethics was rapidly abandoned and other methods trialled, including notably the shift to broadly pragmatic methods, demonstrates that there was a clear relationship between particular methods and practical relevance. There is still good reason to claim that the field has maintained and increased its relevance to practice through a willingness to experiment with and adopt the most effective methods. Thus the emergence of pragmatic methodological commitments in bioethics can still be argued to have a causal link to the practical relevance of the field and in particular to maintaining its 'fit' with cultural constraints thus ensuring its ongoing success.

The advocate could also emphasise that the argument does not propose the very expansive contention that the entire field of environmental ethics, simply by adopting pragmatic methodological commitments, will be transformed into a practically relevant and influential field of applied ethics like bioethics. Rather, the argument is quite specific to the proposals of Minteer and Collins for a new field of inquiry to be known as "ecological ethics". And as discussed above, there is significant interest at least internal to the ecological community regarding the benefits of developing such a field. Given that pragmatic methods have at the very least been associated with the effective functioning of bioethics as a practically relevant discipline, then there seems good reason to think that Minteer and Collins are justified in their relatively modest expectations for the success of a pragmatic field of ecological ethics if not environmental ethics more generally.

4.6 Critical differences between biomedical and 'ecological patients'

The second potentially critical factor to be considered is the question of the significance of the differences in the primary subject matter of bioethics in comparison to ecological ethics ($A_2 : A_2$*). The focus of most work in bioethics is on ethical issues that concern individual patients whereas the 'patients' for ecological ethics are whole populations of organisms, species, biotic communities and ecosystems. There is quite naturally a "case-focus" in bioethics. And although of course there is also a focus on policy, the focus of bioethics policy is also largely centred on issues that can be broadly construed as concerning the treatment of individuals. However, since Minteer and Collins discuss "cases" in ecological ethics and recommend the development of a database of "case studies" to build an equivalent "case literature" to that which has evolved in bioethics, the differences between the domains are somewhat blurred. But "cases" and "case studies" in ecological ethics are clearly of a very different kind to those of bioethics. What must be determined is whether or not the differences of subject matter are of such significance as to undermine the analogy made with the source domain of bioethics.

Much of the literature of environmental ethics has of course been concerned with attempts to establish direct moral duties to collective or holistic entities such as I have described in Chapter 1. This literature has also led to no end of controversy and little basis for practical agreement. The question of the significance of the special moral desiderata of environmental ethics was addressed in relation to the top-down analogy discussed in Chapter 3. Minteer and Collins seek to neatly side-step this controversy and thus the consequent negative analogy with bioethics by endorsing a pluralistic approach to environmental values and an eclectic relationship to ethical theories. But even leaving aside the vexing question of the moral status of 'ecological patients', the objects of ecological research and management intervention are also usually the subject of much wider community or public interest in contrast to the private concern of the biomedical patient with individual well being. In many cases, what I am terming 'ecological patients', either particular populations of nonhuman species, entire biotic communities, ecosystems and even the biosphere in total, are the subject of significant interest for some wider human "community" or "public". A very great range of concerns may apply here as has been addressed within the environmental ethics literature. These range from aesthetic, spiritual, recreational and scientific interests to a most basic concern centred on survival, where the 'health' of the 'ecological patient' is essential to the survival and well being of a human community.

As I have already emphasised, one of the most important contributions of moral philosophy (as well as legal studies) to bioethics has been strong advocacy for respecting the autonomy of patients.

Historically there has of course been a significant battle against an established culture of paternalism within the medical profession which has been resolved at least formally through legal provisions ensuring that informed consent procedures are followed. The focus of moral philosophers (and lawyers) on the need to respect patient autonomy along with the political influence of patient rights movements emphasising the rights of patients to make choices as "health consumers", coincide with the important role that a private-public domain distinction plays in contemporary healthcare ethics as emphasised by Tollefsen (Tollefsen 2000). Based on this distinction, ethical issues that are understood to concern just the well-being of the individual patient can be largely relegated to the private domain of individual choice. The patient's conception of their own good is then regarded as sovereign in this domain, and thus as Tollefsen notes, whatever treatment outcome "works" to the satisfaction of the patient or their surrogate is sufficient. Those issues considered to be of public concern require the forging of a societal consensus in liberal democracies. And this public domain has proven much more problematic for bioethics as I have discussed in Chapter 2 (See Engelhardt 2002a; Trotter 2002b).

Although there are a significant number of public issues in bioethics that remain highly controversial such as abortion or euthanasia, there is also much agreement within bioethics (Moreno 1995: 18-35). That agreement has been very much facilitated by the primary focus of biomedicine on treating the health problems of individual patients. This focus, combined with the now prevailing emphasis on patient autonomy and rights means that a very great proportion, although certainly not all, of the ethical concerns of bioethics can be treated as private matters where the patient's opinion, based on their own conception of the good, whether well informed and considered or not, is regarded as sovereign. Moving ethical issues to the private domain successfully averts many potentially intractable political controversies that otherwise inevitably plague ethical decision-making in a pluralist society. Clearly some issues in bioethics cannot be assigned to the private sphere. For issues such as health justice, healthcare allocation and funding and most controversially in the U.S.A., the issue of providing adequate universal access to healthcare services, ongoing political controversy reigns. Significantly, the carefully argued positions of many bioethicists for improvements in healthcare coverage in the U.S.A. have had little traction in what is an openly political as well as ethical issue (Kuczewski 2002: 27-28).

While a substantial proportion of bioethical issues that concern individual patients have been made over largely for the individual to decide, thus averting the otherwise fraught political character of other issues in bioethics, there is I will argue no equivalent set of relatively unproblematic issues in ecological ethics. My claim is therefore that all or at least most ethical issues within the ecological or environmental domain have this "fraught political character". And as I have just noted, the well considered positions of bioethicists regarding fraught political-ethical issues such as the fundamental issue for any healthcare system of how access to that system is controlled, and the question of

universal health insurance cover, have little special influence on the wider political debate or the lack of ethical rationality concerning that debate (Kuczewski 2002: 27-28). To the extent issues in ecological ethics have a similarly "fraught political character", it must surely also be anticipated that the well argued positions of moral philosophers or moral philosophy-trained ecologists will have little special influence. And this has certainly already proved to be the case with the carefully considered writings of many philosophers working in environmental ethics. However, some of the terminology used by Minteer and Collins seems to contradict my claim regarding the unavoidably more contentious nature of ethical problems in the ecological domain. They make reference to the decision-making responsibilities of individual biodiversity or conservation managers, as well as the ethical responsibilities of the individual ecological researcher. It seems that their new field of ecological ethics is intended primarily to support the ethical deliberations of these individuals (Minteer and Collins 2005: 1810).

4.6.1 Hardin and the special character of environmental problems

I believe that further specification of the character of ethical problems within the ecological or environmental domain is required before I can proceed further here. Significantly, the sense in which Minteer and Collins use the terms biodiversity or conservation manager in these contexts presumably matches the special circumstances where wild lands or other natural resources are under the control of government agencies. Such land is thus held in public ownership with government officials having the responsibility to manage these lands or resources in the public interest. However, the circumstances under which such managers must function is clearly very different from that of the paradigmatic manager of private resources who may have very considerable decision-making freedom within the bounds of that which is profitable. The public lands biodiversity manager is inevitably subject to varying degrees of wider political pressure stemming appropriately from the reality that they are presiding over resources and deciding on matters that are of public interest.

The biodiversity and conservation management and ecological research roles that Minteer and Collins propose ecological ethics to serve are concerned with the protection or sustainable harvesting of wild species, lands and waters that have at some earlier time been brought under protective public ownership and control. The placing of these 'natural resources' under public ownership and control contrasts with the general movement in capitalist society towards private ownership of all lands and resources in pursuit of the goal of achieving the most efficient means of achieving maximum economic gain. The contemporary situation thus reflects a history of earlier successful efforts to place certain wild lands and other natural resources under public control to protect them from rampant economic exploitation and ecological degradation which otherwise had seemed inevitable. Government departments and agencies have thus been developed to act as the state's agents on behalf of public interests in the long term protection of these lands or natural resources. But these existing

protected lands and natural resources by no means represent all the critical biophysical 'resources' of wider public interest.

Although in the New World large areas are under such protection, of course, not all ecologically or environmentally critical terrestrial 'resources' are under such public administration. Forests, rivers and lakes represent clearly defined natural resources that have been subject to degrees of conservation protection. However, the wider public have finally started to become increasingly aware that the critical 'natural resources' essential for human survival and flourishing include many less clearly delineated and quantifiable dimensions of the biosphere. Most notably among such more ubiquitous 'resources' are underground aquifers, the oceans and the atmosphere. Most telling of the roles that such critical but much less tangible 'natural resources' play is that of the atmosphere in retaining just sufficient heat from the sun to support climate stability, an equilibrium now threatened by the steady increase in the concentration of greenhouse gases in the atmosphere since the industrial revolution. Thus there is very good reason to consider the character of the paradigmatic environmental problem or case as necessarily extending well beyond the special circumstances of state administered natural resources and endangered species programmes that Minteer and Collins focus on. Of course I acknowledge that these resources nevertheless remain a very major focus of attention for conservationists and environmentalists given that they are intended to be administered in the public interest.

As I noted in Chapter 1, the biologist Garrett Hardin's 1968 article, *The Tragedy of the Commons*, has provided an extremely influential, although as is now widely recognised, a significantly flawed model for understanding the special character of most environmental problems (Dryzek 2005: 29-30, 47-49; Hardin 1968; Barry 2007: 270). I will therefore briefly review central aspects of Hardin's model as well as some significant corrections provided by others which together should provide a more adequate conception of the particular character of environmental problems. I will then argue that an amended understanding of Hardin's thesis is most relevant to those environmental problems which extend beyond the boundaries of designated conservation areas and national boundaries to the global level.

Hardin's logic of the commons gains much of its impact from his use of a very effective and illustrative metaphor of the overgrazing of the common lands of a medieval village. From the point of view of individual self interest, the 'rational' action of a villager is to place additional cattle on the commons. The individual villager thus reaps the benefits from the additional stock while the costs of his action, in terms of the increased stress on the pasture if the ecological carrying capacity is exceeded falls on all the villagers. But if all the villagers apply this same logic of rational self-interest, they will all race to put more cattle on the commons while they still can so that the carrying capacity will be greatly exceeded and the pasture destroyed to the detriment of them all. Thus Hardin uses the metaphor of the medieval commons to illustrate the argument that the exercise of free access

and unrestricted demand for a finite resource ultimately degrades the resource through over-exploitation, temporarily or permanently. Hardin then generalises the "tragedy" metaphor to illustrate the risks of inevitable ecological degradation that the unrestricted logic of individual self-interest poses for all forms of finite natural system upon which human cultures depend. Thus decisions based on the private benefit of catching an additional net of fish, dumping additional sewerage or other waste, cutting down another tree or driving an extra kilometre when one could have walked, all engage the same logic of personal self-interest at a cost to the wider collective interest in a 'healthy' natural environment. Diagnostic of so many environmental problems, the logic of short-term private benefit and longer-term collective or public interest pull in opposite directions (Dryzek 2005: 29).

Beyond the quite obvious examples of conflict between private and public interest with regard to human interaction with the natural environment noted above, Hardin also made a more controversial extension of the significance of this logic of environmental tragedy. This controversial connection was made to childrearing decisions. If the world as a whole is regarded as a commons with a limited ecological "carrying capacity" for human population, then each additional child adds to the stress on this commons, even though calculations of private self-interest determine that the child should be born. The question of how a global human population explosion could be addressed became the primary focus of Hardin's later writings and campaigning. And as will be discussed below, the unpalatable political and 'ethical' means he and a number of other biologically trained "survivalist" writers of the 1970s proposed did much to undermine the credibility of their otherwise relevant insights on the need for humanity to develop intelligent responses to natural limits (Dryzek 2005: 29, 35-38, 46-50).

4.6.2 Ostrom and the later critique of Hardin's "tragedy parable"

It is important in the context of this sympathetic presentation of Hardin's "tragedy parable" to briefly highlight the most serious problems, both with his parable itself, and with the influential conclusions which he draws from it. Firstly, it should be noted that the tragedy parable is misleading insofar as it refers to medieval villagers pursuing unrestrained self-interest in their use of the commons. It is now widely acknowledged, including later by Hardin, that the problem he illustrates is not so much "the tragedy of the commons", but the tragedy of an "open access" model for the exploitation of a common resource (Barry 2007: 270). As the research of Elinor Ostrom, a prominent contributor in this domain has highlighted, most traditional commons or the more neutral term now preferred, "common pool resources"[12] were, and in some cases remain, subject to regimes of local self-

[12] The term common-pool resource (CPR) is used to apply to resource systems regardless of the system of property rights involved, if any. CPRs can include natural and human-constructed resource systems (such as irrigation systems) in which (1) exclusion of users is costly, and (2) exploitation by one user reduces the resource availability to others (Ostrom et al. 1999: 278).

regulation and monitoring. They were not subject to the unregulated open access described in Hardin's metaphor. In fact, many traditional European village social systems functioned with private property rights for agricultural plots but a common-property system for forests and grazing lands. These common lands were the subject of communal regulation and mutual duties and responsibilities. For individuals outside the mutually accepted responsibilities of the village system these were effective private lands (Ostrom 2002: 8).

Secondly, the 'solutions' to the "commons dilemma" which Hardin and other "survivalist"[13] authors of the 1970s and 1980s assumed and promoted with very little research backing, have similarly been found to be flawed. For Hardin, there were only two categories of solution. The first 'solution' was the state control and centralised administration and policing of the resource use, his "socialism". The second was the complete privatisation of the resource on the presumption that private owners will have self-interested reasons for good resource management, his "privatism of free enterprise" (Hardin 1998: 682). And survivalist authors such as Ophuls did not baulk from the conclusion that the global problems of over-population and natural resource over-use required draconian and centralised ecological dictatorship (Hardin 1968; Ophuls 1977; Dryzek 2005: 35-38).

Ostrom describes how such centralised regulation was indeed imposed by state authorities for the regulation of common pool natural resources such as forests and fisheries in many Third World Countries during the 1970s and 1980s following the wide influence of Hardin's tragedy thesis within the environmental management and policy world. She notes that the results of such interventions have frequently been disastrous. In some cases long established local systems of resource management have been disrupted and the alternative state-controlled management ineffective and open to corruption (Ostrom 1990: 23). In addition, Hardin's alternative major 'solution' to prevent the unfolding of tragedy in common pool resources scenarios, private ownership, also has serious short-comings. As Ostrom notes, many common pool resources problems such as those concerning marine fisheries are not easily resolved in this manner, and in all cases there are significant equity concerns and difficulties in taking fairly into consideration the rights or at least interests of all those other parties who become excluded from the now private resource (Ostrom 1990: 12-13).

Unfortunately, much of the policy work undertaken following the prominence that Hardin's 1968 article brought for the "tragedy parable" was then driven almost entirely only by this parable and the apparent implication of the inevitable degradation of common pool resources without his solutions of

[13] Dryzek defines a "survivalist discourse" within the wider discourse of environmentalism. The defining features of survivalism are a primary focus on ecological "carrying capacity" and natural limits to the growth of human populations and natural resource exploitation on a finite planet. Many survivalists came from population biology and ecology backgrounds. They therefore had ample experience of the predictable consequences for populations of any species seriously exceeding the carrying capacity of an ecosystem, thus degrading the natural system and consequently suffering from abrupt population collapse, only to recover *if* natural processes restore the ecosystem (Dryzek 2005: 27).

the state imposition of socialism or privatisation. There was thus a strong tendency towards the development of generic, centralised solutions to common pool resources problems and little recognition that a vast range of locality specific responses might be possible, and indeed, historically had functioned all around the world. More recently, Ostrom and others have approached the question of common pool resources issues with an interest in understanding much more closely the dynamics of this problem, both in terms of game theory analysis and empirical field research[14].

Numerous studies have now been undertaken which provide a fundamental challenge to the presumption that individuals and communities will inevitably deplete a common pool resource unless an external regulatory management system is imposed, or otherwise that the resource is privatised and thus placed under the control of one individual or a single corporate entity. They have documented many historic and contemporary common pool resources examples in which to the contrary, local communities have successfully negotiated binding agreements amongst themselves to create cost-effective, cooperative self-managing regimes allowing the long-term sustainable use of common pool resources. There are also of course many examples where such cooperative regimes have also failed and social science researchers such as Ostrom continue to work to identify common causal factors contributing to both the successes and failures and thus to enhance theoretical understanding in this vital area[15] (Ostrom 1990: 23-28).

Crucially, Ostrom notes that Hardin's influential prediction that individuals jointly using a natural resource will inevitably act in accord with a logic that drives the depletion of the resource to the detriment of all is tied to certain critical presumptions regarding the motivations and morality of those individuals. As Ostrom et al. note, his tragedy model presupposes a model of human behaviour and motivation that:

> . . . assumes all individuals are selfish, norm-free, and maximisers of short-term results. This model (of selfish human behaviour and motivations) explains why market institutions facilitate an efficient allocation of private goods and services, and it is strongly supported by empirical data from open, competitive markets in industrial societies. However, predictions based on this model are not supported in field research or laboratory experiments in which individuals face a public good or common pool resources problem and are able to communicate, sanction one another, or make new rules. Humans adopt a narrow, self-interested perspective in many settings, but can also use reciprocity to overcome social dilemmas.
>
> (Ostrom et al. 1999: 279)

[14] Variations of the "prisoner dilemma" scenarios in particular have been much studied in the attempt to improve theoretical understanding of the decision dynamics involved in such "group cooperation" or "collective action" problems (Ostrom 1990: 9-18).

[15] For a summary of common factors in the success and failure of common pool resources management and the potential lessons for the management of global common pool resources problems see (Ostrom et al. 1999).

The essential corrective lesson for Hardin which I take from the more recent work of Ostrom and other social scientists is a rejection of a generic and simplistic presumption regarding the inevitability of self-interested individualism destroying common-pool resources. Particularly for sufficiently local and small-scale common pool resources where individuals know and trust each other the possibilities of reciprocal and mutually beneficial arrangements have proven possible simply through steadily evolving social norms. More elaborate self-regulating resource systems involving greater numbers of individuals and more spatially extended resources require similarly more extensive and conscious negotiation of rules and norms. And a critical feature of many successful common pool resources systems is the requirement that the self-regulating beneficiaries or users of the common pool resources

> . . . share an image of how the resource system works and how their actions affect each other and the resource. Further, users must be interested in the sustainability of the particular resource so that expected joint benefits will outweigh current costs.
>
> (Ostrom et al. 1999: 281).

Critically, where effective communication and common understanding of shared risks and benefits are possible and indeed encouraged, rather than dismissed out of hand through reference to Hardin's tragedy parable, significant cooperation has been proven possible both historically and today. Communication and the maintenance or development of trust makes possible much more effective and elaborate cooperation than which is modelled in the rather autistic prisoner's dilemma scenarios that have had so much influence on thinking regarding natural resource use or so-called environmental management since Hardin's original article.

Ostrom et al. have also considered the relevance of the more encouraging examples of local and regional common pool resources institutions for the even more vexing environmental challenges that humanity now faces with regard to the prospects for global institutions for the sustainable management of biodiversity, climate change and other global scale ecosystem services. They note very significant challenges in "scaling-up the problem" to the global stage including challenges related to: (1) cultural diversity, both protecting diversity and achieving cooperation despite it; (2) complications due to the interdependence of common pool resources but the distance (both spatial and temporal) between the benefits of common pool resources use and the consequences of that use; (3) accelerating rates of change associated with both rapid population growth and greater global social and economic connectivity; (4) the requirement for unanimous agreement and the related problem of non-cooperation from powerful and heavy resource-using nations; and finally and soberingly, (5) the reality that there is only one globe with which human civilisation is now experimenting. There is no alternative Earth that humanity can migrate to should we fail to manage our demands on the biosphere (Ostrom et al. 1999: 281-282).

From a perspective informed by examples of both successful and unsuccessful common pool resources regimes, and with neither undue optimism nor abject pessimism, Ostrom et al. have considered the daunting challenges for the development of effective global institutions to ensure sustainable human interactions with the biosphere. They state, "In the end, building on the lessons of past successes will require forms of communication, information, and trust that are broad and deep beyond precedent, but not beyond possibility" (Ostrom et al. 1999: 282). I take their emphasis on communication, information and trust as salutary for the effective resolution of environmental problems at all levels. Before I bring this discussion of the special character of environmental problems back to the evaluation of the proposals of Minteer and Collins for a new field of ecological ethics some final comments are in order which are rather more sympathetic to the enduring significance of Hardin's contribution, flaws acknowledged.

4.6.3 The continued relevance of Hardin's parable – suitably reformulated

Firstly, his seminal 1968 paper includes a strong rejection of attempts to cultivate the environmental conscience and ethical character of individuals without addressing the wider systemic issues which drive environmental decline. Such appeals to the moral conscience and ethical character of individuals may help convince some that they should no longer act on their short-term interests to maximise their exploitation of a common resource. But Hardin argues that in doing so the individual suffers the immediate disadvantage of reduced benefit, while others who do not respond to this appeal to conscience continue to reap the material benefits of unfettered exploitation. But there is little collective and long-term benefit, both to the biosphere or humanity, from the abstinence of conscientious individuals while the resource continues to be over-exploited by those rejecting moral appeals for community-minded action (Hardin 1968).

I believe this statement has relevance today. It should remind us of the futility of a theoretical project aimed only at "correcting" individual attitudes regarding nonhuman nature without sufficient concern and insight regarding how a programme for achieving the necessary parallel and supportive changes in institutions and practices might be achieved. Nevertheless, Xavier Márquez has helpfully discussed the relationship between environmental virtues and common-pool resource problems (Márquez 2009). As he illustrates, arguments can of course be made for the inspirational and educational value of the model that environmentally virtuous individuals might provide for others. And certainly it is worthy to promote and begin to inculcate environmental virtues provided this is done in conjunction with awareness of the need for the parallel development of the necessary social, educational and political institutions of a sustainable society. However, prominent U.S. environmental advocate Gustave Speth's comments regarding the insufficiency of a purely individualist and consumerist approach to environmental problems remain salutary:

> Consumption, ironically, could continue to expand as the privatisation of the environmental crisis encourages upwardly spiralling consumption, so long as the consumption is 'green'. This is the path of business-as-usual. The other road, a rocky one, winds towards a future where environmentally concerned citizens come to understand, by virtue of spirited debate and animated conversation, the 'consumption problem'. They would see that their individual consumption choices *are* environmentally important, but that their control over these choices is constrained, shaped and framed by institutions and political forces that can be remade only through collective citizen action, as opposed to individual consumer behaviour.
>
> (Speth 2008: 154-155)

The second aspect of Hardin's thesis which I believe warrants careful reconsideration is drawn from his original and flawed logic of the inevitable decline of the open access commons. Australian based political scientist John Dryzek argues that intelligent approaches to environmental issues must include ". . . a dynamic, structural-level analysis of the liberal capitalist political economy" given that this political economy is now globally dominant and is patently ecologically unsustainable. An approach to environmental problems without such an analysis is he states simply "reduced to wishful thinking" (Dryzek 2005: 232). But in his critical discussion of the major environmental discourses, Dryzek notes that Hardin and many of the other original "survivalists" clearly failed to make such a vital analysis (Dryzek 2005: 47-50). This is of course understandable given they were mostly professional biologists without extensive understanding of social, political and economic systems. Their short-comings in political and ethical understanding are evident in the pernicious and socially repressive and authoritarian 'solutions' some of them proposed. And Hardin in particular, with his callous advocacy for a 'lifeboat ethics' for first world survival while "over-populated" third world countries should be left to 'drown', fails spectacularly to address the wider ethical, political and economic circumstances within which environmental problems have arisen and may be fairly and humanely addressed (Dryzek 2005: 35-38).

Despite these very serious short-comings of his overall position, it should be noted that the competitive, self-interested and short-sighted morality which Hardin, erroneously as we have seen, attributed universally to all common pool resources users, is nevertheless precisely the ethos of the prevailing, liberal capitalist political economy, the structural dynamics of which he so clearly failed to grasp. Although Hardin may have failed to recognise this, the global environmental tragedy scenario within which humanity now seems entrapped is surely being driven by the still largely unfettered, exploitative and expansionary prevailing global political economy. And as is now widely acknowledged, the rational self-interest maximising individuals driving this global open access commons tragedy are not the individuals "breeding without restraint" in developing countries that concerned Hardin, but the transnational corporations originating from the developed countries (Korton 1995).

Speth, long recognised as an expert and prominent advocate for environmental regulations and adjustments within the presumptions of the current economic system in the U.S.A, has recently stated

that to address the environmental crisis effectively requires making changes to central aspects of that system itself and not just further limited external regulation. He states,

> . . . my conclusion, after much searching and considerable reluctance, is that most environmental deterioration is a result of systemic failures of the capitalism that we have today and that long-term solutions must seek transformative change in the key features of this contemporary capitalist.
>
> (Speth 2008: 9)

Speth argues that it is the essential expansionary commitment of the global liberal capitalist political economy, coupled with the continuing incapacity of markets to incorporate the so-called externalities of environmental costs that is the fundamental cause of the modern environmental crisis. He notes that it is the 'success' of the economic means that our civilisation has employed to better provide for the material conditions of life that now threatens not only the quality of our existence, but even the possibility of existence for many if not all during the course of the 21st Century (Speth 2008: 46-66).

I therefore conclude that Hardin's tragedy of the commons model, more appropriately "scaled-up" to focus on the real global problem presented by expansionary capitalism, indeed highlights the core ethical problem raised by the environmental crisis, and thus points to a central challenge for ethical thought. That is the question of how the *individualistic* motivational ethos of maximising personal material wealth at the core of capitalism and so central to the material success of modern civilisation, might somehow be legitimately and constructively reformed and redirected to prevent the role this ethos currently has in driving the degradation of the biosphere to the detriment of *all*.

The upshot of this discussion of the particular character of environmental problems, informed especially by Ostrom's reinterpretation of Hardin's tragedy metaphor should be clear. Environmental problems characteristically involve collective action challenges. The equitable resolution of such problems requires effective communication, cooperation and trust amongst both those causing harm and those being harmed. For many environmental problems, each of us is implicated to a greater or lesser extent in both these categories. It is also to recognise that environmental problems and attempts at resolving such problems are played out within the wider context of an industrial political economy committed to material expansion that drives a worsening global environmental tragedy of the commons scenario. Such an assessment paints a dire picture. But it is surely only through gaining a realistic and comprehensive understanding of our circumstances that there can be any possibility of intelligent remedial action.

4.6.4 A critical difference in desiderata?

However, the specific question that the fore-going discussion has aimed to settle is whether the negative analogy concerning the character of the primary subject matters of the two domains of bioethics and environmental ethics represents a critical difference. The substantial differences

between the subject matter of the two domains will only have critical relevance for the analogical argument under consideration if the differences in the target domain will serve to block the generalisation of the prior association established in the source domain, bioethics. That is the sociological causal link between the adoption of pragmatic methodological commitments and the related practical skills necessary to work in the domain of bioethics. I have already argued that the effective 'privatising' of many ethical issues in clinical bioethics to become matters determined in relation to the individual patient's conception of their own good has been a decisive step in bioethics. Many decisions may thus be quite neatly solved that would otherwise be the subject of the interminable and ultimately politicised debates that characterise contemporary ethical discourse as diagnosed by MacIntyre. But I have argued that the qualitatively different character of 'ecological patients' is such that no similar 'privatisation' is legitimately possible in this domain. I have noted that ecological problems inevitably involve collective action challenges and require the development of effective communication, cooperation and trust between the concerned parties. Who these concerned parties are of course varies in accord with the spatio-temporal scale of the 'ecological patient' and on our beliefs regarding their moral status or otherwise. And in the situation where the 'ecological patient' encompasses biophysical processes upon which the survival and flourishing of all humanity depend, then the concerned parties must include at least all living humans and their potential descendants.

From this description it would seem that the adoption of equivalent pragmatic methods and the development of relevant ethical skills will surely be insufficient within the target domain of ecological ethics to address such a demanding challenge. However, the advocate for the analogical argument can make a similar form of argument to that made regarding the first negative analogy. The advocate admitted the significance of the negative analogy for the successful rise of a pragmatic field of environmental ethics. But they could argue that there are sufficient favourable institutional factors within the ecological domain to at least support the rise of the more modest and clearly delineated field of ecological ethics. Similarly, the advocate can accept that it is true that environmental issues at their broadest require processes of communication, cooperation and trust that would surely require much more of a new field of ecological ethics than the proposed adoption of pragmatic methodologies and of a pluralist framework equivalent to that now prevailing in bioethics. Nevertheless, the advocate can argue that there will remain a considerable range of ethical issues of specific concern to ecologists and biodiversity and conservation managers for which the proposed field of ecological ethics will provide a valued service.

As I noted earlier, Minteer and Collins refer to biodiversity and conservation managers in a manner that confines the scope of their project particularly to ethical concern regarding the species, lands and waters already placed under state control. In these circumstances, managers employed by governmental agencies may have historically been granted considerable discretionary decision-

making power within the broad parameters of various governmental statutes and regulations. Such managers and the environmental scientists that may work for and with them may, to some degree, find the inevitable and often divisive public interest in their management activities to be an impediment to the otherwise effective application of their specialised ecological management knowledge and skills. However, as I have already argued, such public interest is inevitable and appropriate in a democracy with regard to natural resources entrusted to state agencies to manage on behalf of the public.

I consider that the special character of the 'ecological patients' that biodiversity and conservation managers have responsibility for indeed makes the proposals of Minteer and Collins to develop an equivalent "ethical advisory and decision-making service" to that provided by bioethics to biomedical clinicians and scientists potentially fraught. This is so because of the primary emphasis they place on assisting the *individual* ethical judgemental capacity of ecological professionals. This focus is entirely understandable given the demand for such contributions from philosophers and other disciplines. However, I believe that their approach risks supporting the perpetuation and even exacerbation of a kind of "ecological management paternalism". The authors show no awareness of this risk.

Bioethics has been much concerned with and can claim considerable success in encouraging the medical profession to recognise the wrongfulness of medical paternalism and to reinforce within the clinical setting the wider cultural value of personal autonomy (Buchanan 1978; Wolf 1992). Despite this ostensible success, concerns have remained about the persistence of paternalist behaviour and attitudes, particularly in the treatment of women and people of other ethnicity (Wolf 1994). Wolf has also argued that despite this public commitment to the importance of respecting patient autonomy and legal requirements for informed consent procedures, this commitment may be insufficient. She notes that in the U.S.A. there has been a lack of theory regarding the nature of the processes actually applied by ethics committees despite the critical role such committees play within bioethics. Because of this, Wolf asserts that while ethics committees have often claimed to champion a patient-centred concern and respect for autonomy, because insufficient attention has been given to due process, they have in practice often excluded patient involvement and deferred to professional judgment. The paternalist model has thus been reconfirmed at this important institutional level. Wolf argues for a theory of process for ethics committees that would show genuine respect for patient autonomy and for the values of democracy by ensuring patients have a voice in these discussions. She notes that otherwise many ethics committees will continue to work primarily to serve or protect the interests of health providers, whether clinicians or institutional managers, and thus tacitly support medical paternalism (Wolf 1992). The question of the composition and procedural guidelines for health ethics committees is clearly of vital importance in determining the real as opposed to idealised outcomes of such groups. It should also be noted that the important role of such collective processes in bioethics also offers the possibility of a further, more positively instructive analogy between the two fields.

With related concerns, clinical pragmatists such as Miller et al. have also argued for the introduction of a form of participatory democratic process into the clinical domain. They emphasise the importance of inclusive processes of information gathering and communication and shared decision making. They note that the prevailing principlist and casuist approaches continue to focus on the intellectual process to be carried out by the individual moral judge regarding the justification of ethical decisions. This prevailing model fails to emphasise and support the importance of collaborative processes and the possibilities for shared and more democratic processes of decision-making between professionals and patients. Though Miller et al. support the importance of training and developing ethical knowledge and judgment skills, they argue that the exclusive emphasis on the intellectual process of individual ethical judgment, fails to recognise the importance of collaborative processes (Miller, Fins, and Bacchetta 1996: 14).

Extending this discussion to the ecological domain, I note that the primary emphasis of the articles in which Minteer and Collins outline their proposals for the new field of ecological ethics can be read as very much focused on supporting the individual ethical judgment capacities of ecological professionals (Minteer and Collins 2005: 1810; 2008: 498-499; Minteer, Collins, and Bird 2008: 478-479). As Miller et al. have argued in their advocacy for clinical pragmatism, supporting the development of such individual skills is of course important. However, given that Minteer and Collins quite explicitly envisage their new field as providing a service to ecological professionals, and given that they make no explicit reference to the development of collaborative ethical decision-making processes, I think the risks of supporting what I refer to as "ecological paternalism" are real. And given what I have argued to be the genuine public interest in ecological management issues within a democracy, the absence of an explicit concern with collaborative process is a concerning omission. I recognise that only so much can be covered in relatively short overview articles but I consider the question of collaborative ethical process with regard to 'ecological patients' is surely a matter of critical philosophical ethical concern and must be addressed, at least through promissory commitments to further development[16]. I note in other writings by Minteer that, as a "canonical pragmatist" in Arras' terms, he has strong commitments to the importance of participatory democratic processes (Minteer 2002, 2006; Minteer and Manning 1999). That said I believe it essential that such core commitments are incorporated and made sufficiently explicit in one's practical recommendations. One possible way to address this deficiency which the authors could explore comes from a potentially instructive analogy with the role of ideally structured and procedurally

[16] Minteer and Collins do make a brief reference to the potential relevance of alternative dispute resolution (ADR) methods for ecological ethics but the significance of collaborative process to most or all ethical issues in the field is hardly addressed by this passing and belated mention (Minteer and Collins 2005: 1810). There is no mention of such processes in their 2008 article and in any case, the field of ADR is not a field in which environmental philosophers have particular expertise (Minteer and Collins 2008).

adequate health ethics committees. The example provided by bioethics suggests that some similar kinds of group decision-making and advisory bodies might also perform a significant and helpful role within the domain of ecological ethics.

4.7 The relevance of on-going social-political influences

There is a third and final negative analogy which needs to be discussed ($A_3 : A_3$*). Drawing to the end of my discussion of the prior association I noted that there was another set of relevant causal influences in addition to explicit commitments to aspects of pragmatist methodology. Such explicit commitments include pluralism of theory and principle, contextualism, coherentism, and an empirical and case-focus and so forth which play a role in the practical relevance and success of bioethics. I referred to the manner in which a pragmatic bioethics has also proved well adapted to the broader social, political and economic context. Two key features are relevant here. Firstly, I have already described how a pragmatic bioethics sits comfortably within a broad but largely implicit consensus on the beneficial role of biotechnological progress for human well being and in support of greater individual freedom. Secondly, a pragmatic bioethics has also been able to draw on a strong distinction between public and private issues in bioethics, each with their own appropriate mode of intelligent inquiry, social on the one hand and individual on the other (Tollefsen 2000: 78, 86-87).

For Minteer and Collins' proposal for the parallel development of a pragmatic ecological ethics, there do not appear to be equivalent conducive roles from both a broad social, political and economic consensus or from the possibility of a ready and relatively clear division between public-private issues. Focusing on the first point regarding the important role that an implicit background consensus plays for bioethics, I believe there is a sense in which central elements of the very same background consensus which underpins agreement in bioethics, work to fuel disagreement in the ecological domain. On the one hand bioethics has flourished within the context of a social and economic ethos of continual progress. That is progress both in technological sophistication through scientific research, and related economic growth and progress. Progress in both senses has generally been assumed to better the living conditions of humans. On the other hand, ecology and conservation management has come to prominence largely through efforts to mitigate the continual drive for technological and economic progress as it impacts upon the natural environment. Those engaged in biodiversity and conservation management pursuits have often been caught in the now classic form of environmental conflict. That is conflict between demands to "sacrifice" elements of nature in order to continue to fuel economic growth and employment and thus serve individual human welfare juxtaposed with well justified concerns for the protection and conservation of Nature.

There is a major challenge here for the ecological ethics of Minteer and Collins. The implicit broad consensus regarding the inevitable benefits of "progress" that has contributed to the coherence

and effectiveness of bioethics practice represents a feature of the social environment which on the contrary drives disagreement and conflict in the ecological domain. The "business as usual" presumptions of the liberal political economy, as Speth has noted, are driving a worsening global environmental crisis and this unsympathetic wider context will sooner or later have its impact on even the most local of ecological concerns. Thus this issue of unsupportive rather than supportive background consensus is yet again another significant negative analogy between the two fields.

Once again, I think the best that the advocate for the positive analogy between the two fields can argue is that there remain ethical issues that ecologists and ecological managers face in their work on protected lands and species where they can exercise a degree of decision-making discretion and hence the pragmatic methodology of ecological ethics may still offer a needed service. I would concede there may well be certain smaller scale and localised issues where this may be the case. However, overall I would argue that my previous concerns regarding the dangers of promoting ecological paternalism remain pertinent. An improved ability to justify ecological management decisions with regard to "balancing competing principles" and the necessity to make "hard judgments" and so forth can unfortunately be as much used to disguise unjust actions and decisions as it may reflect a genuine effort at improving ethical judgment. A field focused almost exclusively on supporting *individual* ethical judgment in a domain where the subject matter is almost always of wider *public* concern within the context of a pluralist and democratic society is surely at considerable, if inadvertent, risk of supporting an illegitimate ecological paternalism.

4.8 Chapter conclusion

The final stage in Bartha's model for evaluating analogical argument involves making an overall assessment of the possibility of generalising the prior association from source to target domains. The various positive and negative factors that have been discussed above must now be taken into consideration.

The first critical difference between the two domains to be discussed concerned the significance of the favourable coincidence of social, political and institutional factors driving the initial rapid development of bioethics. These favourable conditions for the rapid rise of bioethics contrast with the less conducive conditions facing ecological ethics. However, I conceded to a hypothetic advocate arguing in defence of Minteer and Collins' implicit analogical argument that this negative analogy might not be critical. This concession was granted because of the very specific focus of the proposed field of ecological ethics on supporting ecological professionals, given that the authors have clearly identified a demand for such a service arising specifically within this sector.

The second potentially critical difference between the two domains discussed concerned the very different character of the respective subject matters of the two fields ($A_2 : A^*_2$). Bioethics has been

most successful in mediating solutions for ethical issues concerning individual patients through emphasising respect for individual autonomy and thus where possible consigning ethical issues to a private domain where the individual's conception of their own good is sovereign. In contrast, I have argued that almost by definition, all environmental issues are to greater or lesser degree matters of public ethical concern. I have suggested that at best an advocate for the plausibility of Minteer and Collins' argument could again insist that the tightly circumscribed role envisaged for ecological ethics might avert this problem. In this case ecologists and ecological managers with decision-making jurisdiction regarding designated conservation species, lands or waters may nevertheless gain from the ethical service ecological ethics offers them.

However, I raised further objections with regard to the prospects that such a programme might inadvertently support an ecological paternalism paralleling the medical paternalism that bioethics has been concerned to reform in the biomedical domain. The dangers of such an ecological paternalism with regard to the necessarily politically fraught 'treatment' of ecological patients looms large here and the advocate's emphasis on the role of ecological ethics as working in support of a professional elite ecological decision-making class simply exacerbates concerns on this topic.

The third critical problem relates to the manner in which an implicit background consensus has been essential to facilitating the practical relevance and success of bioethics while elements of the same progress-oriented ethos present an unsympathetic framework for the development of ecological ethics. Once again, the advocate can argue that there remain ethical issues where a pragmatic ecological ethics framework will aid ecological professionals in their practice. However, this adverse wider social and political context does not look promising for the great flourishing of the field of ecological ethics. And again, the advocate's best defence is to emphasise the significance of the internal ethical concerns and standards of the ecological professional and to minimise the significance of the wider social context of their work. Given the centrality of public interest in the subject matter of their profession, this may not be a wise or just long-term strategy in democracies.

The primary defence that an advocate for Minteer and Collins' implicit analogical argument can make regarding all three critical differences discussed here is to argue that a much narrower focus on the specialised concerns of ecologists and ecological managers allows this new field to avoid the significance of these differences. The prior association from the source domain of bioethics, that is the causal link between the application of pragmatic methodological commitments and the practical relevance of bioethics, should therefore generalise by analogy to ecological ethics. I concede there is some plausibility to this defence because of the manner in which ecological ethics is so specifically targeted toward the concerns of ecological professionals. There is also a deliberate distancing from the wider and deeper concerns of environmental ethics achieved through the narrowed scope of the field. However, insofar as this response saves the plausibility of the analogy between the two fields, my concern is that this may be at considerable cost to the ethical-political character of the new field.

The principal concern raised is that a narrow focus on supporting the ethical expertise of *individual* ecological professionals without a parallel focus on *collaborative processes* of ethical decision-making on subject matters of wider public interest may lead, albeit inadvertently, to a field in service of ecological paternalism. To support such a development would surely run counter to the ethical commitments of Minteer and Collins, as well as of their concern to further, rather than diminish, democratic ideals and commitments which I am sure they do not intend to compromise. I therefore conclude this discussion with some unease regarding the proposals of Minteer and Collins for a new field ecological ethics. One hopes that they will consider more carefully the challenges of incorporating collaborative processes, perhaps also gaining some guidance in this from bioethics, or at least from bioethics examples of useful collaborative endeavour.

However, it is important to acknowledge the tentative and suggestive, rather than definitive nature of the conclusions reached in this chapter on the basis of this analogical analysis. The reconstructed analogical argument that has been the subject of this evaluation has provided a framework that has greatly aided my considerations. But this mode of analysis should be understood to be primarily of exploratory and / or preliminary diagnostic value. No claim to decisive conclusions seems appropriate. The tentative conclusions and concerns identified thus suggest of themes worthy of more systematic investigation.

I have identified what I consider to be a lack of focus to date with the critical issues of the role of collaborative process for ecological ethics. It is in light of this seemingly significant weakness for ecological ethics, as currently defined, that I now turn to consider what Norton alternatively offers. The recent proposal of Norton for an integrative role for environmental ethics within the adaptive management paradigm holds the promise of better addressing the issue of collaborative decision-making. In contrast to the ecological ethics model of Minteer and Collins, participatory democratic process is central to Norton's model. In the next chapter I will therefore seek to use analogical comparison with bioethics to aid my evaluation of Norton's significant and promising work.

Chapter 5
Norton's Sustainability: Integrating environmental pragmatism and adaptive ecosystem management

5.1 Overview

This chapter explores the recent proposal of Bryan Norton for a model of sustainability that would incorporate environmental ethics expertise within a participatory form of adaptive ecosystem management practice. In contrast to the proposals of Minteer and Collins discussed in the previous chapter, Norton does not make any similar direct or implicit claims for the enhanced plausibility of his proposals by drawing on analogy with bioethics. Nevertheless, my evaluation of his proposals will still be structured around an analogical argument using developments in bioethics as the source domain. I will argue that Norton's approach relies on core methodological assumptions which have strong parallels particularly with the methodological commitments of clinical pragmatism described in Chapter 2. Given these parallels, I will construct an analogical argument again sourced from methodological developments that have been subjected to a degree of test within the practice of philosophical bioethics. Tentative conclusions regarding likely parallel challenges for Norton's as yet only hypothetical model will then be considered.

Given the complexity of Norton's model, and the extent to which he has sought to integrate it within the adaptive management paradigm, it has been necessary to provide quite extensive background material to aid the reader's understanding. Space constraints mean that this material can only presented in largely descriptive form with only minimal critical analysis. The main critical analysis of Norton's position comes in the second section of the chapter as Bartha's model for the formulation and evaluation of analogical arguments is again applied.

5.2 Norton's theoretical model for "Sustainability"

Bryan Norton is a prominent environmental pragmatist supportive of Minteer's efforts to develop the new field of ecological ethics. While both Minteer and Norton are identified prominently with the agenda of environmental pragmatism, it is important to note a significant difference in the manner in which their pragmatism is reflected in their projects under consideration respectively in Chapters 4

and 5. Minteer and Collins propose a "pragmatic" field of ecological ethics modelled to some extent on bioethics. Their concern is not with developing a field that draws explicitly on the canon of American pragmatism. Rather, they draw on a methodological or meta-theoretical pragmatism that links more to the prosaic use of the term as being a concern with approaches that will work in practice to achieve good results. Norton is similar very concerned with the practical efficacy of the model he develops. However, as will become more apparent as this chapter unfolds, his approach is more centrally and openly informed by the work of the classical pragmatists, and most notably that of Dewey and Peirce.

Norton has given probably greater consideration than most other environmental philosophers to the role of collaborative and consensus-building processes for practical philosophy. Norton, rather notoriously within environmental ethics circles, has been the environmental philosopher who has most persistently and ardently criticised the nonanthropocentric and often monist theoretical approaches which have long prevailed in environmental ethics[1]. But Norton has been much more than a published critic of the impracticality of the prevailing nonanthropocentric focus of environmental ethics. He has also actively pursued a career that has been consistent with both his criticisms of that focus and with his positive proposals for a pragmatic redirection of the field. Norton has proposed that:

> ... environmental philosophers should adopt a new role in the process of environmental policy development, that they should reduce their appeal to abstractions and arguments regarding universal principles, and become more pluralistic and problem-oriented. My goal was to encourage philosophers to contribute to the larger policy process from within democratic decision procedures and to venture out of the insulated atmosphere of academic departments of philosophy.
>
> (Norton 2003b: 1)

During the 1990s Norton began what he refers to as ". . . a sort of intellectual experiment". That "experiment" involved firstly gaining direct experience of the role he urges other environmental philosophers to adopt through participating on environmental policy development panels for the U.S.A. Environmental Protection Agency or EPA (Norton 2003b: 1-2).

Secondly, he engaged in an alternative form of academic and intellectual experimentation. This led to Norton:

> . . . as a philosopher of science with an interest in language and communication, to try to build some bridges to connect the various disciplinary islands composing the archipelago referred to as environmental science . . . I began to interact professionally less and less with philosophers and

[1] Norton's continuing dismissal of nonanthropocentrism in contrast to Callicott's determined defence of the importance of intrinsic natural value and of unifying and comprehensive philosophical frameworks for environmental ethics is well illustrated in a recent published exchange between these two prominent environmental philosophers (See Callicott 2005; and Norton 2005).

> more and more with scientists, including social scientists and natural scientists . . . I began accepting invitations to scientific- and management-oriented conferences, conferences that dealt in some way with environmental values and policy; and, as a result of my experiences and contacts at these conferences, I began writing for an audience of scientists and environmental management practitioners.
>
> (Norton 2003b: 2)[2]

In many ways Norton has already, single-handedly blazed a trail that other environmental philosophers might now seek to follow under a more prescriptive and formally defined mantle such as that of the "new field of ecological ethics" promoted by Minteer and Collins (Minteer and Collins 2008; Minteer, Collins, and Bird 2008). However, the aspect of Norton's work which I wish to evaluate in the present chapter is Norton's most recent monograph, *Sustainability: A philosophy of adaptive ecosystem management* (Norton 2005a). The philosophy developed in this book represents the culmination of Norton's experimental engagement with environmental science and policy over the previous 15 years or more and proposes a unique contributory role for environmental philosophy and philosophers within one of the most promising paradigms within the environmental sciences, adaptive ecosystem management.

Before I can begin to evaluate Norton's proposals I must first provide a sufficient introductory overview of this work. As Kevin Elliott notes, since Norton's most recent and comprehensive statement of his position (Norton 2005a), ". . . sprawls over more than 500 pages and addresses issues in philosophy, history, economics, decision theory, risk analysis, and policy studies, it is a challenge to develop a brief description of his position" (Elliott 2007: 5). However, Elliott and a number of others have taken up this challenge in order to review this significant book. In doing so they have provided useful material that has assisted with my descriptive task here, as well as the later challenge of the critical evaluation of Norton's position (See for example Elliott 2007; Holly 2007; Oksanen 2007; Pearson 2010; Varner 2007).

The opening chapter of Norton's *Sustainability* describes his frustrating but instructive experiences as a philosopher seeking to contribute to the environmental policy development and coordination processes of the EPA. The large but poorly connecting and rambling buildings in which the EPA staff were housed in Washington D.C. and around which Norton initially struggled to navigate have also come to symbolise for him the lack of integration and effective communication between the various professional specialities and policy units of the EPA (Norton 2005a: 1).

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[2] The manner in which Norton has engaged with "scientists and environmental management practitioners" outside the confines of academic philosophy is consistent with "the partners for progress" outlook of philosophical self-understanding. This type of "outlook" is one of a number of such models of philosophical understanding insightfully characterised in a taxonomy offered by Stan Godlovitch. This model of philosophical practice and self-understanding has been followed by many philosophers engaging with other fields such as cognitive science and of course clinical bioethics (Godlovitch 2000: 10-14).

Piecemeal additions were made to the EPA buildings to house new departments as the mandate of the EPA expanded rapidly during the 1970s and 1980s. As a result the various departments of the EPA were located in a disjointed and confusing series of multi-story building towers. Paralleling the poorly planned and coordinated physical structure of the EPA, Norton refers to the dysfunctional communication patterns and professional disconnection between the policy units and specialist disciplines of the EPA as "towering". He uses the metaphor of towering to refer to circumstances where;

> . . . bureaucrats and policymakers develop narrowly defined interest areas, respond only to other participants who share their own views and vocabularies for discussing those views, and insulate policy processes from open debate and challenges from critics.
>
> (Norton 2005a: 23).

Norton thus draws on the manner in which this unhelpful physical layout hampered the ability of the EPA to achieve its core function of coordinating environmental policy to serve as an instructive metaphor for his proposals. He sees the resulting "balkanization" of specialised discourses within the EPA as indicative of more pervasive problems standing in the way of a functional discourse on environmental matters, and hence blocking coherent and effective environmental policy (Norton 2005a: 23-29). His concern is that the general absence of commonly understood and agreed concepts regarding environmental values and environmental management has handicapped the entire domain of environmental science, policy and management. As both a philosopher of language, influenced by the later work of Carnap and the classical pragmatism of Dewey, Norton has long been concerned[3] with the possibilities for improving the basis for communication about environmental issues[4]. He has sought to address what he sees as a paralysing deficiency in communication, particularly at the interface between science and evaluation (Norton 2007b: 390).

Norton argues that the problematic interface between science and evaluation has developed because of the enduring influence of positivist presumptions regarding the relationship between scientific fact and human values. He therefore suggests that a key aspect of towering follows on positivist demands for a clear separation between scientific research and policy formulation and the related belief that scientific and value discourses can be carried out in isolation from one another (Norton 2005: 34). This positivist conception of the relationship between science and value is

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[3] For instance in a notable earlier monograph, *Towards Unity Amongst Environmentalists*, Norton states: "The most difficult problem I faced . . . was the lack of an adequate and consensually accepted vocabulary, either colloquial or technical that could be employed without distortion across disciplinary boundaries" (Norton 1991: viii).

[4] Sustainability includes a 60 page appendix in which Norton provides a retelling of the history of twentieth century philosophy aimed at the justification of his methodological commitments (Norton 2005: 519-578). It is a history which gives much focus to the philosophical contributions of both Dewey and Carnap, but significantly, from Norton's perspective ". . . begins and ends with Peirce" (Norton 2005: 523).

grounded in what may be termed "the myth of value neutrality". In a more recent paper, Norton notes that:

> Positivism and its commitments to value neutrality have lost all plausibility in characterizing ecological science, given increased understanding and growing acceptance of the complex role played by assumptions and metaphors in the development of all "models", whether models of human behaviour or models of galaxies.
>
> (Norton 2008a: 582)

Norton is therefore critical of the positivist insistence that scientific studies relevant to environmental policy and management can gather and package the relevant "facts" before there is any engagement in the analysis of values or the articulation of policy goals. This presumption is tied to an unhelpful "serial view" of science and policy where scientists gather the "facts" and policy and decision-making experts evaluate the policy options informed by this scientific work. The attempted separation of scientific research and values discourse within policy-making is commonly believed to be an essential commitment to ensure the objectivity and independence of scientific work. However, Norton argues that in practice, this serial view leads to poor policy-making. In the absence of honest and intelligent recognition of the roles of values in directing scientific research the right questions may not be addressed. Combined with the problems of a lack of common conceptual frameworks and shared language, research may fail to have the decisive and rational influence on policy that would be desirable. The outcome of the policy process, given inevitably conflicting values and competing alternatives is then often decided behind closed doors through a politicised process of trade-offs between powerful interests groups (Norton 2005a: 15, 34-37).

The inadequacies for environmental policy making of a value-free characterisation of environmental science are compounded by what Norton describes as the ideological and monistic approaches to the evaluation of environmental values of the two disciplines most concerned with this task. As described in Chapter 1, on one side of a polarised debate on environmental values is the discipline of environmental ethics which has largely, but not exclusively, been associated with the task of providing a philosophical grounding for claims regarding the nonanthropocentric value of Nature. Norton refers to this approach as "intrinsic value theory" (Norton 2005a: 161). On the other side of the debate is the discipline of economics. The mainstream understanding of economics is that of a science concerned with maximising human welfare through the efficient operation of the market place and which has thus been concerned only with anthropocentric bases for evaluating the value of Nature.

The presumption by many working in environmental ethics that anthropocentric valuation of Nature has been the primary cause of environmental problems, has led to intrinsic value theory being presented as a counter to the influence of the uncompromisingly anthropocentric discipline of economics. The result according to Norton has been a polarised debate along disciplinary lines with

little constructive interchange between the two fields (Norton 2005a: 164-5). Environmental ethics has sought to provide arguments against environmental economics on the basis that a mistaken ontology of environmental values has been presupposed. Environmental economists have generally dismissed the arguments of environmental ethics as nonsense. The more generous and environmentally concerned have attempted to re-describe assertions of nonanthropocentric values in terms of so-called "existence" values. This involves extending economic theory beyond classical economics concepts, so as to treat the intrinsically valued natural entities defended by environmental philosophers in terms of dollar equivalences. This has been done through devices such as seeking estimates of individual "willingness to pay" for the protection of so-called non-consumptive values. This move is argued to then allow a rational and quantitative comparison of such values under the single metric of dollar values (Norton 2005a: 164-169).

Norton uses the label "economism" to describe the position of the majority of economists and policy analysts who hold that all environmental values can be adequately understood as economic values. That is a belief that environmental values, for all practical purposes at least, should be understood in terms of the values expressed by consumers as they engage in market exchanges. Economism thus asserts that:

> . . . environmental values must compete with other good causes for effort and investment, and environmental goods and bads should be understood in market terms – the aggregated willingness to pay of consumers for discrete goods and ecosystem services.
>
> (Norton 2005a: 166)

Norton does not follow the approach of many environmental ethicists who reject economic valuation of environmental values outright since he believes the economists' models and methods of analysis can play an important role within environmental policy evaluation. As will become apparent later, Norton supports their emphasis on the need to make "trade-offs" and to ensure that "good investment" decisions are made with regard to environmental protection given multiple options and limited time and funds. However, Norton does reject what he identifies as the general claim that economic valuation provides a comprehensive and monist framework capable of interpreting all environment values in terms of economic consumer goods (Norton 2005a: 166).

Norton argues that both economist and intrinsic value theory approaches function as ideological perspectives which depend on pre-experiential commitments. As such, both seek to develop integrated theoretical frameworks which are effectively closed to constructive dialogue with those holding differing ontological commitments. Although he acknowledges that there are many variants within these two general approaches to the valuation of the non-human world, Norton thinks it reasonable to conclude that they jointly dominate academic and disciplinary research on this subject. And the ideological commitments of each then serve to ensure that there is little constructive dialogue

of the kind needed to learn from each other, and to advance academic and policy discourses on environmental values beyond this polarisation. Thus both fields, in their attempts to provide a comprehensive framework for the valuation of nature, employ different ontological assumptions and vocabulary, making dialogue between the two disciplines virtually impossible. Norton argues that as a consequence, the academic fields most concerned with environmental values have largely served simply to add two more incommensurable disciplinary voices to the "Babel" of incommensurable professional and institutional approaches to environmental science, policy and management (Norton 2005a: 180).

Norton therefore claims to have identified two related and calamitous impediments to the development of coherent and effective environmental policy and decision-making. Firstly, he has described how the continuing influence of positivism results in the often ineffective contribution of a supposedly value-free environmental science. And secondly, the disciplines that vie to inform a discourse on the significance of environmental values within the policy process, environmental economics and environmental ethics, have become trapped by their ontologically grounded commitments in a polarised and deadlocked ideological standoff, allowing little effective communication between the disciplines. Consistent with his general critique of nonanthropocentric environmental ethics he suggests this field fails almost completely to achieve effective communication with most other disciplines. Norton seeks to address these impediments through his proposals for a new approach to the integration of both research and values discourse within the processes of environmental policy and decision-making.

Aspects of Norton's approach are clearly informed by his strong background and interest in the philosophy of language. Seeing the problem as having much to do with the lack of a common conceptual framework and shared vocabulary, Norton therefore argues for a form of linguistic therapy as an essential aspect of his solution.

Firstly he insists that all contributors to the policy dialogue must accept a normative requirement to seek to convey both scientifically specialised and culturally specific insights using a common vocabulary within ordinary language. Norton's key innovation in support of such a more effective ordinary language discourse for environmental policy is through his emphasis on the concept of so-called "bridge terms". These are terms that have the potential to bridge the incommensurable "towers" of a currently dysfunctional dialogue regarding environmental policy and management by incorporating both descriptive (scientific) and evaluative (values) content. In Norton's own words:

> Bridge terms are terms that have empirical, operational and measurable descriptive content and therefore have a connection to the descriptive discourse and literature of science; but bridge terms also connect to social values and our evaluative discourse by embodying or evoking important social values.
>
> (Norton 2005a: 38)

Norton wisely avoids attempting to defend bridge terms such as "ecosystem health" and "ecological integrity" which have been defined by what Shrader Frechette refers to as soft ecology. That is the more systemic and inspirational side of ecological science which has been of most interest to environmental ethicists[5] (Norton 2005a: 39; Shrader-Frechette 2001: 304-308). Norton, true to his pragmatist credentials, chooses instead to salvage as his central bridging term a word that has already assumed such a degree of general and indiscriminate use within discourse about environmental policy that it has become regarded by many commentators as best abandoned. That term, as reflected in the title of his latest monograph, is "sustainability" (Norton 2005a: 40).

Given that there is indeed a considerable diversity, including even quite contradictory definitions of sustainability and sustainable development already vying for popular and technical usage, the central place that Norton gives this term in his environmental philosophy might seem to invite needless controversy and confusion. However, Norton's commitment to pragmatism as the preferred method of philosophy rather than as a set of metaphysical commitments (Norton 1991: x) merges with his interest in the philosophy of language, to drive his insistence on sustainability as the essential bridging term for environmental science and management. He relies on the procedural emphasis of pragmatism to free him from the need to seek to provide yet another substantive definition of sustainability (Oksanen 2007: 273). Instead, Norton provides what he refers to as a schematic definition of sustainability. He introduces his schematic definition thus:

> A schematic definition characterises and relates the key components of a definition while leaving specification of the substance of those components open. Speaking schematically, we can say that sustainability is *a relationship between generations such that the earlier generations fulfil their individual wants and needs so as not to destroy, or close off, important values options for future generations.*
>
> (Norton 2005a: 363, his emphasis)

The definition is left schematic in the hope that particular communities will negotiate the substantive content of what sustainability will mean in the context of local ecological constraints and communal values. Thus he expects that "every community may come up with a different definition" on the intuitively plausible model of finding local solutions to match local conditions and commitments (Norton 2005a: 43). The critical work in defining the sustainable relationship between human culture and Nature is therefore to be sought by applying a process approach to sustainability which Norton recommends given his belief that it is unlikely there will be some more universally accepted substantive normative standard. As will become apparent later in this chapter, Norton's pragmatic and procedural approach to the defining of sustainability is both the principal strength of his

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[5] Contrasting soft ecology is hypothetico-deductivist hard ecology which is much less romantic in its concern with predictive precision and universal generalisations (Norton 2005: 39; Shrader-Frechette 2001: 304-308).

environmental philosophy, but also, stated in the particularist form currently advocated, the subject of worrying problems (See for example Oksanen 2007: 274-277).

The position that Norton promotes in this work is controversial, although I believe well argued. Space cannot be afforded here to do justice to a full account of the competing positions and arguments regarding what "sustainability" is or rather, should be. However, it should be noted that Norton is proposing a form of "strong sustainability" in contrast to the "weak sustainability" model generally preferred by economists and influentially defended by Solow (Solow 1993). Weak sustainability positions do not specify any particular aspects of nature that absolutely must be protected for future generations. They argue that this would be mistaken because we are quite ignorant (they claim) of the preferences of future generations. Instead, they argue we should focus on fairness to future generations by monitoring the growth of capital (Norton 2005: 310-316).

The claim here is that all sustainability requires of us is to ensure that each new generation has access to at least as much capital as the current generation in order to provide for their (economic) welfare. Critical to this position is the assumption that both natural and cultural capital is completely substitutable (or fungible). It is also assumed rather optimistically, that present prices in competitive markets will reflect future value of resources. Many neoclassical economists therefore follow Solow in claiming that it is possible to account for sustainability merely through the efficient exercise of the mechanisms of consumer want and market exchange. It is then claimed, I consider disingenuously, that in following this model of market-led sustainability, they are not imposing a normative account of what sustainability is in the manner of strong sustainability advocates such as Norton. Norton notes that Solow's position depends on three key normative assumptions; (1) ignorance of future preferences and conceptions of the good life of future generations; (2) the fungibility of natural and cultural capital; and (3) the effectiveness of market-driven pricing of resources. He provides good reasons to suggest that each of these three assumptions is unjustified (Norton 2005: 310-329).

All strong sustainability theorists argue that some specific natural resources must be protected for future generations to ensure that noneconomic well-being (as well as economic well-being given the loss of critical ecosystem services) will not be harmed. Among the ranks of strong sustainability theorists, those who advocate strong "ecological sustainability" argue that natural ecosystems and biodiversity must be protected. In contrast, Norton advocates what he refers to as "normative sustainability". This approach, rather controversially, is concerned primarily with the protection of social and cultural values rather than supposedly objectively defined critical natural (ecological) resources, as advocated by ecological sustainability theorists and many environmental scientists (Norton 2005: 313-315).

Indicatively of this key difference within the ranks of strong sustainability theorists, fellow pragmatist Paul Thompson has criticised Norton's schematic definition of sustainability because he

argues Norton places too much focus on human choices. By doing so, he suggests that Norton links sustainability too closely to a concept of "social sustainability" which is tied to popular movements for environmental justice and farm worker rights and so forth. While Thompson may endorse the aims of such movements, he believes Norton fails to emphasise a more critical sense in which the term is used by environmental scientists to refer to the "functional integrity" of natural systems. Thompson is thus disappointed by Norton's failure to make central to his definition of biophysical sustainability a conception of the fundamental limits to the resilience of both natural and social systems. This he says is a serious shortfall in Norton's attempts to establish a framework for environmental ethics that he otherwise largely endorses (Thompson 2007: 381-384). Put in the terms discussed above, Thompson's is thus critical of Norton's socially-oriented normative sustainability and considers that Norton should embrace more of the commitments of strong ecological sustainability.

The other critical problem that Norton addresses, in addition to the problematic influence of positivism and the absence of a common vocabulary and shared conceptual framework for environmental policy discourse, is what he has described as a polarising ideological deadlock regarding environmental valuation. To briefly reiterate, he sees this situation as resulting from the two fields most directly concerned with environmental valuation, environmental ethics and environmental economics, each promoting competing ontologically grounded theoretical frameworks. The prevailing theoretical approaches within both disciplines have aimed to achieve both completeness or comprehensiveness and a connectedness or elegance in their theoretical terms. Applying the terminology familiar from previous chapters, academics in both fields have generally presupposed the necessity of monistic theoretical frameworks. The problem of incommensurable discourses is thus institutionalised since for monistic theories, the domain addressed by a theory is expected to be expressed in a single vocabulary, derived from a single unifying principle or hierarchy of principles (Norton 2005a: 161-162).

Given there is a diverse range of often contradictory valuations of nature, seeking to develop monistic theoretical systems which require all such values to be reduced into a single conceptual and linguistic framework, appears to offer the prospect of gaining greater rational order within an otherwise chaotic and conflict-ridden situation. Norton is sympathetic to this intention. However, he is very critical of the oversimplification of the diversity of environmental values that has occurred and of the unhelpful polarised rhetoric that results.

The solution Norton proposes to take the debate regarding environmental valuation beyond this cross-disciplinary stalemate merges with his practical and procedural response to the dysfunctional "towering" of scientific discourse on environmental policy. His approach calls for the acceptance of the plurality of positions regarding environmental values and the embrace of empirical and procedural methods for evaluating this diversity of value. This evaluative process is to be integrated within a

wider project of defining sustainable futures for particular human communities within localised ecological spheres.

Norton's environmental pragmatism understandably informs the critical aspects of his proposals and he finds two of Dewey's ideas particularly instructive. The first of these is Dewey's treatment of both scientific and moral inquiry as being subject to the same rule of "logic": the rule of experience. Dewey denies that there is a problematic "fact-value gulf" and espouses a naturalism whereby ethical dilemmas should be resolved through the test of experience, and especially through participatory democratic practices, sensitive to the needs and interests of local communities (Norton 2005a: 191).

The second key idea taken from Dewey is his concept of "social learning". This rather optimistic concept is important to Norton because of its emphasis on participatory democratic frameworks. Within such frameworks, developing better institutions and strategically deploying research, is expected to better inform the public regarding particular choices or controversies, allowing people to re-evaluate previous value commitments and indeed learn. Effective social learning is pivotal to the manner in which Norton proposes to integrate scientific understanding within a community-level democratic process seeking to evaluate the plurality of environmental values and goals. And this evaluative process is seen as a necessary step on the way to progressively better defining a sustainable relationship between these local cultural values and interests and the ecological systems within which a community functions (Norton 2005a: 191-192). But while Norton's model for the negotiation of ecologically sustainable communities is greatly influenced by the thought of classical pragmatists such as Dewey and Peirce, it has also been 'adapted' to function as a component within a more encompassing, ecologically informed model of environmental management known as "adaptive ecosystem management" or simply "adaptive management". To fully understand Norton's proposals for the development of a more practically engaged and effective environmental ethics it is therefore necessary to have some understanding of adaptive ecosystem management.

5.3 Adaptive ecosystem management

Adaptive management has become widely accepted as a central aspect of a new consensus regarding the appropriate framework for the integration of conservation biology within conservation planning and management. Sahotra Sarkar notes that the term "adaptive" in the phrase "adaptive management" is ". . . signifying that the process of planning is iterative and continuous, having to be periodically repeated to take into account changing ecological and political contexts" (Sarkar 2002: ii).

The demand for an iterative responsiveness to changes both in ecological and socio-political context reflects an acknowledgment of the special challenges of interaction associated with natural systems. Thus adaptive ecosystem management is a practical response to the indeterminacy of complex natural systems such as ecosystems whereby the classical reductionist and mechanistic

conception of the world has proved inadequate. As Kay and Schneider remark, coming to recognise the limits of the reductionist and mechanistic model in this domain means that, "We will have to learn that we do not manage ecosystems, we manage our interaction with them" (Kay and Schneider 1994: 33). Adaptive management also builds on an acceptance that conservation or environmental science and management is inevitably a normative affair. The features of the biophysical environment that are judged to require measuring are determined by human values and thus conservation and environmental planning must be responsive to political processes as noted above by Sarkar (Sarkar 2002: ii).

The term "adaptive management" was coined by the ecologist C.S. Holling (Holling 1978). However, Norton proposes that Aldo Leopold, the great forester-philosopher and inspirational figure of North American environmentalism mentioned in Chapter 1, was the first adaptive manager, although Leopold did not employ this terminology (Norton 2005a: 71). Leopold gained a significant lesson from a mistake he made early in his career as a wildlife manager. His error was to apply the simple logic that reducing predator numbers would increase the supply of game animals. Such a policy had a tangible economic value for hunting in the mountains of the Southwest. However, the resulting large scale eruption of deer populations, mass starvation and the degrading of plant communities encouraged him to re-consider the role of the ecological manager. Norton makes much of Leopold's employment of an interesting and central simile for a more appropriate approach to ecological systems expressed in the title to his essay, *To think like a mountain* (Leopold 1987: 129). Through this simile, Leopold sought to foster a change in land management thinking, away from the short-term, economically driven management objectives evident in his flawed predator eradication programmes, towards the adoption of the perspective of the 'mountain' or ecosystem. Leopold came to recognise three significant timescales for ecosystem management: (1) human experiential (and economic) time; (2) ecological time ("decades to a millennium or so") and (3) geological (or deep) time. One of his key insights as a conservationist was to recognise clearly that humans now have the population densities and technology to begin to impact at the level of deep time. Thus our current activities can impact on future generations on a scale not previously possible (Norton 2005a: 214-215). Leopold called for a reframing of perspective to bring into consideration the effects of management interventions over the much extended spatio-temporal scales relevant to complex natural systems (Norton 2005a: 121-122).

Norton emphasises that a theory of environmental management such as adaptive management must be a theory of action. The actions involved in environmental management must surely be motivated by social values. Thus all actions taken as part of the management process, including the undertaking of scientific studies are inevitably influenced by social values. He notes that the environmental management process "necessarily involves us in goal-directed activity, and our theory of management must therefore include a means of identifying, justifying, and/or legitimating goals by

reference to some social value" (Norton 2005a: 92). Norton then defines adaptive management according to three major tenets as follows:

1. *Experimentalism*. Adaptive managers emphasise experimentalism, taking actions capable of reducing uncertainty in the future.

2. *Multi-scalar analysis*. Adaptive managers understand, model, and monitor natural systems on multiple scales of space and time.

3. *Place sensitivity*. Adaptive managers adopt local places, understood as humanly occupied geographical places, as the perspective from which multi-scalar management orients.

(Norton 2005a: 92)

As already indicated, Norton proposes to integrate his model for a more practically relevant and effective environmental ethics within the general framework provided by the adaptive management paradigm. However, he acknowledges two fundamental commitments of his approach which are not accepted as necessary aspects of that paradigm as it is currently understood and practised by many environmental scientists. Firstly, he notes an overlap between the pragmatism of his approach to evaluating environmental values and the approaches of the scientists developing an adaptive management paradigm. Since Leopold's time environmental managers have at least implicitly embraced a Deweyan pragmatist epistemology of seeking to reduce uncertainty regarding the behaviour of natural systems through carefully targeted scientific management experiments. It must be emphasised however, they generally have not adopted what Norton argues is an equally fundamental aspect of Dewey's programme. He notes that adaptive management advocates, generally have not similarly expanded on Dewey's dynamic approach to value change. As emphasised by the clinical pragmatists such as Miller et al. with regard to clinical ethics, Dewey advocated the treatment of ethical principles, beliefs and commitments as "hypotheses" which need to be subjected to the test of experience just as do hypotheses regarding the functioning of natural systems (Norton 2005a: 119).

The second central commitment of Norton's approach which is not generally considered to be a necessary component of adaptive management is the role of democratic, community participation in the defining of the management goals for adaptive management processes. He notes that it is possible to consider adaptive management as a purely scientific programme concerning the adjusting of management goals based on experiments and the monitoring of ecological systems. There need not be a commitment to public input into the goal-setting processes. Certainly adaptive management processes can be applied in this manner on privately owned lands (Norton 2005a: 94). However,

Norton argues that within a democratic state, public input into the goal-setting process regarding environmental policy regarding public lands is essential[6]. Norton states:

> I built this aspect into my definition by emphasising the local nature of environmental values and by seeing localism as not just a geographical point but a "place" which is best thought of as a negotiation between the land and a human culture. In this sense the localism aspect of adaptive management, . . . entails an unavoidable interaction between adaptive managers, members of the public, politicians and resource users.
>
> (Norton 2005a: 94-95)[7]

The overarching purpose of Norton's proposals is therefore to provide an idealised model for adaptive managers. This model is intended to help them engage in a rational and democratic manner with the political and policy making processes of goal-setting, problem formulation and value advocacy, needed to legitimately direct their work. Because he is concerned with describing an ideal process, he quite self-consciously develops a model of adaptive management informed by the pragmatism of Dewey and Peirce and which incorporates pluralist and participatory democratic processes that are not necessarily embraced by most adaptive managers currently. His proposal is then effectively a kind of extended philosophical thought experiment to allow consideration of how the political and policy processes feeding into adaptive management might be amended through such a self-consciously pragmatic and democratic treatment (Norton 2005a: xiii).

The most critical, innovative and also idealised aspect of Norton's theory depends on the exercise of fair and open procedures of deliberation by particular communities in order to define the goals for adaptive management in their ecological region. In developing his case for the potential benefits of such innovative and as yet largely counterfactual processes, Norton confides that he has found the existing philosophical model of discourse ethics, as elaborated by Jürgen Habermas instructive[8].

Norton therefore proposes that his model depends on the attempts of diverse but sincere participants seeking to approximate what Habermas describes as "an ideal speech community". Norton thus looks to discourse ethics for a normative method capable of moving from the initial plurality of expressions of goals and values by individual members of a community towards consensus and the legitimation of public actions in support of public values (Norton 2005a: 278).

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[6] I have provided support for this contention in my critique of the proposal of Minteer and Collins for the new field of ecological ethics. I have suggested their approach threatens to support an "ecological paternalism" due to their lack of sufficient theoretical focus on the question of democratic participation.

[7] Also see my argument in Chapter 4 regarding the danger that state employed conservation managers may engage in "ecological paternalism" if due concern for democratic process is not embraced.

[8] In fact Norton goes on to argue that discourse ethics offers much more than an instructive supplement to the ideas and approaches of adaptive management as discussed below. He makes a bolder and much broader reaching claim that discourse ethics shows the way toward a more productive approach to environmental ethics in general. He states that "Habermas's discourse ethics, and especially his construct of an "ideal speech community" thus defines a key role for philosophers at the *centre* of the policy process" (Norton 2005: 286, my emphasis).

Consistent with the discourse ethics framework, Norton's approach presupposes that members of a local community should be willing to accept a commitment to achieve cooperative solutions to the challenges presented to their community (Norton 2005a: 243, 288). He notes that such an expectation is not unreasonable since this kind of cooperation has been achieved by many communities previously, a point confirmed by the research of Ostrom and others regarding the institutions for the self-management of common-pool resources discussed in Chapter 4. In seeking to cooperate to find solutions to their common challenges, Norton's model requires that the members of a community must also commit themselves to following certain procedural norms. Notably this includes commitments to "communicate clearly and to offer explanations and reasons for their proposals for action" (Norton 2005a: 246, 281, 288-289). They must also accept and continue to engage in the dialogue irrespective of the outcomes of the process as this is described further below. They should not quit the dialogue and undermine a community consensus should they personally disagree with some determinations (Norton 2005a: 288).

Norton recognises that it is likely only a small number of people will be sufficiently motivated and capable of contributing to what will inevitably be quite demanding processes both in terms of time commitments and the necessary procedural discipline. Thus he accepts that in practice only a small advisory committee is likely to be actively engaged with the adaptive management process relevant to a particular community. However, Norton insists that the members of the advisory committee should be representatives of particular interest groups within a community, and that they must also provide a liaison and education role updating other members of their community on the progress made by the committee (Norton 2005a: 294-295).

Norton also offers a "process heuristic" for these participatory evaluation processes. As just noted, Norton envisages such processes as involving community advisory committees made up of community representatives who would work with adaptive managers and scientists in evaluating the plurality of local environmental values. They would then work towards a consensus on the goals for the adaptive management programme relevant to this locality. Norton's process heuristic, conceptualises two alternating phases, an *action phase* and a *reflective phase*. In the action phase, the community sets out to judge a range of previously agreed actions and policies against appropriate criteria. In the reflective phase, the community discusses which ecological and social variables to monitor and which goals and values will be pursued initially. The adaptive management process is then proposed to involve the continued iteration of action and reflection phases (Norton 2005a: 144). The overarching goal of this process is to achieve a community consensus regarding the sustainable relations between local culture and nature. He envisages a continual refining of management goals and of knowledge regarding the biophysical system, along with the progressive testing and refinement

of social values and goals, all of which should contribute to a process of social learning within the community[9].

Norton acknowledges that such an inclusive, democratic process seeking to embrace the full diversity and plurality of environmental values and goals within any modern community would seem to be attempting something contradictory or almost paradoxical. That is, he is arguing that a diversity of evaluative opinion within a community should somehow be conducive of constructive agreement, and yet surely, ". . . what is diversity of values if not disagreement?" (Norton 2005a: 159). Norton's solution to this paradox relies on a distinction between environmental *values*, such as the enjoyment of unspoilt landscapes or an appreciation of good water quality, and measurable environmental *objectives*, which may include specific goals and policies such as reducing the volume of nutrients entering a river by *X* % over a certain time-frame. He argues that this then allows the making of a distinction between potential actions and the plurality of values which may motivate and justify those actions. It also clarifies the role of political processes within adaptive management processes. Norton then claims that, "Finding better policies is often finding policies and management objectives that support multiple values" (Norton 2005a: 159). To illustrate his claims, Norton returns to his oft-cited example of how agreement may be reached on a common conservation policy despite very considerable disagreement regarding ultimate values amongst the participating groups and individuals. The example is that of wetlands protection policy in the U.S.A. where common interest in the objective of protecting and restoring wetlands led to cooperation amongst groups with very different ultimate values including hunting organisations, wilderness protection and conservation societies and animal rights organisations (Norton 1991: 201-202; 2005a: 159).

Environmental indicators therefore play a critical role in Norton's proposed evaluative enhancement of adaptive management processes. During the proposed reflective phase within adaptive management processes, local participants, aided by scientists, and perhaps also philosophers, are to engage in a discourse aimed at eliciting multiple values, interests and viewpoints. They are then to begin to negotiate how to rank and to measure the degree of attainment or protection of these values and goals. Norton suggests that the presentation of various scenarios or "development paths"[10] will serve to focus these discourses. Given such a range of development paths, indicators are to be proposed that would allow a degree of quantitative evaluation and tracking to try to determine the extent to which these measures actually protect or promote the plurality of values and goals of community members. Norton notes that any such indicator

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[9] Norton rather neatly matches his proposal for a two-phase process of evaluation within adaptive management with Habermas' theoretical distinction between communicative action and discourse (Norton 2005: 280).

[10] As I will discuss later, I believe Norton's use of the term "development path" is unfortunate since it implicitly includes an acceptance that "development" is a necessary goal of all communities and a demand on all ecosystems.

> . . . must be understood as a measurable index of change in valued states of a system. An indicator should thus be related to a state of the system – a state that may change given choices the community makes regarding development paths. Various participants in the public process can, then, advocate protection of their values by favouring a set of indicators associated with their favourite values and by advocating that goals be set to maintain or achieve specified standards for the indicators.
>
> (Norton 2005a: 294)

As the adaptive management process then switches from the reflective phase to the action phase, the initially most favoured policies (and thus development paths) are trialled. He recommends that "safe-fail" experiments are conducted where negative outcomes can be contained without risk of major disruption or degradation of the entire system (or landscape). Such experiments, based on even temporary agreements on the prioritising of policies, represent "probes" of the biophysical system. Norton claims that such probes are worthwhile because they will provide a source of social learning (Norton 2005a: 274). By making such experiments and through the monitoring of relevant indicators during a continued iteration of action and reflective phases, it should be possible to say "Development Path A is more (less) likely to enhance social values V_1, V_2, V_3, . . . than Development Path B" (Norton 2005a: 188).

In brief, Norton's ambitious proposal centres on a pluralist, participatory, experimental and iterative procedure to be embedded within the adaptive management process. Through local processes for defining both social and biophysical sustainability, Norton proposes to free environmental policy and management from the dysfunction of "towering" and from the polarised, ideological values discourse of Intrinsic Value theory and economism. Before I begin my evaluative discussion of Norton's proposals, an illustrative example of his model may prove helpful. Norton defends the abstraction of his model since he argues that all the detailed work of defining sustainability must be carried out by communities as they adapt to local ecologies. Thus he says that this approach rules out grand and simplified accounts of what sustainability will entail (Norton 2005a: 389). The example Norton provides is therefore tied to a particular community and his own locality, Atlanta city and the wider region of Northern Georgia. I have suggested that his model is effectively a protracted thought experiment and this abstraction is further confirmed by the fact that when he turns to illustrate his model with a "practical example", this too is purely hypothetical.

Norton's (hypothetical) example describes what could happen if the various branches of local government and interest groups were to stop "feuding and competing" for the most rapid path to economic development and instead sought to cooperate to " define sustainability for the region through an open, deliberative process designed to increase cooperation" (Norton 2005a: 389). That would be a process that would, much against the flow of the current competitive politicking of the region, approximate an "ideal speech community" as defined by Habermas. He acknowledges that even under the most optimistic circumstances considerable disagreement should be expected initially.

However, Norton imagines it possible that considerable support could be forged for the adoption of what he calls synoptic indicators. Such indicators could then help establish standards for evaluating the range of development paths and projects likely to be promoted by various interest groups.

For the Atlanta urban area Norton would propose "the ratio of pervious to impervious surfaces" as such a synoptic indicator. He suggests this would serve as a "synoptic" indicator because it could simultaneously monitor several important values. A variety of participants in the planning process who wouldn't initially have a commitment to this indicator, could through discourse and social learning come to see the pervious-surface measurement as an effective indicator of how well their more specific interests and values were being protected, or promoted (Norton 2005a: 391). For example, Norton notes that the citizens of Atlanta generally take considerable pride in the fact that they live in "a city of trees" so that many people would agree that maintaining a high ratio of pervious-surfaces would be a good thing.

Those concerned with maintaining wildlife populations, the water quality of the aquifer, "smart growth", improved public transportation, and clean air could all come to recognise this measure as providing a useful indication of how well their values and concerns were being protected so as to ensure a fair "intergenerational bequest". Norton suggests, that even those people most concerned with economic development, including property developers, might recognise the value of this indicator if they realise that development that conserves water and does not destroy the character of the district as "a city of trees" is likely to increase property values and allow appropriate development to continue (Norton 2005a: 391). Development policy could then be refined in the on-going reflective phases of the adaptive management process as participants

> discuss and debate what percentage of pervious surfaces to set as the ideal and what level to consider as a minimally acceptable ratio. People need not convince others to share their values, provided they can agree on measurable goals toward which to work, because those with differing values can see how the measured indicator will reflect their own cherished values.
>
> (Norton 2005a: 392)

To also illustrate the importance of the multi-scalar dimensionality of adaptive management theory, Norton considers how this hypothetical development process for the city of Atlanta could be integrated within the larger landscape and the more expansive and longer run development of the surrounding Northern Georgia region. He notes there is currently considerable pressure for the conversion of native hardwood forest to faster growing pine plantations or alternatively complete forest clearance to allow residential property development, both aimed at yielding greater or faster profits. These trends threaten the native vegetation of the region and greatly reduce the habitat for wild species.

Norton then suggests for this wider region that an indicator such as the "percentage of area in mixed hardwoods" could effectively supplement the pervious-surfaces indicator for the urban area.

This would then provide the framework for a system of "spatially nested criteria", linking adaptive management processes at the urban level within the context of the spatially broader (and temporally slower) dynamic that determines the vegetative versus human modification mix of the wider region. Norton hopes that his optimistic vision for future developments might then lead to "win-win" policy initiatives allowing continuing development providing for economic prosperity but also maximally protecting the important natural values of his local region. However, for the present, Norton laments that he cannot see even the beginnings of such a process. He nevertheless still hopes that his region will before too long come together as "a true community", embracing a collaborative adaptive management process and demonstrating an appreciation for more than just "maximal short-term development (Norton 2005a: 398).

There are clearly many questions that can be raised about Norton's proposals. However, I have deliberately refrained from criticism of his model until completing this full overview of his position. And my criticism also waits upon the discipline enforced by the formalities of Bartha's model. As a general comment however, there is considerable irony in this major work from Norton that has been remarked upon by a number of reviewers of his *Sustainability*. They have noted that despite Norton's long crusade for reform toward a more practical environmental philosophy, his model is remarkably *idealised*. However as I have already noted and will soon emphasise as I evaluate his model, I believe the real value of Norton's *Sustainability* may come from the way in which it serves as a kind of extended thought experiment. As such it allows the conceptual testing of some key presumptions of democratic pragmatism[11]. I will suggest that the real irony may then be that in pursuing *practicality* in environmental ethics most rigorously, Norton may have done a great deal to help better define what should be understood as the critical *theoretical* challenge for environmental ethics.

5.4 Evaluating Norton's model

To evaluate Norton's model for a more effective role for environmental ethics through integration within the adaptive management paradigm I will again draw on analogical comparison with bioethics and employ Bartha's evaluative model and conventions. This evaluation will differ considerably from the previous applications of Bartha's model in Chapter 3 and 4. Minteer and Collins explicitly seek to gain a measure of support for the plausibility of their proposals by drawing on direct parallels with pragmatic bioethics methodology (Minteer and Collins 2008: 483). By contrast, although Norton discusses some parallels between medicine as a normative science and adaptive management (Norton 2005a: 39) and has remarked on the greater influence on policy and practice achieved by bioethics

[11] For a description of democratic pragmatism as an approach to environmental problems see "The politics of the earth: environmental discourses" (Dryzek 2005: 99-118).

compared to environmental ethics (Norton 2007a: 134), he does not similarly draw explicitly on parallels with bioethics to inform or provide support for the plausibility of his approach. Nevertheless, there are still significant parallels between Norton's methodological assumptions and existing widespread methodological commitments within bioethics more generally and in terms of the practical approach pursued by the so-called clinical pragmatists in particular.

My evaluation of the proposals of Minteer and Collins raised concerns about the risks of supporting ecological paternalism through their well-intentioned offering of a pragmatic framework and methodology in the service of ecological professionals. I emphasised the special character of environmental issues as being of wider public interest and requiring public input within democracies and expressed some disappointment that this concern was not taken up more directly in their proposals. As should already be apparent from my description of Norton's approach in this chapter, he is very much committed to facilitating the participatory democratic engagement of local communities with ecological issues. And his model need not be restricted to public lands in the manner in which Minteer and Collins' proposals appear most suited. As Norton's hypothetical illustration of his model for Georgia showed, it can include environmental resources at any spatio-temporal level and regardless of existing ownership or management regime.

I have therefore presented Norton's approach as potentially offering a significant advance over the position of Minteer and Collins. However, Norton's model at this stage clearly remains very much at the level of idealisation, rather ironically as just noted, given his career-long commitment to establishing a practical philosophy. It is very difficult to evaluate the plausibility of the presumptions and possibilities of such a complex and largely hypothetical model. I thus believe that the methods of analogical comparison with an established field such as bioethics may provide vital assistance for this task. That is because certain related presumptions and approaches to those advocated by Norton have already been subject to some degree of testing in the source domain of bioethics.

Firstly I will outline and then explain in more detail the basis for my reconstruction of an analogical argument linking Norton's adaptive management proposals with methodological development in bioethics.

Table 5.1 Tabular representation of proposed analogical argument

The field of pragmatic bioethics (S)	Norton's hypothetical model (T)
P Observed that there *is* a strong distinction between (1) *public* issues in policy bioethics where a minimal and "thin" overlapping consensus is sought amongst a plurality of substantive (secular and religious) moral frameworks but where significant contention remains and (2) *private* issues within clinical bioethics where the individual patient's conception of the good life is sovereign	P* A parallel strong ('culturally adaptive') distinction should be adopted between (1) the wider societal and trans-national *(public*) levels where a minimal and "thin" overlapping consensus on biophysical sustainability is sought and (2) '*private'* issues within adaptive ecosystem management where the individual local community's conception of the good life (necessarily) integrated with a spatiotemporally defined conception of biophysical sustainability should be sovereign
Q (Conclusion) The structural dynamics of (American) liberal (individualist) democracy has served during the development of bioethics as a kind of 'selective' force favouring approaches to medical ethics 'adapted' or compatible with this particular cultural environment	
	Q* The structural dynamics of liberal democracy should from now on be allowed to serve as a kind of 'selective' force favouring approaches to environmental ethics 'adapted' or compatible with this particular cultural environment

I provide a brief explanation of the overall structure of the argument before taking up the task of defining the nature of the prior association in this analogical argument. This seems necessary given the more complex form that this analogical argument takes and also given that this is not an argument that is immediately apparent in my account of Norton's proposals for a more practically effective environmental ethics. It should also be noted that this is certainly not an argument that Norton makes himself explicitly. Rather, it is a reconstruction that I argue will greatly assist the task of achieving a better understanding and critical evaluation of Norton's model.

5.4.1 The reconstructed analogical argument

The key feature of the positive analogy, P : P*, is my claim that Norton's proposal demands a parallel sharp distinction between 'public' and 'private' spheres to that distinction already obtaining within the practice and institutions of bioethics. Norton's approach prescribes that no more than an overlapping consensus on "thin" conceptions of sustainability should be established in the public domain. By "public domain" I refer to the political institutions of nation states and transnational organisations concerned with biophysical sustainability. The manner in which such a "thin" consensus is proposed to be sought is effectively equivalent to the manner in which consensus is sought in the public domain relevant to bioethics and indeed consistent with liberal moral and political philosophy more generally. The only clear difference here is that the focus is on the 'health' of the natural environment rather than that of the individual person. However, the 'private sphere' referred to in P* must be understood through analogy and requires more explanation.

I claim that the most interesting (and problematic) feature of the positive analogy is a parallel between the private sphere of the individual patient already institutionalised within bioethics and an analogous 'private sphere' prescribed by Norton's sustainability model. The private sphere of bioethics is the realm in which, as far as practicable, the individual is sovereign with regard to their own conception of the good. Thus at least within theory if not always in practice, the patient should be sovereign in their interpretation of their own best interests when receiving biomedical health interventions. The analogous 'private' sphere in Norton's account is not an individual person but rather an individual, geographically localised, human community. This may not appear at first blush as an obvious parallel and more specific reference to Norton's position is needed to support the comparison. However, as I will soon demonstrate, this is nevertheless a very instructive analogy.

The central role for a public-private split in Norton's conception of environmental ethics is tied to his strong and quite uncritical endorsement of Habermas' formulation of discourse ethics[12]. Norton acknowledges the important influence of Habermas' work on his *Sustainability* stating in a later defence of his position that:

> . . . my deepest debt in the realm of philosophical ethics is to Jürgen Habermas, who combines pragmatic influences with a deep understanding of, and incorporation of, a broader European tradition[13].
>
> (Norton 2007b: 400)

[12] Another German philosopher, Karl-Otto Apel, also contributed significantly in the early development of discourse ethics (Thompson 2002: 204)

[13] The tradition Norton refers to here is the critical theory tradition of the so-called Frankfurt School (See How 2003; Norton 2005: 279).

Although Habermas argues that practical reason is a basic and undifferentiated capacity which applies to all action-oriented choices and thus includes pragmatic, moral, ethical and legal reasoning, he emphasises an important distinction with regard to moral and ethical reason. Pragmatic reason and discourse is concerned with establishing effective means to achieve goals or ends which are not in themselves in question. In contrast, moral and ethical reason is commonly brought to bear in circumstances where value claims and proposed goals and ends have been brought into question and thus require justification. Habermas acknowledges considerable conflict between broadly Kantian and Aristotelian approaches to morality and he claims his discourse ethics represents a considerable advance for philosophical ethics by presenting a remedy to this conflict. The modern Kantian conception of morality emphasises the ideal of an impartial and largely formal practical reason, employed by individual morally autonomous beings. In contrast, Aristotelian approaches focus on a more substantive practical reason much concerned with defining the good life and with the cultivation of the virtues. While on the one hand the Kantian understanding of practical reason is often criticised as descending into rigorous but empty proceduralism, on the other, Aristotelian approaches may be charged with being too dependent on uncritical acceptance of culturally specific values and norms (Habermas 1993: 1-17).

The solution Habermas proposes to this common theoretical impasse has been to insist that two distinct modes of practical reason are in question and that each should be limited in application to their two corresponding quite distinct realms, the moral and the ethical (Norton 2005a: 282-283). It should also be noted that surely the most crucial conceptual innovation made in discourse ethics is to insist that the purely individual or "monological" exercise of practical reason central to the universalisation procedures of Kantian moral judgment, should be recast as a collective or dialogical exercise (Habermas 1990: 66-68).

Norton's embrace of Habermas' clear division between an abstract procedural and universalist realm of morality and a particularist and substantive realm of ethics is pivotal to his project. Firstly, Norton wishes to draw upon the core procedural norms of fairness and impartiality said by Habermas to govern all deliberative discourse. These are said to follow from the normative demands falling upon rational agents purely as a consequence of the implicit presuppositions of language use itself. This level of moral normativity is said to apply universally to all parties engaging in practical discourse. Norton proposes that such very general procedural demands should provide the rational basis to pursue participatory agreements on overarching universal norms regarding human relations with the natural environment, the public level referred to in P* (Table 5.1). Crucially he then considers the potential role of Habermas' ethical realm for defining sustainability at the particular and local level. He states:

> But discourse ethics leaves room also for a more particularistic layer of normativity, the choice – in conversation with others in one's community, of course – of a given ideal of the good life. Here, I would argue, choices of a *good life* are inseparable from choices of a *good environment* in a particular place.
>
> (Norton 2005a: 289, my emphasis)

Norton therefore identifies the task of considering what constitutes a good environment in a particular place as integral to the question of what constitutes a good life. Having made that critical identification, he thereafter places the central focus of his sustainability model on the participatory discourse of local communities in particular places, additionally informed by transdisciplinary input from social and environmental scientists. I believe that he is right to conceive the question of sustainability as a substantive ethical matter. And I will also argue that he is right to 'ground' this question in particular spatiotemporally defined communities and to seek to integrate such processes within the wider process of adaptive ecosystem management[14]. However, as will become apparent in the evaluation of the analogical argument constructed in this chapter, I will also argue that Norton's model of sustainability faces very serious theoretical problems[15].

The sense in which Norton's processes of local, "bottom-up" resolution of environmental problems involve a 'private' realm with parallels to the "private" realm of ethical issues concerning individual patients in bioethics should be becoming clearer for the reader. The parallel is that between individual communities seeking to define social and biophysical sustainability in their locality as prescribed by Norton's sustainability model, and the individual patient within pragmatic bioethics. Such communities are to be sovereign over their own conceptions of the good life and the biophysically sustainable.

The role prescribed for philosophers under Norton's model is simply to serve as facilitators or mediators, aiding the clarification of the local conception of the good life and of a sustainable local natural environment. To do so philosophers must seek to improve communication both within the community and with the relevant adaptive ecosystem managers and social and environmental scientists. Environmental philosophers should not attempt to assert their own substantive normative positions regarding environmental values and the nature of sustainability on the deliberations of such local communities. To do so would be analogous to the medical paternalist overriding the substantive ethical commitments of the morally autonomous patient.

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[14] See the excellent discussion and argument for such a local grounding for environmental concern by Robyn Eckersley (Eckersley 2006).

[15] Not least of those problems is Habermas' thorough-going anthropocentrism and his consignment of questions of the good, including ecological ethics concerns regarding "environmental goods" to the non-cognitive domain of ethical preference (Habermas 1993: 105-111 ; See also Krebs 1997).

On analogy, it would seem that Norton's strong antagonism to nonanthropocentric environmental ethics can be understood as being reinforced by his Deweyan democratic commitment. Such commitments lead him, in effect, to promote the intrinsic value of the autonomous development of a conception of sustainability by individual communities tied to particular localities. From this perspective, attempting to impose normative duties to Nature based on supposedly universal claims for its intrinsic value involves an analogous paternalist imposition of predefined conceptions of the good and sustainable onto local communities. The perception that intrinsic value theorists in environmental ethics are attempting to resolve environmental problems in a manner analogous to the now rejected paternalism in medicine would, I argue, help explain the strength of Norton's long-running critique of the central role that intrinsic value theory has played in environmental ethics.

The critical aspect of the parallel which I suggest is at the heart of Norton's model, therefore lies in his prescription of an equivalent distinction between public (moral) and private (ethical) realms for environmental ethics to that already applying within pragmatic bioethics. An important parallel presumption, reinforced by Habermas' discourse ethics is also that there can be little or no rational interchange between the two spheres. Moral rationality is confined to the "thin" discourse of the public sphere. The ethically "thick" values discourse of the particular community lacks equivalent cognitive content.

Dutch philosopher Pieter Pekelharing has highlighted and criticised this aspect of Habermas' discourse ethics (Pekelharing 2002)[16]. Pekelharing focuses on Habermas' enthusiastic endorsement of Kant's strong distinction between the liberal moral sphere concerned with universally valid norms and a substantive ethical sphere of values tied to particular ways of life. He argues that Habermas creates a categorical dichotomy between universalistic norms and inter-subjective values or "preferences". And this dichotomy leads to ". . . a dangerous tendency . . . to make values as non-cognitive as they are on the positivist account" (Pekelharing 2002: 218).

The following passage is identified by Pekelharing to support his contention of such a "dangerous tendency" inherent to Habermas' conceptualisation of norms and values.

[16] It should be noted however that Pekelharing does not specifically address Norton's *Sustainability* in these comments, but rather addresses the general significance of this flaw in Habermas' approach for pragmatists wishing to employ his discourse ethics as a practical ethics.

> Any procedural ethics must distinguish between the structure and the content of moral judgment. Its deontological abstraction segregates from among the general mass of practical issues precisely those that lend themselves to rational debate. They alone are subjected to a justificatory test. In short, this procedure differentiates normative statements about the hypothetical justice of actions and norms from evaluative statements about subjective preferences that we articulate in reference to what our notion of the good life happens to be, which in turn is a function of our cultural heritage.
>
> (Habermas 1990: 204)

The position of Habermas is clear in this passage. There must be a categorical distinction made between normative statements that hold the potential to possess universal validity and evaluative statements which are inherently subjective given their intimate connection to particular conceptions of the good life and contingent dependence on cultural heritage. Through his earnest attempts to provide a neo-Kantian basis for a universalistic morality and thus to out-flank the moral sceptic, Habermas has embraced such a categorical dichotomy between norms and values that the cognitive aspect of morality is attributed entirely to norms, while the rational and cognitive status of ethical value is dismissed (Pekelharing 2002: 219).

Habermas rightly emphasises the manner in which ethical values are tied to individual and group identities and to a particular way of life with personal narratives and related cultural history. And Norton is justified in being impressed with Habermas' descriptive accounts of the ethical phenomena. Habermas' anthropological, psychological, sociological and semantic accounts of the relationship between the development of human identity, sociality and morality are extensive and impressive[17] (Kelly 2000: 12). However, I believe that Pekelharing rightly objects to Habermas' too ready concession towards conceptualising ethical values in terms of psychological and sociological facts rather than meaningful commitments with genuine cognitive content. Pekelharing notes that if we follow Habermas in viewing ethical value in psychological or sociological terms, we must make an abrupt shift from an internal perspective engaged with the meaning and significance of particular value orientations, to an "objective" or detached (third person) perspective that merely attributes values to persons as brute social facts. He states:

[17] See for example his extended discussion of Kohlberg's stages of moral development (Habermas 1990: 116-194).

> . . . there is a persistent propensity in Habermas' form of discourse ethics to suppose that somewhere along the line we can step out of value discussion by judging the value to be a relative one – relative to this or that local life world, or relative to the preferences of the individual . . . a border is conjured up beyond which values come to be judged from the outside. We no longer "justify" value from an ethical point of view: it becomes a mere preference. The boundary is one where we step over from an insider's justification to an outsider's explanation, thereby disclaiming the value's grip on us, in a way in which norms can never lose their grip on us.
>
> (Pekelharing 2002: 219)

Pekelharing's argues that this over-ready concession to what may be referred to as "sociologism about values" is damaging to Habermas' overarching project of trying to provide a post-metaphysical justification for moral cognitivism. By accepting the inevitability of adopting a third person treatment of ethical values as merely the preferences of individuals relative to particular cultural backgrounds, Habermas then supports the treatment of all value differences as ". . . mere social conflicts to be resolved (although they are frequently that too) and not as rational disagreements calling for a decision as to where the better reasons lie" (Pekelharing 2002: 219). Values are regarded as private affairs with the only solution to unavoidable substantive value conflict being the application of fair processes of compromise. And it should be noted that Habermas presages Norton by unequivocally locating the concerns and valuations of ecological ethics within the subjective or at best intersubjective realm of the ethical. For Habermas the concerns of ecological ethics are not matters which press centrally on the universalistic and liberal moral domain he defines. The moral sphere is after all concerned with the just regulation of social affairs above and beyond a plurality of particular substantive ethical judgments and concerns. From his perspective, calls to protect ecological integrity, however worthy, represent but one of many, albeit important, competing substantive positions (Habermas 1993: 105-111). Because Habermas' discourse ethics and the public-private distinction play a critical role in Norton's *Sustainability,* I will return to these matters when I begin the evaluation of the analogical argument described in Table 5.1.

Leaving this initial elaboration and clarification of the positive analogy, I move now to the task of clarifying aspects of the conclusion (Q) of the analogical argument stated in Table 5.1. To recap, the conclusion (Q) is as follows:

> Q The structural dynamics of (American) liberal (individualist) democracy has served as a kind of 'selective' force favouring forms of medical ethics 'adapted' to this particular cultural environment.

It should be noted that a central role in this conclusion is being placed on themes associated with cultural influences on the development of a pragmatic bioethics. Such themes were previously discussed with regard to the negative analogy of the formalised analogical argument considered in Chapter 4. This observation has interest at a theoretical level simply because it illustrates the manner in which both the structure and content of analogical arguments depend very much upon the purposes

and context of each particular analogical argument. Themes that may serve as part of the positive analogy in one argument may become negative analogies in the formulation of a different analogical argument or vice versa. This is a feature of analogical argument emphasised by Bartha (Bartha 2010).

This observation also has value at another level. Because I have already introduced and discussed the role of such cultural factors as part of the negative analogy in the analogical argument evaluated in Chapter 4, it should not be necessary to repeat that detail. The background cultural factors discussed in Chapter 4 were described by the negative analogies $A_1 - A_3$. To recap they were:

A_1 A unique series of contingent social, political and institutional factors led to the "secular ordination of bioethicists" (Engelhardt 2002b: 78-80)

A_2 An emphasis on the value of individual patient autonomy enables many ethical issues to be moved to a private realm where the individual's conception of the good is sovereign

A_3 Agreement on ethical issues within pragmatic bioethics has been achieved within the supportive context of an implicit societal consensus on the benefits for individual well being and freedom resulting from biotechnological progress

Each of the three factors identified above concern elements of the social, political and institutional framework within which a largely pragmatic bioethics has emerged in the U.S.A. and other Anglo-phone countries. A_1 is not relevant to the current discussion since it refers to the initial or "originary" conditions supporting the rapid rise of bioethics rather than the contemporary cultural conditions relevant to the uptake of Norton's sustainability model. Thus it will not be discussed further in this chapter.

A_2 concerns the pressure that the prevailing liberal individualist ideology has played in justifying the restriction of discussion regarding substantive ethics issues to the private sphere of the individual as noted in Chapter 4. Likewise, at best only the pursuit of a minimalist, "thin", overlapping consensus is considered legitimate in the public sphere.

A_3 represents the subtle influence of the background societal consensus regarding the benefits of advances in biotechnology for improving individual well being identified by Tollefsen. My suggestion is that all such factors should be understood as representing key aspects of the wider cultural environment which have indeed served to help determine the manner in which a pragmatic bioethics has developed. And as I discussed in Chapter 4, there is good reason to consider that such cultural factors may have helped shape and select the methodological approaches of the largely

pragmatic and philosophical bioethics that has come to prevail[18]. As noted above, I will not repeat the detailed discussion of these influences on the development of bioethics since this has been sufficiently covered in Chapter 4.

5.4.2 The "prior association"

Following Bartha's overall model for the evaluation of analogical arguments, I will now seek to identify the nature of the prior association for the analogical argument in Table 5.1. I will draw on Bartha's taxonomy of submodels for evaluating different types of analogical argument (Bartha 2010: 107-149). As previously noted, Bartha's categories have been inspired by, and formulated for primary applicability in mathematics and the sciences. Thus applying such models to the type of reconstructed philosophical argument involved in this dissertation necessarily requires a degree of analogical extension in itself. Based on my reading of Bartha's categories I believe the form of analogical argument that is most relevant and informative for this argument is what he refers to as the "abductive/probabilistic" model (Bartha 2010: 128-133).

Bartha notes that it is a mistake to assume that all analogical inferences will be predictive (Bartha 2010: 122). What Bartha means by predictive analogical inference is illustrated by the arguments discussed in Chapters 3 and 4 which were of this type. The prior association represented in those arguments assumed that there were some similar causes captured by the respective statements of the positive analogies. These causes had relevance to both source and target domain and would thus explain the outcome referred to in the conclusion (Q) in the source domain, and by analogical inference, might account for the hypothetical conclusion (Q*) in the target domain. For example, in Chapter 4 the adoption of pragmatic methodological commitments were claimed to be instrumental to the emergence of a practically relevant bioethics discipline (Q). And similarly, the analogical argument proposed that a similar adoption of pragmatic methods might be instrumental to the emergence of a practically relevant new field of ecological ethics (Q*). The form of these arguments therefore took a predictive form whereby causal elements related to the positive analogy were claimed to bring about or cause the argument conclusions, Q and Q*. The direction of the relationship was thus, $P \rightarrow Q$.

By contrast, Bartha notes there can be occasions when the direction of the prior association is reversed. Thus he notes that

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[18] I do not have space to adequately defend notions of cultural adaptation as any more than broadly analogous with processes of natural selection operating at the level of individual organisms. However, I note that there is a significant literature now developing around this general subject area and to which philosophers have been significant contributors (See for example Boyd and Richerson 2005; Cavalli-Sforza 2010; Linquist 2010; Sterelny 2010).

> If *Q explains P* (the positive analogy), then the analogical argument aims to show that a similar hypothesis Q* is plausible because it would explain a similar phenomenon. Justification in such a case is, roughly speaking a matter of accumulating enough similar effects to support the inference to similar causes.
>
> (Bartha 2010: 122)

He then identifies two forms of abductive analogical argument. For what he refers to as abductive analogies, the relationship between Q and P is characterised as one of entailment. For abductive/probabilistic analogies, this relationship is understood in probabilistic terms (Bartha 2010: 122). It is the latter, abductive/probabilistic form which I believe will prove most relevant to the analogical argument represented in Table 5.1. I will consider some additional significant complexities that are relevant to applying this submodel in evaluating a normative philosophical theory rather than a causal-scientific hypothesis when I later come to interpret the implications of this evaluation.

A well established example from biology will help illustrate the manner in which abductive/probabilistic forms of prior association function. Use of such a comparison also avoids the need to introduce the further technical definitions and specialised terms that Bartha employs with regard to this submodel and which I believe represent unnecessary detail for philosophical applications of the model. That example, already mentioned briefly when introducing Bartha's work in Chapter 3, is the analogy employed by Darwin to help establish the initial plausibility of his natural selection hypothesis. Darwin's analogy was drawn between the established practice of artificial selection in breeding new varieties of domestic plants and animals and his natural selection hypothesis which sought to account for the evolution of new species in Nature.

Bartha notes that in this argument, the source domain S can be any example of what Darwin refers to as "domestic production", the selective breeding of a domestic animal or plant variety. The target T is any species found in nature. Artificial selection or breeding (Q) has the causal function of propagating the traits sought by the breeder, thus increasing the probability that the desired traits will become predominant. The observable phenomenon of the emergence a "new variety" is denoted with the term "E" by Bartha. The observable consequence, E, is generally part of the positive analogy which may also include other necessary conditions and hypotheses. The positive analogy, P* thus includes the analogical observable E*, which in this example will represent some particular naturally occurring species (Bartha 2010: 129-130).

Darwin's analogy with artificial selection functions by claiming that the survival advantage that certain traits may provide to individual plants or animals will increase the probability that these traits will become more frequent in the population under selection. This increase in the frequency of favourable traits is analogous to the selective influence achieved by the breeder of domestic varieties. Thus over very long periods of time, natural selection could explain the predominance of useful traits and of the diversity of species adapted to particular environmental conditions. Bartha then argues that

the prior association for this analogical argument must involve the entire complex causal process of mutation, inheritance, and artificial selection incorporated within the conclusion Q in the source domain (Bartha 2010: 129-130).

To illustrate, Bartha's account of Darwin's (abductive/probabilistic) analogical argument for the plausibility of natural selection can be stated in tabular form as follows:

Figure 5.1: Tabular representation of the causal and analogical relations in Darwin's analogy between artificial and natural selection

Source (S)				Target (T)
Artificial selection				Natural selection
E Observation of a particular domestic variety	←	Horizontal relations (analogical)	→	E* Observation of a particular naturally occurring species
↑				↑
Vertical causal relations				Possible causal vertical relations
Q Artificial selection	←	Possible horizontal relations (analogical)	→	Q* Natural selection

(Bartha 2010: 24, amended)

The next challenge is to explain how this mode of prior association functions for the reconstructed analogical argument in Table 5.1. Darwin's example is chosen as having particular relevance since his analogy concerns selective forces, those of artificial and natural selection. The argument under evaluation similarly involves 'selective forces', although in this case, one set of selective forces is operative in both source and target domains. These are cultural rather than "natural" selective forces which are related to the commitments of what may be termed the liberal (individualist) democratic cultural environment.

The prior association relevant to the source domain therefore concerns the way a range of interrelated cultural factors have had an empirically observable influence on the methodological development of bioethics. These factors include: (1) the influence of Rawlsian and other liberal political philosophies at one level in response to the challenges of increasing multiculturalism and moral and ethical pluralism; (2) the economic influence of capitalist individualism and competition; and (3) the challenges and promises of scientific and biotechnological advance linked to the prospects

for improvements in individual well-being and so forth. I suggest that the prior association is the combination of such factors tied to the structural dynamics of liberal (individualist) democracy having a causal, selective influence in favour of certain forms of bioethics practice and not others. Thus this multifaceted (social causal) selective force is then used to explain the forms of bioethics practice that now prevail. Thus I suggest that pragmatic methodological features that have been described such as pluralism of theory and principle, contextualism, empirical orientation and case-focus, and including in particular the importance of the clear distinction made between public and private concerns, are to be considered as 'adaptations' to the wider cultural environment. It is also suggested that these may not instantiate the right methods in some universalist sense[19]. For the quite particular purposes of this analogy I do not believe additional discussion and elaboration of these influences is required beyond that already provided in Chapter 4 and above. I acknowledge however, as already noted, that the issue of cultural selective forces on analogy with natural selective forces is an interesting and also contentious subject which cannot be adequately addressed within the context of the present dissertation (See for example Boyd and Richerson 2005; Sterelny 2010; Linquist 2010).

The general hypothesis is perhaps even banal insofar as it involves the claim that prevailing structural cultural influences (causes) have shaped a significant cultural production, the field of bioethics. The hypothesis would only seem to be controversial if one is particularly attached to promoting the unique legitimacy of one or other methodology of bioethics without wishing to give much consideration to the wider social, political and economic circumstances within which such methodologies are to be applied. Given the ongoing debate considered in Chapter 2 regarding the "right methodology" of bioethics, or the "methodology wars" as Daniels has referred to this debate (Daniels 1996), there will no doubt be some contributors to the bioethics literature who would wish to dispute the validity of this hypothesis. In any case, I suggest that this hypothesis regarding the role of such a cultural-selective-force will prove its merits within the process of evaluating Norton's sustainability proposals.

A critical departure from Bartha's intended use of the abductive/probabilistic submodel must be acknowledged in terms of the manner in which this prior association might apply in the target domain. The target domain in this reconstructed analogical argument is Norton's theoretical model for a reformed environmental ethics. It should thus be noted that the target domain is purely hypothetical. In contrast, Bartha's submodel has been developed for evaluating scientific arguments. His expectation is that there must be some kind of active causal process/es operative in both source and

[19] Jonsen's account of the history of bioethics includes a discussion of the question of why bioethics came to prominence first in the U.S.A. and has taken the form that it has in that country along with other Anglophone nations. His answers focus on the influence of American liberalism and of the so-called "American ethos" (Jonsen 1998: 377-405). My argument here is broadly consistent with his speculations as well as the similar historical reflections of other prominent authors in bioethics such as Callahan (Callahan 2003).

target domains. In the case of Darwin's analogy, causal selective processes, "artificial" and "natural" respectively, were argued to be operative for both the source and target domains. However, that is not the case for both domains for this reconstruction of Norton's sustainability proposals. It is true that I have described a causal process involving cultural selective forces in the source domain of bioethics. Those selective influences, sourced as they are in the cultural conditions of liberal democratic society must also apply to some extent in the target domain given that Norton's theoretical proposals have been formulated with such a society in mind. But it must be emphasised that the target domain concerns a theoretical model of how environmental ethics should be reformed according to Norton. The key difference from the standard scientific application of the submodel Bartha intends is that analogical argument therefore has a *normative* rather than *causal* function. Norton is urging that his model should be taken up, since it will be better 'adapted' to prevailing social norms and to the most promising model of environmental management, adaptive ecosystem management. The source domain informs us of factual-observable occurrence in terms of bioethics methodology. But in the target domain those same cultural influences do not apply by necessity. Rather, environmental ethics has developed in many ways to challenge existing cultural influences, most notably of course despotic anthropocentrism. Norton's *Sustainability* should therefore be understood as a sustained theoretical argument (or thought experiment) with normative intent. Norton is arguing that environmental ethics *ought* to change so as to begin the process of becoming better 'adapted' to such cultural influences. In the background, as I highlight, Norton has the established example of bioethics as a field that *is* already so adapted. Thus the analogical argument, as reconstructed by this author, must cross Hume's is / ought gap in the generalisation of the prior association from source to target domains.

5.5 Identifying critical factors

The next step in evaluating this analogical argument following Bartha's procedures requires identifying the features of the source and target domains that are critically relevant to the argument. Critical features playing an essential part in the prior association must be distinguished from secondary features which play a part but are not essential. As proved vital in Chapter 4, I must again look to identify any features of the target domain that might block the generalisation of the prior association to that domain. Such blocking would involve a negative analogy or analogies that would be of such critical relevance that they undermine the plausibility of similar causal relations obtaining between Q*, the influence of liberal individualist cultural selective forces and E*, the analogous cultural 'fit' of a public-private distinction that Norton's sustainability model prescribes for environmental ethics.

As a guide to identifying which factors might count as critical for this sort of analogical argument I will again draw on the example Bartha uses of Darwin's abductive/probabilistic analogical

argument for the plausibility of the novel process of natural selection based on parallels with the known process of artificial selection. Bartha notes that for this kind of analogical argument:

> All factors in the prior association (except counteracting causes) are critical[20], but we have to augment that association in *both* directions by adding causes and effects. That is, salient defeating conditions and additional observable consequences of Q, both of which may be omitted from the original version of the prior association, count as critical. The analogical argument is defeated if any of these factors belongs to the negative analogy.
>
> (Bartha 2010: 130)

Bartha notes three serious problems that were raised by Darwin's critics regarding this analogical argument. One was with regard to the observed effects of artificial selection and the other two regarding causes. The first problem was that although breeders had been able to produce very different domestic varieties through a series of small changes in each generation, they had not produced a new species. The second problem was that artificial selection is by definition the result of intelligent intervention or design, whereas the critical feature of Darwin's natural selection was that it is supposed to function without the causal intervention of any conscious agent. The final problem was that artificial selection is a deterministic process while natural selection is probabilistic. The breeder is able to select precisely which organisms have the most desirable traits and will thus be allowed to propagate. In contrast, natural selection presupposes only that certain individual organisms will have greater adaptive fitness and therefore be more likely to propagate (Bartha 2010: 130).

Darwin's solution to the first problem regarding what appear to be critically different effects between artificial and natural selection was to argue that there was a gap in the fossil record. He suggested that similar graduated changes in natural varieties had also occurred through natural selection but examples of such intermediate forms had yet to be discovered. With regard to the two problems concerning disanalogous causal factors, Darwin was able to use the one plausible response. To explain how so much biotic diversity could be achieved without conscious design, and with only probabilistic rather than deterministic processes, Darwin emphasises the great scientific uncertainty in his own time regarding the age of the earth and also the rate of evolution under natural selection. Thus he was able to make the plausible but hard to envisage claim that life on earth had evolved over such a very vast period of time that such remarkable diversity could indeed be achieved through only

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[20] Bartha explains the respective roles of contributing and counteracting causal factors as follows: "You have an event A which takes the form "A because X, despite Y, where X is a nonempty set of contributing, or positively relevant causal factors and Y is a (possibly empty) set of counteracting, or negatively relevant factors". He uses a simple example to illustrate how these terms apply as follows. "The car skidded of the road because it was travelling at an excessive rate of speed, despite the fact that the road was free of ice. Contributing causes (high speed) raise the probability of the event to be explained; counteracting causes (the absence of ice) lower it" (Bartha 2010: 114).

the probabilistic (and non-conscious) selection of very small changes in natural variety (Bartha 2010: 130-131).

Bartha's technical model, drawing on Darwin's example emphasises that the critical factors for the plausibility of abductive/probabilistic analogical arguments may be either effects or causes of the prior association. According to Bartha's model, firstly the observable effects of the prior association (E) cannot be part of a negative analogy with the target domain[21]. Secondly, there can be no defeating conditions (counteracting causes) known to hold in the target domain[22] (Bartha 2010: 131-133).

5.5.1 Potential counteracting causes

I will consider possible critical differences in causal factors first. That is differences equivalent to the seemingly critical differences in causes between source and target domains identified in Darwin's analogy. There are at least two causal factors operative in both domains which I believe may serve as counteracting factors against the plausibility of this reconstruction of Norton's argument. The first of these is the role of the implicit consensus regarding the beneficent role of biotechnological progress for individual well being discussed in Chapter 4. According to Tollefsen this implicit consensus has been instrumental to much of the agreement reached within bioethics (Tollefsen 2000: 78). However, the influence of the very same belief regarding the inevitable benefits of new technologies and related great expectations of benefit from continual economic progress and growth has frequently been linked to the destructive exploitation of the natural environment and of peoples in 'developing countries' (Wenz 1988, 1996). Thus what is a "contributing causal factor" in the source domain may well be a "counteracting cause" in the target domain.

This may seem confusing given that I have said that the causal influences proposed to function in both domains are derived from the same overarching cultural influences. That is the influence of liberal democratic and individualistic cultural commitments and institutions. The explanation for this apparent confusion is tied to the very different desiderata of the two domains. The same overarching cultural influences can nevertheless be understood to operate as very different causal factors in the two domains. What is a contributing cause in the source domain may be potentially a counteracting cause in the target domain. For bioethics this implicit consensus is consistent with a primary concern with the relatively short-term spatiotemporal frame and a specific focus on the well being of individual human lives. In contrast, environmental ethics is concerned with the greatly expanded

[21] I have illustrated this condition above with reference to the way Darwin was able to give a plausible explanation for what seemed to be a critical difference in the effects of the prior association between the two domains by suggesting there was a gap in the fossil record.

[22] Similarly illustrative, Darwin responded to seemingly counteracting causes regarding natural selection, by arguing that there was great ignorance regarding both how truly ancient the Earth was and also the rate of evolution under natural selection.

spatiotemporal scale of both existing and future human lives as well as the functional integrity and multiplicity of values of biophysical systems.

The advocate for this analogical argument may still question the potentially problematic role being attributed to this causal factor. They could argue with some plausibility that if a community pursued the idealised, inclusive democratic procedures for defining and experimentally testing sustainability models that Norton advocates, this causal influence may not be significant. Thus while this factor should be noted as having the potential to be critical, it cannot be established conclusively purely by conceptual considerations.

The second but no less important potential counteracting causal factor is the prevailing influence exerted by the modern commitment to individualism and related concern regarding the protection of individual rights central to liberal democracy and individualism. It is this modern concern with, and some would even say invention of the morally autonomous person, which is of course fundamental to the broad acceptance of the moral necessity of the sovereign and private realm of the individual patient in bioethics. This factor may be considered counteracting for the target domain insofar as this is a social influence that has historically served to weaken and even dissolve the traditional ties and bonds of close-knit communities as part of the process of 'releasing' the morally autonomous individual. Norton's model of sustainability is centrally dependent upon the role of local and substantive ethical community, and the ethos of liberal individualism may therefore act as a counteracting factor against the emergence and maintenance of such community.

The cultural forces promoting individualism in modern times have worked to a greater or lesser extent against the cohesion of established and traditional substantive ethical communities or against their emergence where they do not currently exist. This is not to say that this kind of ethical community is now unattainable. However, it must at least be noted that this cultural influence or movement towards individualism which has served to support the emergence of the strong public-private distinction in bioethics, may well be problematic for Norton. That is it provides a significant degree of counteracting influence that may directly undermine the flourishing of the kind of community that Norton's model relies upon[23]. Again, the advocate for Norton's position may reasonably argue that it is possible that his rational procedural guidelines may be sufficient to neutralise this factor and thus claim that it is not critical. I will consider the relevance of this potentially counteracting causal factor further in my discussion of internal differences in effects below.

[23] Marilyn Holly raises very similar concerns about the viability of the central role Norton places on a Habermasian conception of the ethical community for his model of sustainability in her review of *Sustainability* (Holly 2007: 343-344).

5.5.2 "Internal" differences in effects

The first potentially critical difference I will discuss in the effects of the prior association in the target and source domains is the central role that participatory democratic process plays in Norton's model. This feature of Norton's model is informed by his Deweyan commitment to "democracy as a way of life" and to his focus on local processes to define sustainability in conjunction with considerations of the good life within substantive ethical communities. There is no similar explicit focus generally apparent within pragmatic bioethics with the exception of the approach of clinical pragmatism advocated by Miller et al. Their approach, like Norton's, is similarly directly dependent on the canon of the classical American pragmatists and Dewey in particular (Miller, Fins, and Bacchetta 1996). As discussed in Chapters 2 and 4, clinical pragmatists emphasise the role of collaborative process in resolving ethical issues at the clinical level. They contrast their concern with the role of *inclusive* processes in ethical decision-making with the prevailing emphasis in the bioethics literature on the moral decision making and judgment processes of the *individual* moral judge.

However, as Moreno has argued, despite training in a discipline with such an individualist focus, those moral philosophers who have become engaged in clinical ethics have had to adopt more collaborative, and often mediating roles. They have generally not been in a position to act as authoritative, individual moral judges presiding over ethical quandaries in the manner so often presupposed by the literature (Moreno 1995: 11-12,147-150). An advocate for Norton's model might then argue that this is not a critical difference in effects between the two domains. Rather it represents a gap between actual practice in bioethics and the idealised methodological discourse of the field, which, in any case, the clinical pragmatists in particular have set out to correct. I would tend to accept this response as plausible at this point, but still note that while Norton insists that a participatory democratic model is necessary to the effective functioning of his sustainability model, the same claim has not been widely defended within pragmatic bioethics.

What I regard as the difference in effects between the source and target domains most likely to be critical concerns the crucial role that the geographically localised community plays for Norton. I have argued above that for Norton's sustainability model, individual spatiotemporally delimited communities should be understood to function on analogy with individual patients within bioethics. Such 'individuals' function within an analogous 'private' realm, whereby a community's definition of a good and sustainable way of life is *sovereign*. The individual substantive ethical community thus functions for Norton on analogy with the manner in which the individual patient does for bioethics. The community, like the patient is sovereign with regard to its conception of the good and of the sustainable.

I have argued that in embracing Habermas' discourse ethics, Norton has also clearly endorsed liberalism's typically strong division between a public (moral) realm and a private (ethical) realm

already well established within pragmatic bioethics. And Norton has, as he says, "bet" on much of the solution to achieving sustainable relations between culture and nature as coming about from bottom-up solutions agreed by individual local communities. I argue his position parallels the way in which so many of the solutions to ethical issues in bioethics have been resolved by being made over to the private realm of the ethically autonomous individual patient[24]. The public, moral realm Norton embraces can readily be understood as fully equivalent to that of the source domain, pragmatic bioethics. However, the potentially critical difference for this argument relates to the manner in which Norton's 'private' realm of individual ethical autonomy represents an analogical extension of the individual patient of bioethics to the individual localised community. That is a local community seeking to be biophysically sustainable, must be significantly engaged in a common project of defining what constitutes a good and long-term sustainable way of life, given a spatiotemporally delimited natural environment. In this shared responsibility, the individual community parallels the task of each modern individual to define their own conception of a good life.

The fundamental role that local community plays within Norton's model faces serious theoretical problems. I will argue that these problems follow as a consequence firstly of Norton's uncritical acceptance of the liberal position implicit to Habermas' discourse ethics, which asserts a clear division between public (moral) and private (ethical) spheres. Secondly it follows from Norton, I believe rightly, recognising and making the role of the individual, localised and ethically constituted community central to his sustainability model. The problem can be clarified by considering the critical differences in the analogy with regard to what constitutes the private realm in each sphere. That is the individual, ethically autonomous patient within pragmatic bioethics and the 'individual', local community for Norton's model.

The analogy between the private realm in which the patient is sovereign with regard to their own conception of the good and the 'private' (ethical) realm of particular communities pursuing their own sovereign conception of biophysical sustainability is surely intelligible. The critical difference in effects regarding this analogy is tied to the very different role that personal identity plays in the effects, E and E* respectively, of each domain. For bioethics, the personal identity and related ethical commitments at stake in the private realm appear simple and uncontroversial, at least to moderns within liberal individualist society[25]. They are those of the individual, ethically autonomous patient. However, the identity playing the pivotal role in the 'private' sphere for Norton's model is less

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[24] In response to criticism of his focus on localism and his apparent lack of concern for global environmental problems Norton responds ". . . I'm betting on localism and bottom-up efforts to be the most successful way forward in environmental management. That is a hypothesis; prove it wrong if you can. Endorsement of bottom-up management must not be confused with ignoring or down-playing global issues" (Norton 2007: 400).

[25] It is recognised within the bioethics literature that many other cultures, particularly those of the East, do not place the same absolute priority on individual ethical autonomy.

obvious and more controversial. This is the 'identity' of a particular local community, made up of many individual, more or less ethically autonomous persons.

Norton recognises that participatory processes that seek reasonable agreement on both what constitutes a good life and a good or sustainable biophysical environment for a particular spatiotemporally defined locality, must require individuals to identify with and commit to developing elements of a shared communal identity (Norton 2005a: 240-241, 334-339, 371). He also freely acknowledges that his sustainability model relies on a highly idealised process that may seldom if ever be achieved in practice. However, he hopes such processes will be at least significantly approximated in many instances, assuming good will and commitment to participatory dialogue[26]. However, as several reviewers of Norton's *Sustainability* have noted, this key component of Norton's model, local community, is a very illusive and ill-defined concept in contemporary liberal and individualist democracies (Holly 2007: 348-349; Oksanen 2007: 274-275; Pearson 2010: 421-422). Indeed, I have discussed above the potential challenge for Norton's heavy reliance on local, ethically substantive community posed by the socially corrosive influence of the competitive individualism prevailing in modern liberal democracies. This previously discussed counteracting factor supports a conclusion that there is good reason to doubt the crucial theoretical and practical load that Norton places on local community.

The critical difference in the identities central to the respective private realms of the source and target domains is also problematic in a more fundamental sense. As already argued, much of the success of pragmatic bioethics has come about from the field consigning to the private (individual) realm, many contentious ethical issues. This has been a pragmatic move to avoid what otherwise would be the kind of interminable ethical conflict that MacIntyre famously defined as characteristic of the moral discourse of modernity (MacIntyre 1981: 6-22). Ethical conflict is thus often resolved by allowing matters deemed to be of the private realm over to the individual identity, the patient, to decide[27]. This movement of ethical controversy to the private realm has of course been the defining pragmatic and liberal individualist solution to religious and now also secular moral conflict. It was hardly an invention of bioethicists. That pragmatic bioethics should rapidly move to institutionalise this liberal solution to ethical conflict is as I have argued, essential to the cultural 'fit' of this social enterprise.

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[26] It must be added, virtues that cannot be universally assumed. Habermas' discourse ethics has been widely criticised precisely because too much is presupposed of the binding power of reasonable discourse, and too little resource provided to counter the strategic use of knowledge and of power imbalances (Thompson 2002: 213-214).

[27] The suggestion that deep ethical conflict is thereby avoided is of course an oversimplification since the modern individual, often considerably freed as they may be from strong and clearly defined traditional moral doctrine whether religious or secular, may of course find themselves immersed in potentially interminable "internal" ethical conflicts when grappling with troubling ethical questions.

However, the 'private' ethical identity at the heart of Norton's model, the local community, cannot sidestep the challenge presented by pluralism and related ethical conflict in using this established liberal formula. Indeed Norton freely acknowledges this fact. But Norton considers that he has effective solutions, at least with regard to conflicting environmental values, to the fundamental problem that ethical conflict is otherwise widely accepted to pose for modern, pluralist society. In short, those solutions are on the one hand his hopes regarding the adoption of the rational constraints and disciplines of Habermasian practical discourse, and, on the other, a remarkable reliance on the role of environmental indicators, and in particular what he refers to as synoptic indicators[28]. The role he proposes for Habermasian practical discourse is certainly both highly idealistic and optimistic, but can be accepted as at least holding up an ideal which may have some constructive influence on practice. However, I will argue that the central role assumed by synoptic indicators faces more decisive, but, in the end instructive theoretical difficulties.

I have already discussed Norton's example of the potential use of *synoptic* indicators for seeking agreement on sustainable environmental policies in his own locality of Atlanta, Georgia. That example was nevertheless entirely hypothetical and idealised in a manner which certainly does not provide empirical support for the decisive role he assumes for such environmental indicators. However, the example still effectively demonstrates how Norton's model depends on such indicators to supposedly safely navigate the perils of open, substantive ethical conflict regarding ends and means. I will argue that Norton's move here is quintessentially, instructively and also problematically, liberal[29].

The central role that environmental indicators and synoptic indicators are required to perform in Norton's idealised sustainability defining processes only helps to postpone direct engagement regarding inevitable substantive ethical conflict. Norton's desire to avoid such direct conflict and yet make progress towards a sustainable future appears laudable, and I commend the depth of his theoretical engagement with the adaptive ecosystem management paradigm. However, I believe his reliance on environmental indicators works primarily to rhetorically paper over a fundamental theoretical challenge for his model which has not been adequately addressed. I should also note immediately that the theoretical challenge noted here is not simply a problem for Norton's model. Rather I will be arguing that Norton's work highlights a challenge of much wider significance for moral and political philosophy. I will expand on this point shortly.

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[28] See my discussion of the central role that environmental indicators play in Norton's sustainability model covered in the first section of this chapter.

[29] I must emphasise here that I certainly do not wish to suggest that I am critical of the successes of liberal moral and political philosophy and of liberal democracies in terms of significantly reducing the harms of direct and violently expressed ethical conflict, whether expressed by individuals or the state. My concern is specifically with what I will argue is the serious and fundamental incapacity of liberalism concerning the development of culture to nature relations supportive of both long-term biophysical sustainability and human flourishing.

The problem with Norton's reliance on environmental indicators is that these appear to be offered specifically so as to allow multiple and competing options to be pursued simultaneously, which may or may not be biophysically sustainable. Norton's Deweyan pragmatism embraces experimentalism and there is much that is commendable in his vision of social science and environmental science expertise and intelligence coming to bear in the exploration of a range of possible modes of interaction between culture and Nature. However, I believe that the theoretical challenge of reconciling genuinely conflicting and mutually exclusive ways of life and their corresponding uses of the natural environment is only side-stepped in this approach. Norton's advocacy for the role of such indicators by using yet another hypothetic example, in this case in relation to forestry practice in southern Tennessee, illustrates this fundamental theoretical problem.

In this example, a local environmentalist states his concern to retain old growth hardwood forests in this region which contain much biodiversity and also because of what Norton refers to as the constitutive value of the forests[30]. Another "member of the community" favours economic growth and jobs over biodiversity and aesthetics. The second individual wishes to see the forests clear-felled to supply woodchip mills and thereafter replanted with faster growing softwood species to supply the mills. Norton's solution to such classically and diametrically opposed visions or as he prefers, "development paths", is to seek trade-offs while proposing the monitoring of a synoptic indicator – the proportion of forests in hardwoods (Norton 2005a: 394-397). The kind of trade-offs he has in mind inevitably involve considerable destruction of old-growth forest to at least partly satisfy the immediate demands of the economic growth imperative. Of course in the particular localities subject to the logging, the values and concerns of environmentalists are absolutely overruled with the permanent destruction of the anciently evolved biotic communities.

I do not think that this at all represents the impressive hypothetical example of an intelligent solution to ethical conflict that Norton seems to think he has provided. Rather I believe it is better understood as an all too common example of the forced compromise of weaker to more powerful social interests. The plausibility of this kind of compromise 'solution' to conflict regarding environmental values lies in the notion that there can somehow be a *simultaneous expression*, at least for now, of conflicting development paths. Forests can be clear-felled in this space, but in another space, old growth forest will be retained and so competing interests have supposedly been balanced with the mediating assistance of the environmental pragmatist. But no intelligent and just means of setting limits so as to maintain the functional integrity and aesthetic value of ecosystems has been effectively stated. Thus given the as yet unstoppable demand for economic growth, the spaces and

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[30] Constitutive values are values that are essential to an individual's sense of identity, meaning and purpose in relation to their natural environment. Norton prefers this term over "intrinsic natural value", given he has of course spent a good deal of his career criticising the role of Intrinsic Value theory in environmental ethics.

resources that will turn out over time to 'need' to be exploited will continue to expand. Quite inevitably as a result of the inadequate formula offered, the space retained for the flourishing of ancient and evolved Nature will be eroded and ecosystems potentially degraded beyond critical limits. In a now very considerably humanised and frequently ecologically damaged world, this is a very familiar and predictable story, well known to those concerned with the protection of the natural environment.

Paul Thompson expresses a related concern in his review of Norton's *Sustainability*. He states:

> There is an element of risk, tragedy and permanent foreclosure of the future that attends every choice that we make. We are going to use some non-renewable resources so why fool ourselves into thinking that we have not limited our children's future by doing so . . . We are committing a certain kind of life in all these actions, for ourselves and futurity alike, and we ought not conceal this fact from ourselves or our children.
>
> (Thompson 2007: 384)

Thompson is content with much of Norton's overall pragmatic framework but refers to Norton's attempt to use synoptic indicators of sustainability and talk of multiple development paths of sustainability as ". . . in the end very unpragmatic" (Thompson 2007: 384).

The difficulty for Norton's model, as I have noted above, stems from his uncritical endorsement of liberalism. Given his uncritical endorsement of liberalism, he attempts to institutionalise a strong distinction between public and private domains while at the same time correctly recognising that the attainment of sustainable modes of life is a matter of substantive ethics. The problem with this move is that the canonical liberal solution to ethical conflict that Norton embraces incorporates fundamental assumptions, which I will argue are incompatible with the widespread achievement of socially and biophysically sustainable societies. The nature of this problem is inadvertently well highlighted in a statement previously quoted from Rorty. Rorty notes:

> Human perfection becomes a private concern, and our responsibility to others becomes primarily a matter of permitting them as much *space* to pursue their private concerns – to worship their own gods, so to speak – as is compatible with guaranteeing *an equal amount of space to all*[31]. The tradition of religious toleration is extended to moral toleration.
>
> (Rorty 1998: 24, cited in Tollefsen 2000: 86-87, my emphasis)

The liberal solution of pushing fundamental (ethical) conflict regarding how to live in the social world to a private realm involves seeking to allow conflicting substantive visions to be pursued simultaneously, albeit in the private spaces, both psychologically and physically, of the lives of

[31] The liberal and pragmatic solution to the problem presented by competing conceptions of the good outlined here by Rorty requires the simultaneous pursuit of potentially incompatible conceptions of the good within private spaces. I argue that this 'solution' is unfortunately a ticket to inevitable conflict with regard to our common and thus public natural environment.

individual persons and like-minded groups of persons. As communitarians have long argued, this is an insufficient treatment both with regard to the real nature of ethical conflict in contemporary pluralist society, and also given the fundamental significance of the interconnectedness of persons (Beiner 2000: 459-461). Nevertheless, Norton seeks to extend this defining liberal 'solution', originally motivated by religious conflict and now relied on to address ethical and political conflict more generally within pluralist societies, to the only more recently acknowledged challenges of human (cultural) relations with the natural world. But I will argue that in doing so he very effectively highlights the unsuitability of that 'solution' for this vital domain.

According to Norton, substantive ethical conflict regarding treatment of nature is somehow also to be allocated simultaneously to different 'private' spaces, matching the differing ethical conceptions and development paths held by various individuals and groups of like-minded individuals. In a world of open horizons and seemingly endless natural bounty, such a model was seductive. It is surely much less plausible in an increasingly densely populated world containing people with greater expectations for material consumption armed with much more impactful technology. In such a world, our world, conflict is only temporally forestalled as the unexploited spaces become fewer and fewer and the over exploitation more systematic. I believe that the important theoretical challenge which Norton's approach fails to adequately engage is how to intelligently and fairly reconcile differing visions regarding our interaction with nature. This challenge is simply that not all such visions can be pursued simultaneously while also retaining a biodiverse, aesthetically pleasing, and in the end, life sustaining natural environment for both ourselves and future generations.

Thus I conclude that this internal effect represents a critical difference between source and target domains that alone surely blocks the plausible analogical extension of the example provided by a successful pragmatic bioethics for Norton's theoretical model for a more practical environmental ethics. I do not see any plausible response from the advocate for Norton's model. I am claiming that Norton's model demonstrates a significant theoretical problem of critical practical importance, insofar as he seeks to translate the liberal solution to ethical conflict, originally heralded in the domain of intra-human ethics and politics, to the now pressing challenge of managing conflict regarding environmental values.

5.5.3 "External" differences in effects

The discussion above has thus centred on what I have termed the "internal" differences in effects between the source domain represented by the field of bioethics and the target domain of Norton's hypothetical sustainability model. The primary focus with regard to the differing effects for the two domains has been on the manner in which the pragmatic and liberal device of the public-private split fails to provide an equivalent service for Norton. However, there is another level of critical difference

in effects between the source and target domains and still concerning the role of the public-private split for Norton's model. This level concerns what I will term "external" differences in effects.

For bioethics, the private realm in which the morally autonomous patient is sovereign encourages the individual to make healthcare treatment related choices consistent with their own conception of the good. Such decisions are generally considered permissible in relation to Mill's Harm Principle insofar as they are also understood not to harm others. There are of course contentious limitations to the legal rights of individuals to pursue just any health option, with continuing heated public and political-ethical debate regarding some issues, most notably matters such as abortion and euthanasia. However, as already noted, the significance of the role played by the public-private split within pragmatic bioethics depends on the prospect that many substantive ethical decisions can be effectively resolved at the level of the individual and by so doing, minimising the problem of substantive ethical disagreement. Thus there must be a considerable range of ethical decisions that may be exercised without raising concerns regarding the harmful influence of such decisions on others, whether family or wider communities. In other words, there must be a considerable range of permissible decisions that may be exercised without leading to what I shall term "external" concerns.

But for Norton's parallel autonomous individual communities, there may not be a parallel considerable range of permissible decisions that can be exercised in their pursuit of both a good and sustainable way of life in a particular locality. Even to consider this problem requires assuming for the point of argument that sufficient valid agreement can actually be reached by particular post-modern communities. This is obviously to ignore for the purposes of this discussion the serious concerns already raised about this possibility. Nevertheless, presuming for now that some such local substantive agreement on ideas of good and biophysically sustainable ways of life is achieved, there are two ways that Norton's autonomous communities may encounter what I will term problems of "external" ethical-political relations. And these are both problems that may also constitute further critical differences between the target and source domains.

The first problem is raised by Mark Oksanen in his review of Norton's *Sustainability*. Oksanen accepts Norton's emphasis on the importance of local community involvement in the defining of biophysical sustainability for a region. However, he is I believe rightly concerned about Norton's apparent failure to provide a sufficient basis for external criticism of particular local definitions of sustainability. That is because Norton's model focuses only on prescribing processes which would allow local substantive ethical communities to perform principal and autonomous roles in defining and implementing local definitions of sustainability. He notes that for Norton the basis for external criticism of local sustainability definitions therefore rests only on philosophical observations of the procedural rationality of the decision-making processes from which such local definitions and environmental policies are to emerge. Oksanen asks whether such a purely procedural moderation of local decision-making is appropriate and sufficient (Oksanen 2007: 274).

Oksanen thus questions "whether Norton's approach is applicable to resolving those problems that are not local, or which local communities fail to recognise, or refuse to recognise, as such" (Oksanen 2007: 275). He comments that to solve many such problems would seem to call for grand-scale cooperation between local communities, either at national or international level or both. Thus Oksanen questions for instance how a coherent basis for coordinating global climate change policy is to be achieved given Norton's emphasis on autonomous localism. He similarly questions the capacity of Norton's approach to respond to challenges such as that of coordinating policy to protect migratory birds where local indifference can completely counteract the conscientious conservation efforts of those in many other often distant localities. Norton's schematic approach to sustainability as coming to be defined purely as the outcome of a local political process, thus leaves Oksanen with serious doubts regarding the potential unresponsiveness of this locality-focused model to valid external concerns. He states:

> But if a locality decides to maximise the immediate utility or continues the traditional, but unsustainable way of living, and the process of coming to these policies is fair and informed in Nortonian terms, what is the basis for criticising them? Perhaps, then, environmental ethics requires something more firm, substantive and universal than a description of a fair and open continuous process in a community.
>
> (Oksanen 2007: 276)

And to provide further empirical backing to illustrate the well justified basis for this kind of unease, Oksanen draws on an actual case from his own country, a helpful contrast to Norton's primary reliance only on hypothetical cases to illustrate crucial claims. The example involves the proposal to build a large reservoir for power generation in the Vuotos region of Finnish Lapland. Finnish communities have been deeply divided on the issue since the project would cause major ecological disruption while only providing mainly short-term employment possibilities. Political elites and the majority of people in the Vuotos region itself where the reservoir would be built are in favour of the project. If the decision had been purely up to the local community, whichever way local community is to be defined[32], it seems that the project would proceed.

However, there has been strong opposition to the building of the reservoir particularly from southern urban dwellers. The result has been a protracted and socially divisive political process which Oksanen considers has nevertheless been "broadly Nortonian in essence". Oksanen notes that the most wealthy and politically influential actors, such as the large utility corporation behind the original proposal, remain most capable of having the money, time and skills to continue to press their

[32] Oksanen raises serious doubts about the key role Norton places on local community. He and other reviewers of Norton's *Sustainability* note that such a role for "community" can certainly not be taken for granted today in much of the "developed world" (Holly 2007: 343-344, 347-349; Oksanen 2007: 274-275; Pearson 2010: 421-422).

case and other-things-being-equal, win their way eventually in such a protracted process. However, he concludes that it may well be (external) international agreements that Finland has ratified that may provide a decisive basis for the long term ecological protection of the region. Without such external influence, a local, Nortonian style process would seem highly vulnerable to succumbing to short-term economic interests at the expense of broader and longer-term environmental values (Oksanen 2007: 276).

I believe there is also another equally serious problem regarding external influences running in quite the reverse direction. Oksanen has highlighted the danger that Norton's effectively autonomous processes of local sustainability definition may be insufficiently sensitive to valid external criticism. But equally well a plethora of such locality-limited approaches to sustainability may cumulatively lack sufficient rational ethical resources to criticise and intelligently amend pervasive and destructive external influences on biophysically sustainable ways of life. By "cumulatively" I refer to the possibilities for the very many local communities pursuing socially and biophysically sustainable ways of living to also be able to jointly exercise some degree of reasonable and democratic influence on ethical-political commitments, otherwise exerting unopposed and powerful, top-down, civilisation-wide influences. The kinds of pervasive external influence that I am referring to here are of course global 'ethical' imperatives such as veneration of the individualistic pursuit of wealth accumulation and belief in a necessary link between continual economic growth and improving individual well-being. These are central motivational features of a globally influential capitalism. And highly relevant to this issue, Speth has recently argued that our current form of capitalism incorporates systemic failings which are propelling humanity into an ever more violent collision with the biophysical systems which are essential to the health and flourishing of humanity (Speth 2008: 9).

Norton's approach to environmental problem solving matches what John Dryzek has termed "democratic pragmatism". That is an approach that seeks to work within the basic institutional structure of liberal capitalist democracy. And it is also an approach that emphasises the importance of democratic process, with different theorists envisaging greater or lesser degrees of direct, participatory democratic engagement of the populace (Dryzek 2005: 99-100). Norton makes it clear that he does not believe environmental problems should be traced back to fundamental systemic problems within liberal capitalist democracy such as those identified by many environmentalists, including as noted above by Speth. For Norton, environmental problems are of many kinds and the solutions will also be many and primarily locally designed with the aid of an experimental and social learning orientation (Norton 2005a: 51-56). He assumes what is surely an *ideological* position to the effect that there are no globally pervasive societal forces working against the emergence of sustainable ways of living. Because of this assumption, Norton of course does not fear the prospect

that the locality-focused sustainability model he advocates will be overwhelmed by any such problematic external influences[33].

I have already discussed a hypothetical example Norton uses to illustrate how he believes his model might manage conflicting community visions of either protecting or clear-felling old growth forests in Tennessee. I suggest that this example reveals a serious problem with Norton's supposedly pragmatic approach towards civilisation-wide, if not universal expectations for rapid economic growth. These are culturally pervasive expectations which he clearly accepts as inexorable in this example. He thus suggests that the reasonable response by those concerned with protecting biodiversity must be to negotiate compromises that can at best limit or slow the level of ecosystem disruption proposed. I do not of course wish to challenge the necessity of human economic activity for human survival and flourishing. My concern is whether or not Norton's model includes the ethical-political resources that might allow local communities under at least some circumstances to validly question the need for large scale economic transformations that may lead to drastic impacts on the natural environment. My expectation is that his approach should include the conceptual and political resources that would allow communities, at least under some circumstances, to be able to refuse to accept the necessity for this kind of environmentally destructive development.

Norton's embrace of adaptive ecosystem management emphasises self-correcting experimentation in response to the uncertainties inherent to manipulating biophysical systems. As Oksanen notes, this Deweyan focus on experimentalism and social learning over extended periods of time is by necessity retrospective. Ideally adaptive ecosystem management should allow relatively rapid retrospective adjustments to practice in response to unexpected outcomes. However Oksanen, having recently read Jared Diamond's book *Collapse: how societies chose to fail or survive* questions the wisdom at this stage in human history of such a heavy reliance on local experimentation (Diamond 2005). He suggests more consideration needs to be given to questions such as: ". . . how to extrapolate from ancient and more recent experiences in localities and local communities to post-modern societies? Or how to make pragmatism prospective instead of retrospective?" (Oksanen 2007: 274). I believe this is a very good question that points to the weakness of Norton's locality-focused model to deal with pervasive external influences harmful to the aims of biophysical sustainability.

Diamond concludes his review of a sample of better and worse historical responses to the threat of societal collapse due to environmental degradation, by making what I believe to be an important generalisation. He notes that societies, or even full civilisations, previously facing such threats, have

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[33] I acknowledge that my usage of "internal" and "external" influences on local community is an oversimplification to the extent that insofar as such influences have become truly culturally pervasive, then some such values will of course be expressed by many community members as their own preferences.

fared better or worse depending largely on the extent to which they were able to intelligently evaluate the manner in which certain entrenched cultural values and practices, ways of life in other words, were implicated in the crises they faced. Those faring better were those who made such evaluations and if necessary made major changes to those established practices to avert the dangers otherwise faced. Those who fared badly failed to make such evaluations and changes and persisted with unsustainable practices, often even increasing the scale and intensity of the most damaging practices in the final period leading up to societal collapse (Diamond 2005: 419-440, 522-525).

Diamond, in contrast to Norton, is a scientist and environmentalist concerned by the possibility that there almost certainly are systemic problems in Western civilisation driving environmental degradation with a very real threat of catastrophic collapse. He argues like Speth and many others that this threat of societal collapse is tied to largely unquestioned structural features of our way of life and economy. At the top of his list are high expectations for continued economic growth and material consumption, although Diamond does not provide a critique as similarly sophisticated as that of Speth regarding the systemic features of capitalism implicated in contemporary environmental problems. Norton must acknowledge many intelligent and informed commentators are deeply concerned that there are indeed systemic causes of contemporary environmental problems even if he chooses not to be swayed by such arguments and data himself.

While accounts of the precise nature of systemic causes of environmental problems may differ significantly, the conclusions reached have had a common element since the reports of the Club of Rome in 1970s. That is, unless the systemic causes are addressed, whatever these may be argued to be, environmental problems will continue to worsen with likely dire consequences. Early in *Sustainability*, Norton rejects all such concerns as misguided and overstated (Norton 2005a: 51-56). It would be comforting to think that he was right in this assessment. Whether or not Norton happens to be right though, can only be proved decisively according to his own pragmatist epistemology, by experience, and the considerable passage of time. However, I would argue that in the meantime, given the catastrophic consequences of getting this wrong, his recommended locality-focused sustainability model is recklessly inadequate insofar as it does not at least allow for the reasonable possibility of such systemic problems. And to make such reasonable provision would surely therefore require incorporating intelligent means by which to evaluate sufficiently rapidly and then, if necessary achieve the kind of significant cultural redirection Diamond has argued has been shown necessary by the experience of previous societies. Norton, insofar as he fails to do this on what are surely ideological grounds, then fails to live up to his own oft repeated call for environmentalists to rise above ideology. He has criticised what he sees as pointless ideological controversies between intrinsic nature value theory and economism only to himself assert the necessity of a third ideology, that of liberal pragmatism (Oksanen 2007: 273).

Both these two differences of external effects highlight significant challenges for Norton's model. However, it must be acknowledged that the claim that they represent potentially critical differences is based on the assumption that such external relations are largely unproblematic for the parallel properties or effects in the source domain. In other words, this presumes that there are no similar serious problems of external relations evident in the near exclusive concern of pragmatic bioethics, with the (private) health and well being of the individual patient. It should be acknowledged however that an advocate for the plausibility of my reconstruction of these central theoretical commitments within Norton's hypothetical sustainability model may quite validly contest this assumption.

I accept that such an advocate could indeed argue that both these potential critical differences in external effects may have parallels at least specifically with regard to clinical pragmatism, the approach to bioethics which has the greatest overlap with Norton's methodological commitments. For clinical pragmatism the similarity is most apparent with regard to the problem of external guidance for particular, participatory ethical decision-making processes. A criticism that has been directed at clinical pragmatism, relates to the possibility that a so-called ethical consensus may be reached regarding the treatment of a particular patient that, even though the recommended democratically inclusive and collaborative processes have been followed quite religiously, may nevertheless represent a morally repugnant outcome.

Clinical pragmatists such as Fins et al. embrace Dewey's claim that moral principles should be regarded as working hypotheses rather than as universal, binding norms (Fins, Bacchetta, and Miller 1999; Fins, Miller, and Bacchetta 1998). However, as Lynn Jansen notes in her critique of clinical pragmatism, the normative weight of such norms or principles has traditionally, at least in theory, provided a guiding role allowing a degree of external evaluation of particular moral decisions. Jansen is concerned with the argument of clinical pragmatists that processes of ethical decision-making in the clinic should be free to establish whatever is taken to be the most satisfactory consensus decision by those actually involved in the process[34] with moral principles serving only instrumentally as instructive hypotheses. Her concern is that little or no substantive rational ethical resources are offered to resist the prospects of morally repugnant outcomes (Jansen 1998: 32-34).

A very clear parallel should therefore be evident here with the kinds of concerns raised by Oksanen regarding the absence of wider ethical constraints on the processes of local community definition of sustainability advocated by Norton (Oksanen 2007: 274-276). The advocate would therefore seem justified in claiming that this supposed failing of Norton's model does not represent a

[34] Jansen notes that exactly which parties are granted the right to determine the consensus will greatly influence the outcome reached. However, she notes that the clinical pragmatists are decidedly vague regarding how this crucial selection process is to be determined (Jansen 1998: 26).

critical difference at least with clinical pragmatism. But of course, in establishing this, the advocate has not relieved Norton's model of a potentially serious flaw as such. Rather, they have simply shown that the same potential flaw is also evident within clinical pragmatism, the approach to bioethics with the strongest parallels to Norton's approach. And I believe this potential flaw may also extend to all pragmatic bioethics insofar as the public-private sphere distinction is embraced (See Tollefsen 2000: 86-87).

The other difference of external effects I have raised, concerns influences running in the reverse direction, from individual communities to wider society and the nation state. I will argue that this difference can be similarly overcome by the advocate's efforts to save this analogical reconstruction of Norton's position only at the expense of highlighting a parallel deep problem at least for clinical pragmatism. I am referring to the problem Norton's model faces regarding the absence of rational processes to allow the "bottom-up" ethical determinations of local communities regarding sustainability, to have an influence on wider societal and state norms. This is of particular concern given the real possibility that some wider societal norms may otherwise serve to block both local and global social and biophysical sustainability.

The parallel concern in the case of pragmatic bioethics would be for a capacity for the very many individual patients separately treated by the biomedical healthcare system to somehow exert a collective evaluative influence on the institutional and even society-wide norms and practices which significantly impact on individual health. This issue, unsurprisingly, is not raised by Jansen in her critique of clinical pragmatism or in most other discussions of the field more generally[35]. Leaving aside the obvious literal problems of numerical impracticality, such a concern of course goes much beyond the primary focus of bioethics and of the prevailing biomedical model of the expert and technologically sophisticated treatment of individual patients. Indeed, the possibility of any such substantive evaluative capacities engages much wider and highly contentious issues regarding the relationship of substantive ethics to politics within liberal democracies. Questions of this kind have motivated extensive philosophical debate between cosmopolitan liberal theorists and so-called communitarians regarding the place of substantive, thick ethical commitments within the ostensibly value-neutral liberal nation state. I certainly cannot adequately address this considerable literature here. However, it should be recalled that the strong distinction between a thin public (moral) domain and thick private (ethical) domain embraced by pragmatic bioethics, emerged very much as a working solution to deal with just such uncertainty and controversy.

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[35] Prominent "first generation" bioethicists such as Callahan and Pellegrino have separately argued for more effective discourse within bioethics on the question of fundamental human goods (Callahan 2003: 285-286; Pellegrino 2000: 668-673).

Given that the relationship between substantive (thick) ethical perspectives and the universal (thin) moral domain is complex and contested quite generally, it would seem unreasonable to expect Norton to have provided more satisfactory grounds for this relationship in his sustainability model, even if counterfactually, he had even acknowledged the need for such a capacity. An advocate for Norton's model may plausibly then argue that this matter therefore does not represent a critical difference between source and target domains. If the question of the relationship between the ethical particular and the moral universal has proved best resolved by emphasising a strong public (moral) and private (ethical) distinction for pragmatic bioethics, then surely Norton is justified in prescribing a similar approach to his chosen domain. However, by employing this argument to free Norton's model from charges of critical difference between source and target domains, the advocate again points to the existence of a parallel and as yet largely unaddressed theoretical challenge for pragmatic bioethics.

Because, as just noted above, the primary focus of bioethics and of modern healthcare systems more generally is on the expert and technologically sophisticated treatment of the individual patient, it seems that questions of the wider ethical-political relevance of the substantive ethical commitments of patients can be quite reasonably put aside. The prevailing biomedical model of health has served to legitimate this narrow focus on individual, bodily "health". However, British bioethicist Richard Twine argues that much of what ails the field of bioethics[36] can be traced to an uncritical acceptance of the biomedical model and the implicit dualism of culture and nature inherent to this influential model. He argues that this dualism has been expressed historically in a belief in the separation of mind (and culture) from body (and Nature). Twine claims that this dualistic focus on the body as separable from mind and culture, supports ". . . a tendency to construct the body solely as part of nature rather than also culture" and in parallel to the concerns of environmental ethics, ". . . technological applications to the human body may be part of a wider cultural trend to master nature" (Twine 2005: 289).

Twine emphasises however that despite its continuing prevalence, there is by now a well established critique of the biomedical model of health. He notes that central to that critique is the questioning of the way that this model:

> . . . conceives ''health'' as a property of a bounded individual body, as opposed to an alternative relational definition that figures health as also situated within historical, political, social and ecological contexts.
>
> (Twine 2005: 289)

Through this focus on the individual and indeed on the individual body, the biomedical model continues to support a societal preference for physical medical treatment solutions for individuals,

[36] In recent years quite a considerable literature has developed on the subject of the infirmity of bioethics as a discipline (Dawson 2010; Hoffmaster and Hooker 2009; Ives and Draper 2009; Ashcroft 2010).

over attention to wider systemic causes of ill health. In addition, the central role attributed to individual autonomy in bioethics in the U.S.A. fits neatly with, and also reinforces this individualist and biologically-oriented conception of health and illness (Twine 2005: 289). The biomedical model of health has thus been criticised for deflecting concern from environmental and socio-political interventions which might greatly reduce human suffering such as addressing social inequalities in health status and outcomes through effective measures to end poverty.

I acknowledge the great successes of the biomedical model of health in guiding the development of biotechnological solutions to illnesses caused by external infectious agents or by systemic bodily dysfunctions often tracked to genetic defects. It was after all, the ethically troubling questions that arose in medicine as a result of many such new advances in biomedicine which led to the emergence of contemporary bioethics in the first place. What I wish to emphasise is the limits of this model for supporting understanding of the more holistic causes of ill health including social, industrial, economic and environmental factors. The question of wider socio-economic causes of ill health is complex and contentious. There is however a more immediate and striking indicator of the limitations of the biomedical model of health made apparent on a daily basis at the most fundamental level for contemporary medical practice, the primary health professional clinic. So-called psychosomatic illnesses, illnesses in which the physician cannot identify any physiological abnormality but which involve very real suffering for the patient have become very common amongst people seeking medical help today. Because such illness involves ill health and suffering without the presence of clear "disease" processes, they cannot readily be treated by the armoury of biomedicine.

The proportion of patients presenting with such illness is very difficult to quantify given that it varies greatly in relation to variables such as time, culture, clinic and the personal characteristic of clinicians. However, one experienced family physician has estimated such problems to be evident in around 25 to 50 percent of patient visits to family physicians (Svenaeus 2000: 38). I believe that much of this so-called psychosomatic illness is a manifestation of social and personal unhappiness which may be better understood to be broadly of ethical or religious origin. Many such individuals are then not suffering from a disease but from a "life situation", a way of life, that needs to be changed (Svenaeus 2000: 38). Of course, clinicians whose training is focused on the "value-free" treatment of biological dysfunction are not particularly qualified to assist with solutions to such suffering.

The related question of the limits of the biomedical model of health in considerations of the wider implications for the healthcare system of the 'health' of the natural environment is obviously of particular relevance to the present dissertation. The link between the ethics of biomedicine and the ethical challenge involved in responding to environmental crisis was recognised and made central in Potter's competing original vision for a new field of "bioethics". His vision was for a discipline bridging the knowledge and expertise of the biological and health sciences and that of the humanities,

united by a common focus on the survival of humanity. A vision, it should be noted that bears a degree of similarity to Norton's model, which is however, seemingly much more modestly aimed at saving the world at the level of local communities. However, as I have already described in Chapter 2, and the contemporary field of bioethics bears witness, the field of bioethics that emerged during the 1970s has been almost exclusively focused on the individualistic issues of biomedicine and biomedical research. And as already noted, under the influence of the biomedical model of health, a primary concern with the health and well-being of the individual patient has continued to prevail. There has been much less concern for holistic health concerns, including notably the vital implications of 'ecosystem health' for the health and flourishing of future human generations.

A number of contributors to bioethics have recently argued that the field should become much more closely associated with environmental ethics and give greater prominence to the challenges presented by environmental crisis (See for example Dwyer 2009; Twine 2005). Pierce and Jameton have devoted a full book to the issue of achieving greater integration between bioethics and environmental ethics. They are critical of an academic field of bioethics primarily concerned with the ethical issues arising from the provision of healthcare to individuals. They emphasise that the objectives of this individual-oriented field will be undermined as the wider ecological and environmental context within which individual health and well-being is pursued is rapidly degraded. They state that:

> . . . environmentalism carries a clear and distressing message about the state of the earth's ecosystems and the prospects for life during the next few centuries. If the warnings of environmental scientists continue to go unheeded, the fate of humanity is bound to be dismal . . . Unless the human burden on the biosphere is relieved, expensive healthcare technologies cannot eliminate disease and suffering.
>
> (Pierce and Jameton 2004: vi)

Pierce and Jameton therefore highlight a very fundamental and practical overlap that should be recognised between the concerns and challenges of environmental ethics and bioethics. In short, a bioethics that continues to largely ignore the environmental dysfunction of global capitalist civilisation and, worse, has generally raised no ethical barriers to profitable biotechnological developments which in many cases may pose significant additional threats to the natural environment, is surely deficient (Campbell 1999: 184-185). Ignoring the wider ecological implications of the "bio" of bioethics as originally emphasised by Potter[37] and now largely forgotten, has certainly permitted the short-term flourishing of the current field of bioethics dominated as it remains by the "ethically shallow" discourse of analytic philosophy (Evans 2002; Twine 2005: 285). And perhaps for both

[37] And re-emphasised considerably later in a second book promoting the ideal of a global bioethics (Potter 1988).

better and worse, the field has helped facilitate the further expansion and development of an individualistic biomedicine. But should the causes of global environmental crisis continue to go 'untreated', it is possible that the value of this highly individualistic enterprise will be undone as the environmental and social conditions necessary for collective human well-being are progressively undermined.

By seeking to defend Norton's employment of the public-private split, the advocate for this reconstruction of his position then highlights serious limitations inherent to a biomedical model of health that has until now been taken as given by many bioethicists. And rather paradoxically, we find that in coming to consider the limitations of that model, a number of commentators in bioethics have recently argued for this field to give much greater concern to wider, systemic causes of ill health, including notably, ecological or ecosystem 'health'. Authors such as Twine are therefore arguing that bioethics may have a good deal to learn from environmental ethics. Thus having pursued potential lessons for a more practically effective environmental ethics by parallel reason with bioethics in this dissertation, it now seems that bioethics may perhaps also have much to learn from environmental ethics, albeit with the well defined problems of that field acknowledged.

5.6 Chapter conclusion

The final stage of Bartha's general model for evaluating analogical arguments requires the overall assessment of the prospects for generalising the prior association from the source to target domains. This overall assessment is to take into account all potentially critical differences (Bartha 2010: 102-105). Bartha's understanding of generalisation in the context of such an assessment is of course informed by his primary focus on interpreting examples drawn from mathematics and the sciences. With this context in mind, "generalisation" for him reflects a concern with the potential for a "condensing or unification: finding a common pattern instantiated in both the source and target domains" (Bartha 2010: 105). Generalisation in this sense is certainly also of interest for philosophical investigations. However, as already noted, while Bartha has been primarily concerned with the plausibility of scientific hypotheses, I have been seeking to evaluate the plausibility of a normative philosophical proposal for the reform of an applied ethical practice. I have not then been evaluating the plausibility of two parallel causal processes or of predictive capacities. While a causal process obtains in the source domain, the target domain represents a set of normative philosophical claims. And it is these normative claims which my analogical comparisons have sought to evaluate.

The prior association relevant to this analogical argument has itself been made out by an analogy informed by Bartha's abductive/probabilistic model intended for application within the sciences. The conclusion Q in the target domain represents the particular cultural conditions operative in liberal individualist society. It is these cultural conditions exerting a kind of social selective pressure

favouring the social evolution of a pragmatic bioethics and a strong distinction between public and private spheres that constitutes the prior association. I have argued that Norton's theoretically integrated proposals for a pragmatic environmental ethics presuppose that a parallel development of a clear distinction between 'public' and 'private' domains by a pragmatic environmental ethics will represent a more 'adaptive' response to prevailing cultural conditions.

I discussed two features of the prior association that might represent counteracting causes. Firstly I discussed how an implicit societal consensus regarding the benefits of technological progress for individual well-being, has facilitated agreement in bioethics but can work against agreement in the environmental policy sphere. Secondly I discussed the role liberal individualism plays in support of the public-private distinction in bioethics, noting that this same social ethos serves to undermine the substantive ethical communities at the heart of Norton's sustainability model. It is possible that one or both of these counteracting causes may represent critical differences between the two domains. However, I have accepted that neither can be claimed conclusively and in their own right alone to be critical to the analogical argument.

I considered two separate categories of difference in effects, namely internal and external differences. Of these two sets of differences, one of the internal effects was judged most unequivocally to represent a critical difference for my analogical reconstruction of Norton's sustainability model. That critical difference relates to the dependence of Norton's position on an analogy between local substantive ethical communities and the manner in which the ethical concerns of individual patients are dealt with in pragmatic bioethics. The ethical commitments of the individual substantive communities of Norton's model and the individual patients of bioethics, are both to be considered as part of the private ethical sphere, with Norton assuming a parallel strong distinction between public (moral) and private (ethical) spheres.

I argued that Norton demonstrates a significant theoretical challenge for environmental philosophy as he tries to bring the same long-established liberal solution to substantive ethical conflict into effect in his model. Norton relies on the procedural rationality of Habermas' discourse ethics and a creative employment of synoptic environmental indicators to manage the challenge of a plurality of conflicting substantive ethical belief within communities. However, I conclude that he does not define adequate means to resolve the challenge of conflicting substantive values faced by his model. Rather, Norton succeeds against his own best efforts at practicality, to better identify what I argue to be an important theoretical challenge for environmental ethics. That challenge is how conflicting substantive ethical visions for a multiplicity of spatiotemporally defined localities are somehow to be justly and sustainably harmonised. I have argued that attempting to transfer the liberal pragmatic strategy of seeking the simultaneous pursuit of mutually exclusive options in different (private) spaces as Norton does is simply misconceived. I have thus argued that this is a critical difference of effect.

That is it concerns such a central aspect of the positive analogy that it effectively blocks the generalisation of the prior association to the target domain.

The second internal difference in effects, the absolutely central role of participatory democratic process for Norton's model in contrast to a continuing theoretical emphasis on individual moral judgment within in bioethics, is not regarded as critical. A similar emphasis on participatory process is advocated within clinical pragmatism and has been necessary to a greater or lesser extent within the different subfields of bioethics, despite the theoretical focus on individual judgment. I believe the overlap between Norton's emphasis on participatory process and dialogue and a parallel emphasis within clinical pragmatism and in some other European approaches to bioethics should be of interest to environmental philosophers (See for example Widdershoven, Abma, and Molewijk 2009). I will give further consideration to the under-rated significance of such inclusive, dialogical approaches to ethics in the conclusion to this dissertation.

I have also considered the relevance of two differences in external effects. The first of these concerns the question of external criticism of the effectively private and autonomous local community processes Norton argues should underpin the development of sustainable relations between culture and nature. The second concerns the reverse possibility of criticism of external, culture-wide value commitments by local communities should they become concerned that such wider norms are preventing the achievement of sustainability. Both these issues are significant for Norton's model, although neither constitutes a critical difference in terms of Bartha's technical model.

In both cases it can be argued however that parallel issues can be attributed to bioethics, or at the very least for clinical pragmatism. Thus an advocate for Norton's model can make the technical claim in Bartha's terms that neither factor can be conclusively established to be critical differences between the source and target domains. However, this point is immaterial within the overall context of the evaluation, since I have argued that there are sufficient grounds for recognising at least one critical difference that *alone* undermines the generalisation of the prior association to the target domain of Norton's model. Instead, this defensive ploy regarding external differences in effects serves only to instructively draw out parallel weaknesses in bioethics that are of considerable interest. The latter part of the discussion therefore served to highlight the reverse possibility that bioethics may benefit from comparison with environmental ethics. It challenges the narrow focus of the biomedical model on individual bodily health and calls for greater consideration of wider, more holistic and systemic concerns. And most significantly in terms of the focus of the present dissertation, I argue that bioethics needs to join environmental ethics in recognising the necessity of providing an effective response by philosophical ethics to the environmental crisis.

My overall assessment therefore leads to the rejection of the plausibility of this reconstructed analogical argument. If this analogical argument was a scientific hypothesis conforming to the form

of Bartha's abductive/probabilistic model, then this conclusion would then at the very least result in the demand for the argument to be significantly amended if not completely dismissed. But of course as already emphasised, I have instead conducted a philosophical evaluation of the normative implications of a theoretical model.

It must be emphasised again that this application of Bartha's model has itself functioned only in a manner analogous to the scientific applications of primary concern to him. That is I have been using a model relevant for considering forms of probabilistic and causal processes studied by the sciences, by analogy in an exploratory or diagnostic evaluation of the plausibility of a normative philosophical argument. While I argue that in the source domain, pragmatic bioethics, various contributing cultural influences have served to support the acceptance of the public-private sphere distinction, it is important to emphasise that the same claim has not been made regarding the target domain. Rather, the claim is just that in developing his quite complex hypothetical framework for the evaluation of sustainable human futures, Norton has made assumptions consistent with these same contributing cultural influences. Significantly, there are also important normative claims made in Norton's proposal which clearly have no parallel in the scientific arguments of primary interest to Bartha.

It is important to emphasise that this evaluation has in no way attempted to assess the probability of Norton's, as yet only hypothetical model, becoming established as the prevailing form of environmental ethics, or any similar claim. This evaluation has focused on certain critical theoretical commitments and normative prescriptions central to Norton's model. The purpose has been to achieve a kind of conceptual "pre-test" of the plausibility of these theoretical presuppositions and normative prescriptions through what has effectively been a thought experiment. But this has been a thought experiment that has been more disciplined and highly nuanced than is common in contemporary analytic philosophy. Because of this very significant difference between the nature of this particular application and Bartha's paradigmatic model, careful interpretation is needed of the overall conclusions to be drawn regarding the significance of Norton's model. That interpretative task will be undertaken within the context of drawing overall conclusions regarding this dissertation in the next section.

Conclusion

Reviewing the challenge taken up in this dissertation

I have investigated the optimistic hypothesis that philosophy *can* help solve the escalating, egregious environmental problems that confront the world. The 'natural' place to begin that exploration was with environmental ethics. This academic field has developed over the course of some 40 years very much on the basis of the presumption that this hypothesis is surely true. However, as I have discussed in Chapter 1, the initial bold ambitions of this field have faltered in more recent years among confusions and conflict regarding what are its proper aims and methods.

The controversy amongst environmental philosophers that has been of greatest relevance to this dissertation is the on-going debate about the relationship between philosophical theory and practice in environmental ethics. Callicott has been one of the most eloquent spokespersons for the importance of a grand-theoretic approach to environmental ethics. White's early identification of despotic anthropocentrism as a critical contributing cause to contemporary environmental problems was a decisive influence on the original self-understanding of environmental ethics still defended by Callicott. As a consequence of that influence, contributors to the environmental ethics literature frequently assume that if anthropocentrism is the "problem", then nonanthropocentric ethical theory and principle must be the "cure". As Light has remarked, this self-understanding of the corrective role of nonanthropocentric ethics has ". . . launched a thousand metaethical and metaphysical ships in environmental ethics" (Light 2003b: 633). In Chapter 1 I have outlined some of the main approaches to environmental ethics exploring theoretical grounds to attribute direct moral value to various nonhuman natural entities. I also discussed some of the major theoretical and methodological disputes raised by this prevailing metaethical focus. Notably for this thesis, recent methodological critiques have questioned the overall wisdom of this prevailing nonanthropocentric approach to environmental ethics.

Environmental pragmatists and some other environmental philosophers such as Robert Frodeman argue that a primary focus on nonanthropocentric ethical theory is mistaken and certainly represents an insufficient contribution from the field. The most critical failing of this approach is said to be its continuing lack of relevance to the urgent practical challenge of responding to environmental problems. Bryan Norton has surely been the most determined and prolific internal critic of nonanthropocentric environmental ethics. But Norton and others are not only critics of existing approaches to environmental ethics. They also seek to redefine the mission of environmental ethics toward both greater unity and effectiveness.

Norton argues for environmental ethics to refocus on practical and problem-solving approaches to particular environmental problems rather than developing and evaluating "grand theory" from

within the academy. Along with other environmental pragmatists such as Andrew Light, Norton advocates a pragmatic engagement with the existing anthropocentric discourse of environmental management and policy. They reproach environmental philosophers for being too much concerned with abstract theoretical debate with other philosophers and call instead for them to devote more of their professional focus toward developing arguments with more immediate rhetorical power. In particular, they emphasise the pragmatic value of arguments that draw on widely accepted anthropocentric concern with protecting the natural environment for the well being of future human generations. On this account, environmental philosophers need to be less concerned with developing and defending novel comprehensive philosophical ethical theories. Instead they should be more concerned with helping design and facilitate public policy and decision-making processes that will achieve environmentally benign consensus. Or in the words of Frodeman, environmental philosophers should aim to be less like "philosopher-kings" and more like "philosopher-bureaucrats" (Frodeman 2006: 7).

The pragmatic and policy-focused "turn" advocated for environmental ethics by Norton, Light, Frodeman and others has tended to highlight a division between "pure" philosophical inquiry concerned with grand theory and general principle and a "practical" and problem-solving focus on particular environmental issues. Throop has even suggested institutionalising a division of labour within the ranks of environmental philosophers. According to Throop, some philosophers should focus primarily on the grand theoretical implications of human-Nature relations while others should specialise in transdisciplinary engagement with particular environmental policy and management issues. The contention that the very reasonable demand for practical relevancy in environmental ethics must now drive a wedge between theory and practice runs very much against the original mission of the field defended by Callicott. The hypothesis that fundamental theoretical work, notably concerning the problem of anthropocentrism, represents the most distinctive and also effective response to environmental problems by academic philosophers has defined this field. In this dissertation I have sought a practical but yet philosophical approach to advance beyond the dysfunctional division between theory and practice within environmental ethics.

The approach and main findings

Such a "practical but yet philosophical approach" has been achieved through making systematic analogical comparisons with bioethics, the most successful field of applied ethics. Paul Bartha's recent important work on the construction and evaluation of analogical reasoning in the sciences has helped inform and structure these analogical comparisons. Bartha's theory is described in some detail in Chapter 3 although I have barely done justice to even a small aspect of the wider project that he attempts in his *By parallel reasoning (Bartha 2010).* To some extent the present dissertation in its entirety represents an experimental application of Bartha's model within domains outside the sciences

and mathematics which are Bartha's own primary concern. In that case one may ask whether the results of the "experiment" are promising. I believe that they are. Bartha's theory or model has provided a theoretical framework within which my employment of analogical argument has been subject to greater structure and discipline than would otherwise have been possible. His evaluative framework and well described examples of analogical reasoning from the sciences has helped to channel my inquiries in directions that might not otherwise have been considered. As I will elaborate shortly, I believe that some of those more disciplined but also unanticipated explorations support interesting and novel perspectives on otherwise well-worn theoretical trails. I am therefore indebted to Bartha's work and am of the opinion as a consequence that his theory is worthy of wider interest and exploration by other philosophers than it has yet received.

The application of Bartha's model with the potential to have the greatest significance for philosophical practice more widely is in the evaluation of thought experiments. Bartha suggests that good thought experiments should be capable of being recast as analogical arguments. This would then allow closer attention to the relevant mode of prior association using the specific submodels developed by Bartha, or later refinements of these. Such applications would then offer the possibility of a much more nuanced evaluation of the plausibility and relevance of thought experiments for their real world target domains. In this regard, I have suggested in this dissertation that Norton's sustainability model may be best understood as an extended thought experiment. My evaluation of his model in Chapter 5 can then be understood as providing a preliminary exploration of such an application of Bartha's model to formulate and evaluate a philosophical thought experiment using analogical argument.

Chapter 1 and Chapter 2 provide descriptive accounts of the historical context of the methodological developments and debates of both environmental ethics and bioethics. These chapters serve to provide background understanding about the target and source domains needed to conduct the analogical comparisons in Chapters 3 to 5.

The second part of Chapter 3 illustrates how Bartha's model for formulating and evaluating analogical arguments may be applied in a philosophical context. The analogical argument evaluated concerns the relevance of the failing of a "top-down" or deductive applied ethics model in bioethics for what will otherwise remain quite independent methodological debates in environmental ethics. I reconstructed a more formal analogical argument to consider this question through reference to Bartha's model. This argument claims there to be sufficient similarity between bioethics and environmental ethics to make it plausible to claim the relevance of a lesson gained through the practical engagement of moral philosophy in bioethics for the field of environmental ethics. That lesson concerns the impracticality of the "top-down" applied ethics model. More technically, I argue that the prior association in the source domain of bioethics involves a sociological causal relationship between the model of abstract moral theory and principle initially presupposed, but soon proven

impractical once it was tested within practice in biomedicine. The top-down model did not fare well up against the complexity of actual moral phenomena and the plurality of substantive ethical views within post-traditional and multicultural societies. Common preconceptions regarding the capacity of ethical theory and principle were rapidly proven unfitted to achieve the kind of decisive application to particular cases or rational guidance on more general policy.

I further argued that the differences between the two domains in terms of their respective moral desiderata do not undermine the generalisation of this conclusion to environmental ethics. If anything, the novel desiderata and more complex and politically contentious concerns of environmental ethics only serve to make the parallel conclusion for this field more plausible. I therefore concluded that any philosopher continuing to advocate a top-down applied ethics model for environmental ethics must contend with the plausible hypothetical conclusion Q*. That is, should an opportunity arise whereby top-down and deductive application of environmental ethics theory happens to be invited, the process is almost certain to fail, or at the very least, the judgments delivered will lack rational cogency and normative legitimacy.

This conclusion on the relevance of bioethics experience regarding the failing of the top-down theory application model functions at best to further corroborate a consensus largely already reached in the environmental ethics literature on the impracticality of the applied ethics model. The analogical comparison with bioethics explored in Chapter 3 therefore serves only to reinforce doubts regarding the conjunction of decisive and legitimate normativity as well as practical relevance for high-level moral theory and principle within environmental ethics. This is a purely *negative* thesis which does not address the important question of whether a shift towards the pragmatic methodological commitments now prevailing in bioethics *should* be mirrored in environmental ethics.

In Chapter 4 Bartha's theoretical framework is then used to evaluate a reconstructed analogical argument based on a *positive* thesis advanced by Minteer and Collins which is also informed by the bioethics example. In short Minteer and Collins argue that a parallel shift toward adopting the pragmatic and pluralist methodologies now prevailing in bioethics should be embraced to advance the practical relevance of environmental ethics or at least a more narrowly defined subfield that they refer to as "ecological ethics". Their proposed new subfield of ecological ethics is offered as ". . . a logical next step in developing a pragmatic ethics for the environment" (Minteer and Collins 2008: 490). The relevance of the bioethics example to their proposal is evident in their claim that:

> Just as bioethics provides a critical intellectual and problem-solving service to the biomedical community, ecological ethics can help inform and improve ethical decision making in the ecology and conservation communities (Minteer and Collins 2008: 483).

Bartha's work provides a disciplined framework which supports my careful and systematic evaluation of the positive analogy Minteer and Collins draw with bioethics to lend greater plausibility to their

proposals for a "pragmatic ethics of the environment". Potential problems or at least limitations with the proposed new field were then found that might not otherwise have been recognised.

In particular I identified the risk that their ecological ethics may inadvertently support behaviour amongst biodiversity and conservation managers paralleling the medical paternalism that bioethics has been concerned to reform in the biomedical domain. I argued that there is a critical difference concerning the 'ecological patients' of biodiversity and conservation managers which invalidates the supportive comparison the authors seek with bioethics. While many ethical issues in bioethics can be dealt with as private (ethical) matters where the individual patient's conception of the good is sovereign, environmental problems and 'ecological patients' are inevitably matters of wider public *(*moral) and political concern. That is by analogy, the ethically and politically legitimate 'good' of 'ecological patients' such as ecosystems must somehow be determined with the aid of public participation.

Minteer and Collins emphasise the role of the new field of ecological ethics in supporting and developing the individual ethical judgement capacity of ecological professionals. This focus will surely have its benefits and is entirely understandable given that the demand for outside assistance with ethical problems is coming from this sector. However, I caution that there is some risk of supporting and even exacerbating an ethical wrong which I term as "ecological paternalism". Without a parallel focus on designing and supporting collaborative processes of ethical decision-making on subject matters that are inevitably of wider public interest, their proposed new field may inadvertently work in the service of ecological paternalism. By this I mean that ecological scientists and biodiversity managers may come to believe themselves to be better justified ethically to make unilateral determinations that I argue should better require some ethically and democratically adequate participatory decision-making process. I therefore concluded Chapter 4 with the suggestion that Minteer and Collins could usefully more closely consider collaborative processes. I would emphasise such processes more than Minteer and Collins do, in their otherwise promising and helpful proposal for the new field of ecological ethics.

In Chapter 5 I evaluated Norton's impressive and remarkably extended hypothetical model or thought experiment proposing a more practical role for environmental ethics. Norton's model explores the possibility of achieving complex integration of environmental ethics within the adaptive ecosystem management model; the prevailing paradigm of the environmental management sciences. Significantly in light of the concerns raised regarding the proposals of Minteer and Collins, participatory and collaborative processes play an essential role within his model. Thus I recognise in Norton's model an important potential for considerable advance in ethical and democratic acceptability over the proposal of Minteer and Collins.

The use of Bartha's model had to be considerably more nuanced in this chapter since Norton's model does not claim greater plausibility by drawing on analogy with methodological developments in bioethics. An analogical argument was formulated which allows Norton's most essential theoretical presumptions to be evaluated through analogical comparison with parallel commitments already well entrenched in bioethics practice.

On the basis of this analogical comparison, a significant theoretical challenge for Norton's model was identified. I must immediately emphasise that although I claim to have identified a quite fundamental theoretical challenge for Norton's model in Chapter 5, I certainly do not consider that this problem is of a kind that demands the complete rejection of the relevance and significance of his model. Norton's *Sustainability* is an ambitious and wide-ranging work and I believe it includes a number of important recommendations toward enhancing the relevance of environmental ethics for practice. In addition, I have argued that a clear understanding of the implications of the theoretical challenge I have identified with his model should also prove instructive to directing further important theoretical inquiry in environmental ethics. I have thus argued that by rigorously seeking a more practical environmental ethics, ironically Norton's greatest contribution may yet be through helping identify an essential theoretical challenge of practical relevance for the field. I therefore consider that Norton's sustainability model warrants further careful exploration and potentially constructive revision from other environmental philosophers. I offer some preliminary discussion towards that end in the remainder of this conclusion.

The wider significance of Norton's Sustainability

Norton's case for integrating environmental ethics within the adaptive ecosystem management paradigm represents an important contribution for the reform of environmental ethics toward greater practical relevance. His understanding and interest in this promising model of environmental management practice allows Norton to make a number of potentially important and constructive contributions to environmental ethics. In particular, he has described a potentially central role for environmental philosophers to work alongside environmental scientists, social scientists, policy analysts and others seeking to define sustainable ways of living for particular local communities. Norton envisages philosophers helping design and facilitate processes aimed at a more intelligent and democratic integration of human cultural values and aspirations within the exigencies of biophysical systems. Essential to this role is Norton's strong emphasis and demand for an ordinary language, transdisciplinary discourse. His emphasis here very much parallels the arguments of Frodeman and others in support of philosophy taking up once again a central transdisciplinary function (Frodeman 2008b; Briggle, Frodeman, and Holbrook 2006).

Norton seeks to forge a more effective interface between the sciences and the evaluation of value commitments within adaptive ecosystem management programmes. This environmental management

model represents a promising convergence in scientifically informed attempts to manage culture-Nature interactions. But through his involvement with environmental policy discourses, Norton is aware that many of the professionals involved in the environmental management sciences still consider cultural values, including environmental values, within a positivist framework. Substantive ethical values are then usually cast as subjective, individual preferences little different from other consumerist wants. Norton's model represents a comprehensive attempt to correct this situation including in particular his emphasis on ordinary language "bridging terms" such as sustainability which bring together both descriptive and evaluative considerations. This is surely a worthwhile project that should be of interest to those committed to achieving a more adequate consideration of environmental values within environmental policy and decision-making processes.

Norton's pragmatist remedy for what he sees as a still prevailing simplistic and positivist fact-value dichotomy in the sciences depends on his embrace of a Deweyan emphasis on participatory democracy and of efforts to bring intelligent, experientially informed methods of inquiry to bear on social policy. This is a focus which he shares with many contributors to bioethics and most extensively with the clinical pragmatists (Arras 2002: 47-55). Such approaches seek to achieve socially intelligent and humane policies and eschew policy positions and social decisions beholden to supposed universal moral principles or the facile reduction of all value to monetary equivalents. There is also an important focus here on dialogical processes of ethical decision-making in contrast to the traditional emphasis on processes of individual moral judgment. Interesting and I believe important parallels are apparent between approaches already being tested within bioethics and the participatory and dialogic emphasis that Norton recommends for environmental ethics.

However, I have also argued that there are also potentially significant weaknesses both for Norton's participatory and consensus-oriented model and for clinical pragmatism with regard to how wider or external guidance may be provided to such dialogic, experientially informed and more flexible approaches to moral decision making. That is because such approaches eschew the role traditionally attributed, at least in theory, to high level moral or ethical principles[1]. With this *flexibility* comes a real danger of morally objectionable outcomes in the absence of any other effective external guidance or well established ethical limits (Pearson 2010: 421).

This concern notwithstanding, I believe that this experiential and dialogic shift Norton commends is important for environmental ethics. It also significantly matches calls within bioethics to move beyond what social science critiques identify as the overly formalist and "thin" principlist

[1] MacIntyre has argued that while the language of morality and of universal moral principle is employed in the everyday world with regard to decision-making and policy practices, the manner in which such 'principles' are applied is quite unrelated to the way in which moral philosophers understand those principles. Instead the 'principles' employed in everyday processes of 'moral judgment' function merely as simulacra of moral principle and practice (MacIntyre 2006).

approaches that still prevail. Environmental ethics, concerned as it is with the complex matter of ethical relations with the natural environment, may well benefit from greater concern with the empirical demands of human – Nature adaptation in particular ecosystems. And such a reorientation is supported by the work of the classical pragmatists Dewey and James as endorsed by Norton in his *Sustainability* in conjunction with the dialogic emphasis which he draws from Habermas[2].

I have argued that Norton's most seminal but also most problematic contribution comes from his insistence that the issue of biophysical sustainability must be addressed at the level of substantive ethical community. Norton, I believe rightly, argues that intelligent concern with long-term biophysical sustainability must also engage with considerations of "thick" conceptions of the good. Not all conceivable ways of life are possible or desirable within a spatiotemporally defined locality given both long-term concerns with human flourishing and the maintenance of the necessary functional integrity of biophysical systems. However, I have argued that Norton's proposal to centre the pursuit of social and biophysical sustainability at the level of local, "thick", ethical community serves to illustrate a problem with liberal individualist commitments in dealing with the challenges of achieving biophysical sustainability.

His acceptance that it is necessary to integrate both the communal pursuit of human flourishing and of biophysical sustainability has drawn Norton, it seems quite unselfconsciously, toward a political philosophy that in all other regards is quite at odds with his democratic pragmatist commitments[3]. I contend that Norton's localism aligns him with the political philosophy of Alasdair MacIntyre, perhaps the most radical critic of the liberal moral and political philosophy Norton presupposes. Running against Norton's ambitions for immediate practicality, MacIntyre argues that genuine ethical human relations are only possible within forms of substantive ethical community generally no longer instantiated in the liberal individualist West other than in certain isolated more traditional rural and fishing communities (Beiner 2000: 461-475).

MacIntyre's career has not centred on the challenge of culture-Nature relations that concern environmental ethics[4]. Thus it is not surprising that Norton may have little familiarity with MacIntyre's position. Of course, if I am right to match Norton with this kind of quite radical political philosophy given his commitment to a substantive ethical localism regarding sustainability, it is little wonder that his model might demonstrate a quite fundamental theoretical problem.

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[2] And as noted earlier, a key step in the development of Habermas' approach to discourse ethics was to draw by analogy on the classical pragmatist Peirce's conception of the role of a community of inquiry with regard to the sciences and apply it to the phenomena of morality (Thompson 2002: 204-205).

[3] See Dryzek taxonomy of major approaches to the environmental crisis (Dryzek 2005: 99-120).

[4] Although in his *Dependent rational animals: Why human beings need the virtues*, MacIntyre has belatedly turned to re-evaluate the standard anthropocentric perspective on which modern moral philosophy has been grounded (MacIntyre 1999).

Norton attempts to apply the standard liberal individualist formula for addressing substantive ethical conflict, including the device of the public-private sphere and of the moral-ethical distinction. These are modern manoeuvres that MacIntyre argues run completely against the furthering of genuine ethics and ethical community. Norton's merging of liberal and communitarian commitments results in a fascinating and it seems until now, an unrecognised theoretical conflict at the conceptual heart of his model. Fascinating as I will elaborate shortly, because in his apparent confusion regarding this aspect of his model, Norton may have inadvertently better identified an important theoretical challenge for environmental ethics and perhaps moral philosophy more generally. And ironically, he may thus contribute towards better defining a key theoretical insight despite his primary concern with practicality and his often vitriolic criticism of the high theoretical focus of most work in environmental ethics.

Leaving aside for the moment the important theoretical challenge that I claim comes with Norton's focus on the local definition of sustainability, I believe his approach may have considerably wider promise than he has realised. That is because Norton's model may hold the potential for a helpful advance in the theory-practice interface of bioethics and perhaps philosophical ethics more generally. The potential advance offered would be to move beyond the prevailing treatment of the plurality of substantive ethical frameworks in modern multi-cultural society through the application of the classical liberal devices of the public-private split and of state neutrality with regard to substantive conceptions of the good or moral visions[5]. Under this prevailing treatment, substantive ethical frameworks are commonly understood to be largely beyond any legitimate, external and rational criticism and review within modern pluralist society. The bioethicist Engelhardt well illustrates this understanding of the limits of ethical rationality in the following comments:

> The consensus of scientists as a mark in favour of the truth of an empirical proposition does not have an analogue in moral reflection, because foundational moral disagreements turn on different rankings of the good and of right-making principles. Depending on the foundational moral account, the character of moral reality will appear irreformably different. It is not just that, as in empirical science, the paradigm of the scientist shapes the experience of the phenomenal world. Additionally, moral experience does not have a ready analogue to the costs imposed by external empirical reality more heavily on some rather than on other accounts, thus directing empirical knowledge claims. Moral accounts, unlike scientific accounts, are not constrained by the discipline of an external empirical reality that makes particular accounts cumbersome or more burdensome to support. As a result, diverse moral accounts easily persist for centuries as competing paradigms or moral visions. There is no neutral moral reality to which discursive reason can turn to help resolve the controversies at hand, as occurs in empirical science by appeals to tensions between particular empirical accounts and the reality confronted.
>
> (Engelhardt 2002a: 12-13)

[5] State neutrality with regard to the good of course includes nevertheless the promotion of a minimal set of 'liberal values' which include the pursuit of liberty, wealth accumulation and private property rights and so forth (Wissenburg 2006: 24-25).

I acknowledge that Engelhardt's libertarianism which likely reinforces the directness of the contrast he draws between scientific and moral realms may not be accepted by moral philosophers of all stripes. However, I think his depiction of the effective isolation of both secular and religious moral visions from the constraints of ". . . the discipline of an external empirical reality" and which can thus ". . . easily persist for centuries as competing paradigms or moral visions" holds some truth regarding the state of contemporary ethical rationality.

I believe that Norton's hypothetical exploration of the prospects for bringing intelligent reflection and evaluation of conceptions of the good life into the same frame as consideration of the exigencies of the biophysical systems on which human communities depend offers the prospect of a new rational ethical discipline. It suggests a means by which ethical rationality may be extended beyond the solipsistic insulation which Engelhardt argues is the inevitable and irrevocable state of modern society. Norton's model requires that Engelhardt's intransigent "moral visions" be subject to some degree of intelligent and empirically informed discipline at least at the level of local communities pursuing biophysical and social sustainability. That would not necessarily be a discipline that merely challenged the environmental values of individuals. I consider it possible that adaptive ecosystem management linked to the kind of reasonable and reflective processes Norton envisages could bring a new reality-conforming demand on moral visions. While any such extension of ethical rationality may be very difficult to achieve in practice, I suggest that this is a theoretical prospect at least worthy of more investigation. And such investigation is made potentially even more worthwhile given the argument made in Chapter 5 that bioethics needs somehow to better address the exigencies of ecological sustainability and in some senses draw closer to environmental ethics.

This short argument rather generously credits Norton with sketching a model for a culture-Nature and theory-practice interface that might yet help define a significant advance in ethical rationality. However, as I have already argued, I believe Norton's model has also demonstrated a quite fundamental theoretical weakness which he does not appear to have recognised.

Norton brings the standard liberal devices for alleviating ethical conflict into his model. That is the public-private sphere distinction and a commitment to pursue simultaneously, mutually exclusive substantive ethical visions and related practices or ways of life within separate, private spaces. At the same time, Norton has accepted that the pursuit of biophysical sustainability must be undertaken in concert with the challenge for substantive ethical communities of defining common elements of the good life for present and future generations. But I have argued that the procedural means he proposes to handle the very considerable problem of conflicting substantive ethical visions are insufficient to meet this considerable challenge. Contrary to his claims, I have argued that what Norton actually achieves through his hypothetical employment of these liberal devices is an instructive thought experiment. When this thought experiment is carefully evaluated with the aid of analogical

comparison with bioethics, it helps to demonstrate the conceptual incoherence of these devices when confronted with the exigencies of biophysical limits.

The particular character of environmental problems, as first rather problematically brought to wider public notice by Hardin, require collective action responses. As Ostrom and others have demonstrated through careful empirical studies, self-organising, effective long-term solutions to common pool resource issues have been achieved both historically and currently. And where such effective solutions have been established, substantive agreement on a single set of governing norms and restraints has been required. That is, common agreement has been shown to be a necessary prerequisite to sustainable common usage of shared natural resources. The degree of common agreement required is clearly related to spatiotemporal scale. For small populations with access to very extensive lands or waters, such common agreement is unnecessary. Under circumstances of large and increasing populations and population density as well as per capita demand now evident globally, the means of achieving sufficient common agreement is surely the paramount concern as indeed Ostrom and others have noted (Ostrom et al. 1999).

With the assistance of my application of Bartha's tools for the formulation and evaluation of analogical argument, I claim that Norton's model allows an instructive thought experiment. This evaluation of Norton's hypothetical sustainability model helps to demonstrate the conceptual and practical limitations of the classical liberal devices for responding to ethical disagreement once these devices are applied to the challenge of achieving social and biophysical sustainability for already heavily exploited biophysical systems. I therefore suggest that rather paradoxically, Norton's long pursuit of greater practicality in environmental ethics has led him to produce in his *Sustainability* a theoretical work that helps to identify a significant conceptual problem blocking the practical achievement of sustainability. And in so doing, I believe he may have also pointed the way towards defining what may be perhaps the most essential and even strictly necessary theoretical work required by philosophy in response to the environmental crisis.

General conclusion

I therefore conclude that the most important contribution of Norton's *Sustainability*, thus understood, is to help define an essential and rather daunting philosophical challenge. That challenge is to reconceptualise the problem of conflicting cultural values within the overarching context of the exigencies of both a 'healthy' biophysical and social environment. To even begin to address this challenge effectively requires an acceptance that the standard liberal solutions of the separate pursuit

of mutually exclusive substantive commitments in different spaces will not do[6]. Attaining social *and* biophysical sustainability may well require the achievement of sufficient, and only sufficient and certainly not universal and extensive, common agreement. That is sufficient common agreement to define the critical dimensions of ways of life which protect and promote the long-term sustainability and flourishing of both social and biophysical systems, locally and globally. Norton's proposal to develop participatory democratic and intelligent processes for the defining of sustainability in particular localities is an important step towards defining more intelligent and just interfaces between culture and Nature. But I have also highlighted the short-coming of his approach. I therefore believe that there remains much that philosophy may be able to contribute towards the challenge of helping design and also facilitate practical processes to achieve such sufficient common ethical agreement.

Of course, it may well be argued that the prevailing liberal solutions to ethical conflict represent the last word on this challenge. If Norton's project of a democratic and participative approach to sustainability within local, ethically substantive community cannot be achieved, then perhaps his project should simply be rejected as mistaken. From this perspective, perhaps the only other alternative to our current race to environmental catastrophe would seem to be a centrally administered eco-dictatorship. Thus it will be argued that the early prophets of survivalism and of the inadequacy of democracy to respond to ecological crisis will be vindicated and perhaps their often misanthropic conclusions accepted. This is surely not a future that anyone of decency can happily envisage. And as environmentally informed political theorists such as Dryzek emphasise, such centralism with regard to culture-Nature relations is in any case well enough proven to be inefficient and ineffective as well as socially pernicious (Dryzek 1998).

The main aim of this dissertation was to investigate the hypothesis that philosophy can have a critical role in solving the escalating, egregious environmental problems that confront humanity. I believe that this aim has been satisfied insofar as I claim to have better identified critical philosophical work that may be required to help achieve a socially and biophysically sustainable and just society. Granted, the practical and theoretical challenge which confronts philosophy (in conjunction with other disciplines) according to this analysis is daunting. Indeed, there can be no assurance that it is achievable when it is recognised that the challenge presented by ethical disagreement has already proven largely insoluble over the course of the last 400 years. Nevertheless, my interest has been with better defining what may perhaps be an essential theoretical problem of practical import for environmental ethics, given my conclusion that a primary focus on intrinsic value theory has proved insufficient. My conclusion is therefore no more than a starting point for further research.

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[6] I acknowledge there is nevertheless a very considerable literature regarding the relationship between liberalism and environmental sustainability which I do not have space to discuss fully here (See for example Bell 2004a; 2002; 2004b; 2005; De Shalit 2001; Wissenburg 2001, 2006)

The task of actually taking up the alternative challenge for environmental ethics that I claim to have identified here is beyond the scope of this current project. It is in any case a task well beyond the means of any one individual, but rather requiring cooperative effort from many individuals and disciplines individual endeavour. Nevertheless, during the course of this study I have noted some existing work that offers some promise towards addressing this challenge. I will briefly discuss some of this work in the next section in an attempt to outline some promising directions for further research.

Promising directions for further research

I here outline some philosophical efforts identified during this inquiry which I view as promising with regard to the philosophical work I have concluded can and should be directed towards better responding to the challenges presented by the environmental crisis. Space limits do not allow more detailed examination of this work. As a result, this discussion can only be of a very preliminary nature and is offered only as suggestive of avenues of potentially fruitful further research. In addition to highlighting some examples of relevant philosophical inquiries, I also aim to provide a rough sketch of a possibly significant line of convergence from these inquires towards the theoretical task of great practical relevance I claim to have identified in this dissertation.

I have argued that Norton is right to have 'placed' the task of achieving social and biophysical sustainability in ethically "thick" local community. But I have also emphasised that his brand of communitarianism has serious flaws. Paradoxically, I believe that an essential part of the 'theoretical therapy' required to save Norton's ailing model could come from forging a more satisfactory conceptual relationship with the grand theoretical and reflexive concerns championed by his long-time academic adversary Callicott. Belatedly, Norton has acknowledged the relevance of discourse regarding metaphysical and ethical fundamentals of the kind that Callicott has defended (Norton 2002: 28-30). But in making that concession, he then asserts that such truly substantive discourse must be held quite separate from the immediate and practical evaluative discourse he seeks to promote within adaptive management processes. Despite his criticism of the enduring influence of positivism in the social and environmental sciences, Norton's disparaging remarks with regard to this kind of broad-ranging ethical discourse rather seem to belie the enduring influence of positivism closer to home. Norton states:

> What I am suggesting is a form of "intellectual zoning", which recognises that while some regions of intellectual discourse are tightly tied to observation and to empirical disciplines, other regions are related more closely to poetry, literature, and worldview examination. The empiricist zone of discourse is most relevant to immediate problems of what to do in the face of *real* and *observable* environmental problems; the more *emotive* realm of discourse, often removed from any base in today's science, addresses our relation to nature as it unfolds over generations of human culture. One might even say that these two zones of discourse change at very different temporal scales. If we adopt this zoned view of the problems of environmental philosophy, pragmatist epistemology seems to me to be well suited to serve as a philosophy of environmental science and management, while intrinsic value theory finds its role in speculative, *emotive* discussions about the possibility and desirability of certain worldview changes.
>
> (Norton 2002: 30, my emphasis)

It should be noted that Norton's expectations for such extremely slow and non-rationally driven change with regard to substantive frameworks has much in common with similar comments from Engelhardt discussed earlier in this Conclusion. In this statement it is clear that Norton is seeking to adjust environmental philosophy to what he regards as the inevitable continuing absence of ethical-political rationality. Quite to the contrary, my work in this dissertation suggests that it can only be through somehow bringing elements of such a wider ranging and self-reflexive ethical discourse into the sustainability discourse that truly intelligent and just solutions may be achieved.

In Chapter 1 I briefly discussed an interesting suggestion for the redirection of environmental ethics long ago made by Janna Thompson. By arguing that environmental ethics would do better to embrace a more expansive anthropocentrism than continue with the prevailing concern with nonanthropocentrism, Thompson was endorsing a metaethical position similar to that of Norton and other environmental pragmatists. However, her vision for a more expansive anthropocentrism placed emphasis on an aspect of the ethical realm that I believe Norton underplays. While the perspective that Thompson proposed does not attempt to extend beyond the human point of view, she notes that it certainly " . . . is not confined to a concern with obvious and traditional material and psychological needs, for it permits us to define a new conception of *what we are* as individuals and *what a good life is* (Thompson 1990: 160, my emphasis).

It is the intelligent and reflexive concern with both conceptions of what we are as well as what a good life is that I consider vital and that Norton's *Sustainability* fails to adequately address. That failure is confirmed by Norton's consignment of the substantive discourse that Callicott advocates to a detached and protracted "more emotive" level of discourse that would bring change with a speed barely discernible across generations. But if I am right to believe that it is precisely elements of our self-constitutive beliefs about who and what we are which determine what we take to be a good life, then to marginalise intelligent consideration of the former, while purporting to engage with the latter within adaptive management processes, contributes necessarily and categorically to the theoretical failings I attribute to Norton.

The classical ethical question of what or who we are and what we should do which Thompson suggests should be tied to the challenges of environmental ethics, concerns what Habermas argues is the "clinical" or therapeutic aspect of ethics. Such questions were addressed in classical ethics, and also in modern neo-Aristotelian approaches with regard to the deeper-going practical concerns of an individual life (Habermas 1993: 1-2, 4-6). Habermas notes that complex decisions such as choosing a career can illustrate the nature of this kind of ethical deliberation. He notes that the

> more radically this question is posed, the more it becomes a matter of what life one would like to lead, and that means what kind of person one is and would like to be. When faced with crucial existential choices, someone who does not know what he wants to be will ultimately be led to pose the question, "Who am I, and who would I like to be?".
>
> (Habermas 1993: 4)

Such decisions can be solved by reference to quite trivial preferences. However, Habermas notes that when an individual attempts to answer them with reference to their self-understanding, character and way of life, the decision then becomes "inextricably interwoven with each individual's identity". Then decisions "based on illusions – attaching oneself to the wrong partner or choosing the wrong career– can lead to a failed life" (Habermas 1993: 4). But when practical reasoning is directed both by self-understanding and ideals of the good life, and not merely by possible or expedient options, then the deliberations can be said to be "ethical" in a manner matching classical understanding of what constituted the sphere of ethics. I note that both Julia Annas and Martha Nussbaum along with others have made interesting recent contributions regarding the contemporary relevance of this more "therapeutic" dimension of the ethical (Annas 2000; Nussbaum 1994). However, the focus of their work remains with that of the ancients on the individual level of ethical consideration and "therapy". If Thompson's proposal for a re-orientation of environmental ethics toward the questions of self-understanding and the nature of the good life is to have any relevance to environmental ethics, it must somehow address the level of collective decision and action. That is because I have argued in this dissertation that environmental problems are most essentially questions of *collective action*.

I find an interesting lead in this direction comes from the unexpected quarter of Habermas' critical response to the conclusions of Bernard Williams in his *Ethics and the limits of philosophy* (Williams 1985). As I have discussed in Chapter 5, Habermas makes a clear distinction between ethical and moral realms. The realm of classical ethics centres on the individual and at best on an inter-subjective and therapeutic focus. In contrast, the realm of morality seeks objective and universalistic perspectives in the pursuit of sufficient common agreement within pluralist societies despite differences in substantive belief. Habermas is thus dismissive of Williams' call to expand the self-reflective aspect of ethical deliberation to a public project that would involve what Habermas terms "ethical-political discourse" (Habermas 1993: 23). Williams' suggestion is that

> just as the individual can reflect on himself and his life as a whole with the goal of clarifying who he is and who he would like to be, so too the members of a collectivity can engage in public deliberation in a spirit of mutual trust, with the goal of coming to an understanding concerning their shared form of life and their identity solely through the unforced force of the better argument.
>
> (Habermas 1993: 23)

The manner in which such an understanding might come about, and the role that philosophy might perform in achieving it has a degree of similarity to the processes of deliberation that Norton proposes for the evaluation of environmental values within adaptive ecosystem management processes. Williams argued that:

> How truthfulness to an existing self or society is to be combined with reflection, self-understanding, and criticism is a question that philosophy itself cannot answer. It is the kind of question that has to be answered through reflective living. The answer has to be discovered, or established, as a result of a process, personal or social, which essentially cannot formulate the answer in advance, except in an unspecific way. Philosophy can play a part in the process, as it plays a part in identifying the question, but it cannot be a substitute for it.
>
> (Williams 1985: 200)

But despite the similarities between the role philosophy is proposed to play within Williams' ethical-political discourses and Norton's deliberative processes within the adaptive management paradigm, there is also a very significant difference. The ethical-political discourse that interests Williams would encourage a particular community to consider the questions of both who they are and should be in relation to conceptions of the good. However, Norton's approach is much more concerned with the experimental testing of the respective consequences of different conceptions of the good life. As I have emphasised, Norton wishes to consign the more fundamental and reflexive questions of human self-understanding and of fundamental metaethical and metaphysical frameworks to another "zone" of discourse. That discourse would be well removed from the exigencies of practical environmental management decision-making. In this, I have argued he is mistaken.

Norton's justification for the separate zoning of two discourses of environmental ethics is based on his presumption that the more reflexive and thorough-going ethical discourse suggested by Thompson, and also envisaged by Williams (although not particularly with regard to environmental ethics) will inevitably remain more emotive and thus less cognitively-driven and rational compared to what is possible in the other zone which he promotes. However, in a quite separate later project, I believe that Thompson may have made significant theoretical progress towards explaining how such otherwise emotive and subjective concerns may support a more rationally compelling inter-subjectivity and enhanced cognitive status. She does this in her book, *Discourse and knowledge: Defence of a collectivist ethics* (Thompson 1998). In this work, Thompson seeks to develop a truly collective and dialogical ethics that counters weaknesses she identifies in Habermas' discourse ethics.

In particular, Thompson argues that although Habermas claims that he has broken the shackles of a prevailing "monology" regarding ethical judgment through his emphasis within discourse ethics on dialogic judgment, his approach retains a significant and problematic aspect of monology.

Thompson claims the key difference between the ethical collectivism she defends and other approaches to moral judgment, including the discourse ethics of Habermas, can be understood through a distinction between distributive and collective agreement. She states:

> A distributive agreement is an agreement that is reached because every rational individual, using the resources available to her (which include criticisms and information provided by others), has determined for herself that a particular judgment or principle is correct. Individuals are able to agree because each using her own judgment has reached the same conclusion. A collective agreement on the other hand is a *constructed* consensus. It is an agreement based upon a collective consideration of moral opinions of participants in a discourse, but it is not necessarily, or usually, identical with any one of these views.
>
> (Thompson 1998: 1-2, her emphasis)

Although Habermas criticises the standard presumption of monology that rational individuals are capable of making all-things-considered moral judgments that may be true or false, Thompson argues that he nevertheless retains a critical element of monology in his discourse ethics. This is because Habermas seeks only *distributive* rather than genuinely *collective* agreement (Thompson 1998: 2). By contrast, Thompson seeks to justify a fully collective ethics. She also outlines in considerable detail the process by which collective ethical agreement might be obtained. Unfortunately, it seems that the relevance of her work for the particular purposes I have in mind here is quite explicitly ruled out directly by Thompson.

Thompson states categorically that her procedures for constructing collective ethical agreement, and she claims thereby ethical knowledge, are concerned with the right and not the good. She justifies this conclusion through arguing that judgments regarding the good simply cannot be universalised because of their incorrigible link to personal and identity constitutive concerns. She argues that such fundamental values have no greater rational status than personal commitments. "They are decisions about how to live a life and what desires and characteristics to cultivate, and by their nature they cannot be fully rational" (Thompson 1998: 82). In arguing this position, Thompson is very much aligned with the prevailing position regarding the priority of the right over the good in moral philosophy. I do not have space here to fully engage her discussion and its wider implications. However, I am intrigued by the possibility of attempting to integrate the collective ethics model she describes and defends with Norton's *Sustainability* model. I speculate that the additional rational and empirical discipline I have argued is made possible through the more intelligent interface between cultural aspirations and the exigencies of biophysical systems that Norton seeks to define, may also provide a basis to extend ethical rationality with regard to the good beyond Thompson's scepticism.

Another line of inquiry I find instructive has been defended by Robyn Eckersley. Eckersley argues for an ecocommunitarianism grounded in local community. This model is advanced to counter the cosmopolitanism of Held and others which she contends threatens the whole notion of local and ethically "thick" community. Such approaches would replace community

> . . with a set of abstract individuals who enforce their rights under global law. Self-rule is achieved by individuals in possession of abstract rights bestowed by global law, not by participation in the collective life of particular communities.
>
> (Eckersley 2006: 107)

In defending a commitment to the importance of local community shared with Norton, she provides a much better considered account of the necessary connection between local community and wider levels than he demonstrates. Eckersley states:

> Ecocommunitarians would take particularistic communities as the primary point of focus for building sustainable societies, working with local knowledge and local 'resources' (both 'natural' and moral). This is not enough, to be sure, but it provides the basis for developing ecological selves and wider ecological affinities. Moreover, the task of cultivating wider social and ecological loyalties must happen in the only way that communitarians know how: building additional layers of *community* that loosen (as distinct from dislodge) the hold of local, national and regional affinities so that they may be adjusted to encompass a wider network of still particularistic relationship.
>
> (Eckersley 2006: 107)

I believe that Eckersley's ecocommunitarian emphasis on the possibilities for the "building of additional layers of community" provides another instructive aspect of the 'therapy' required by Norton's theoretically-ailing model. What Eckersley is describing here is the possibility and necessity of processes by which communal identity, grounded in locally connected and informed community, may be extended to more encompassing levels of shared social and ecological identity. She offers a perspective very much consistent with the task I have suggested must be made central for environmental ethics, and indeed, perhaps for moral and political philosophy more generally. That is the challenge to develop theoretical understanding and to help design and facilitate processes achieving sufficient ethical agreement. The important additional feature that Eckersley offers is an emphasis on the important link between such ethical agreement and the extension of layers of common social and ecological identity.

I suggest there is a rather interesting if only suggestive link between the general model Eckersley commends for extending ethical identity and community to progressively more encompassing levels, and the "concentric circles" model of ethical duty defended by Norton's intellectual adversary Callicott, along with others such as Wenz (Wenz 1988). Callicott's approach to environmental ethics has been centrally informed by Leopold's emphasis on human membership within the biotic community. His concentric circles model of ethical duty is based on an expanding series of ethical

relations from the most intimate and venerable to the least. On his account, the layers of ethical relationship and related duty therefore extend from the family, up through wider social groupings and institutions such as local, regional and national government and transnational bodies to the most recent and least intimate of communities now being recognised by humanity, the biotic community. Given our own biological natures and our utter dependence on the biosphere for our survival and flourishing, this representation is surely mistaken. I believe that the focus on local community tied to local ecology that Norton shares with ecocommunitarians provides a more promising 'grounding' for intelligent and just approaches to social and biophysical sustainability. Further, I believe that Eckersley's emphasis on processes that might build further layers of ethical and ecological common identity suggests the right direction for theoretical enhancement for both Callicott's and Norton's approaches. It may be that the progressive development of sufficient genuine common identity and thus 'community' at the various spatiotemporal levels at which human cultures engage biophysical reality may prove necessary if there is to be a long-term human flourishing on a biodiverse Earth.

Finally, I conclude that this brief consideration of some existing examples of constructive philosophical inquiry supports my contention that there is indeed room for greater unity and effectiveness in the theory and practice of environmental ethics. I also conclude that this discussion lends a degree of further support for my claim that there remains a great deal of important theoretical work of practical import yet to be achieved.

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