

ABSTRACT

THESIS TITLE: Process Theology and the Challenge of Environmental Ethics.

NAME AND SOCIETY OF CANDIDATE: Clare Alexandra Palmer,
The Queen's College, Oxford.

DEGREE SUBMITTED FOR: D.Phil.

SUBMISSION DATE: Michaelmas Term 1992.

The aim of this thesis is to examine process theology in the light of questions raised by environmental issues. To facilitate this study, different approaches to the nonhuman natural world developed in environmental philosophy - in particular in environmental ethics - are compared with the work of process theologians. The primary focus is on the systems of A.N.Whitehead and Charles Hartshorne, but John Cobb, Jay McDaniel and Daniel Dombrowski are also considered.

In Chapter 1, the derivation of value and the formation of ethics in process thinking is examined, and its ethical methodology and content compared with classical utilitarianism and more recent consequentialist approaches to the nonhuman natural world. Ensuing problems including justice, replaceability, the identification of value with experience and the subjectivity of value judgments are considered.

In Chapter 2, process ethics is compared with deontological approaches to environmental ethics which focus on the value of individual organisms and natural objects: in particular, the work of Paul Taylor. Problems generated by egalitarianism, individualism and the inability to affirm environmental restitution are examined. The capacity of process thinking to resist such criticisms is assessed.

Collective consequentialist ethical approaches to the environment, characterized by Aldo Leopold and J.Baird Callicott, are laid alongside process ethics in Chapter 3. This raises questions concerning the nature of species and ecosystems, and the use of metaphors such as organism, community and society to describe them.

The focus moves in Chapter 4 onto a comparison of the metaphysics and ethics of the Deep Ecology movement with that of process theology. This comparison concentrates on two main themes: attitudes to 'holism' and to the 'extension and realization of the self'.

Finally, the question whether process theology should reform itself as a better response to environmental ethics is examined. Some suggestions about possible reformation are proffered, but it is tentatively concluded that process thinking is an inappropriate basis for environmental philosophy.

LONG ABSTRACT

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The aim of this thesis is to examine process theology in the light of questions raised by environmental issues, in particular because of the frequent assertions that process thinking is peculiarly well equipped to tackle the so-called ecocrisis. To facilitate this study, different approaches to the nonhuman natural world developed in environmental philosophy - in particular in environmental ethics - are compared with the work of process theologians. The primary focus is on the systems of A.N.Whitehead and Charles Hartshorne, but John Cobb, Jay McDaniel and Daniel Dombrowski are also considered. The thesis is divided into four main chapters.

Chapter 1 examines the formation of the actual occasion, the fundamental individual in Whitehead's system. The locus of value in the subjectivity of the actual occasion, and more particularly in the intensity and harmony of its experience, is established. This aesthetic value at the level of the actual occasion is distinguished from ethical value at the human level. Since all valuable experience is ultimately, in a process system, absorbed into God, the aim of ethical behaviour must be at maximizing total intense and harmonious experience for God. This totalizing, maximizing approach to ethics immediately suggests a comparison with utilitarian ethics. Thus similarities between process ethics and broadly utilitarian systems are considered: first with classical utilitarianism (in particular with the work of John Stuart Mill) and secondly with more recent consequentialist approaches, consciously constructed to take the nonhuman natural world into moral consideration: primarily those of Peter Singer, Donald VanDe Veer and Robin Attfield. The resemblance between process thinking and broadly utilitarian ethical systems raises the question whether process thinking is able to sustain a concept of individual integrity. Specific problems are also generated in the field of environmental ethics, concerning the replaceability of individual organisms, the

identification of value with experience, the subjectivity of value judgments and the aptness of focusing on individual organisms.

In contrast, in Chapter 2, nonconsequentialist ethical approaches to the environment are considered. These focus attention on the value of individual organisms and natural objects, and on corresponding human duties to them. Among the ethicists considered here are Albert Schweitzer, Paul Taylor, Tom Regan and Lawrence Johnson. A major division between these ethicists viz. whether or not the equality of different kinds of living organisms should be affirmed is discussed. A number of criticisms made of this approach to environmental ethics are raised. First, the nonconsequentialist nature of these ethical approaches makes it impossible for them to uphold the concept of environmental restitution or compensation. Secondly, while those ethicists who affirm the equality of all living organisms are advocating what is practically absurd, equally, those who introduce scales of value could be accused of judging nonhuman organisms by human standards. Thirdly, the individual focus of such approaches leads to their inability to deal with ecosystems and species as wholes, or to place any value in diversity or rarity of species, as well as suggesting the need to interfere in wild nature to save individual lives. The response of process thinking to these issues is then considered. Whitehead's explanations of the status of different kinds of organisms as 'societies' in process thinking is examined. This is contrasted with Hartshorne's language of 'organisms' and 'quasi-organisms'. The value hierarchy established by process thinkers is examined and contrasted with the approach of nonconsequentialist ethicists. The degree to which process thinking could withstand the earlier criticisms is assessed. Despite being consequentialist, it becomes clear that process thinking also could not uphold environmental restitution. Its value hierarchy leaves it open to the accusation of anthropocentrism (although not of practical absurdity); and, while more ambiguous about ecosystems and species, it also proves unable to value concepts such as diversity or rarity. The basis of value in experience also means that process thinking would, generally, accept interference in wild nature, if by doing so harmonious and intense experience is increased for God.

This leads into Chapter 3, where process thinking is compared with 'collective'

environmental ethics. Here value is placed on the wellbeing of ecological groups such as ecosystems and species. The conceptuality of Aldo Leopold is considered in depth, in particular his use of the models of 'organism', 'community' and 'flow of energy' to describe the land and human relations with it. Moving on to questions of value, the ethics of both Leopold and his major interpreter J. Baird Callicott are examined. Two possible interpretations of their ethics, standing in tension with one another, are discussed. In the first, the wild 'biotic community' is the focus of ultimate ethical concern, more so than any other community or individual. In the second, the wild, 'biotic community' forms the outer ring of a nested series of communities, where ethical commitment weakens from the centre outward. Each approach generates its own problems. The former, where the biotic community has moral ascendancy, could be accused of 'environmental fascism'. The latter, where the biotic community is less significant ethically than either the human community or that containing domestic animals, could be accused of relegating the nonhuman natural world to ethical irrelevance. This problem remains unresolved. In addition, the biological accuracy of Leopold's and Callicott's positions, the situation of domestic animals and the problems raised by the subjectivity of Callicott's ethics are also discussed. In response to this, the status of ecological collectives as 'societies' in process thinking, and the relation of these 'societies' to Leopold's models of the land are considered. The fundamentally different metaphysical and ethical focus of the process system indicates sharp contrasts with Callicott and Leopold. The co-operative nature of Whitehead's system (reflecting the persuasive lure of God) means that he finds predation difficult to accept; and even Hartshorne considers predation to be tragic, in contrast with the positive view of Callicott and Leopold. Due to the significance of harmonious and intense experience for value generation in process thinking, the most important organisms for it are those who have such experience; for Leopold and Callicott, within the biotic community at least, priority is given to those organisms which best sustain the ecosystem. Further, this focus on experience prevents process thinking, in the eyes of Callicott and Leopold, from adequately distinguishing between the domestic and the biotic community. However, process thinking cannot easily be accused of environmental fascism. Finally, in this chapter, a brief consideration of the ethics ensuing from James Lovelock's 'Gaia' hypothesis is undertaken: the ultimate 'ecological collective'. The contrast between an

ethic of Gaia, the 'Earth organism' and of the process thinking and the 'cosmic organism' is stark. The cosmic emphasis of process thinking makes it unable to accept that the preservation of Gaia (whether for her own sake, or for humanity's) should be an ultimate concern. Maximization of total harmonious intensity of experience for God should be the ultimate aim of ethical behaviour.

In Chapter 4, process thinking is compared with the metaphysics and ethics of the deep ecology movement. In the first instance, the emphasis is on the metaphysics of deep ecology, an emphasis which is justified in the face of controversy about this issue. Two key metaphysical concepts of deep ecology are explored: 'holism' and 'the extension and realization of the self', primarily in the work of Arne Naess and Warwick Fox. The meaning of 'holism' in deep ecology is examined, and the degree to which it could be described as 'thoroughgoing' holism. Exactly what deep ecologists understand by the 'extended self' and different possible interpretations of it - primarily physical and psychological - are examined. The question whether either, or both, of these concepts are prominent in process thinking is then approached. While process thinking shares some of the characteristics considered to be holistic, the discreteness of the actual occasions and the asymmetrical nature of internal relations means that it could only support a 'restricted' or 'modified' holism. Similarly, while process thinking also undermines the concept of physically isolated beings and hence supports some kind of physically extended self, the process emphasis on the actual occasion, which is too primitive to evince a psychology, means that the concept of a psychologically extended self is undeveloped. Various problems with both holism and the concept of an extended and realized self are examined, in particular the adequacy of both approaches as a foundation of environmental philosophy and as a basis for environmental ethics. The way in which scientific theory has been used by both deep ecology and process thinking is questioned; and the argument that anthropocentric and egocentric drives are involved in protecting the nonhuman natural world because it is part of one's extended self (either physically or psychologically) is assessed. Process thinking escapes the brunt of this criticism, because of its modified holism and undeveloped idea of the psychological extension of the self.

In conclusion, threads from all the preceding chapters are drawn together, and the adequacy of process thinking as an environmental philosophy - more particularly as an environmental ethic - is assessed. There are clearly some issues in environmental ethics which process thinking, as currently constituted, is unable to address, and others for which process answers are inadequate. Several responses are possible at this point. Process thinkers could reaffirm the adequacy of their system as it is; they could reform it, or they could abandon it. A possible reform in the direction of developing a pluralist ethics from process metaphysics, which would value more than just the harmonious and intense experiences of actual occasions is suggested. This would follow the general movement in environmental ethics towards pluralism, as seen in the work of Christopher Stone, Peter Wenz and Andrew Brennan. The tentative conclusion, however, is that the process system should be abandoned as being a fundamentally inappropriate basis to serve as an environmental philosophy, or on which to build an environmental ethic.

PROCESS THEOLOGY AND THE
CHALLENGE OF
ENVIRONMENTAL ETHICS



Clare Alexandra Palmer
The Queen's College, Oxford
Michaelmas 1992 [i.e. 1993]
D.Phil Thesis

ACKNOWLEDGEMENTS

There are several people whom I wish to thank for assistance in completing this thesis:

My supervisor, Rev. Trevor Williams for his extensive help, and also Dr. Paul Fiddes who supervised me for one term;

Professor Holmes Rolston III for allowing me to consult his papers and use his library during my visit to Colorado State University in Spring 1992 and the Queen's College, Oxford for making it financially possible.

Sue Hamilton for reading and commenting on several chapters; Don Smith for assisting in times of computer desperation; and my parents for proofreading (among other things)!

"I don't think they play at all fairly" Alice began, in rather a complaining tone. " And they all quarrel so dreadfully, one can't hear oneself speak - and they don't seem to have any rules in particular: at least, if there are, nobody attends to them - And you've no idea how confusing it is, all the things being alive..."

(from Alice in Wonderland: Lewis Carroll)

TABLE OF ABBREVIATIONS

(Complete citations can be found in the Bibliography.)

ACNT	A Christian Natural Theology
AG	The Ages of Gaia
AL	Animal Liberation
ALATA	Animal Liberation - A Triangular Affair?
AMV	The Aesthetic Matrix of Value
AOI	Adventures of Ideas
ASCA	A Sand County Almamac
BH	Beyond Humanism
BSI	Beyond Enlightened Self-Interest
BTA	Animal Liberation and Environmental Ethics - Back Together Again
CAR	The Case for Animal Rights
CDE	A Critique of Deep Ecology
CWWDE	A Critique of Wild Western Deep Ecology
DE	Deep Ecology (Devall and Sessions)
ECL	Ecology, Community and Lifestyle
EE	Environmental Ethics (Holmes Rolston)
EEC	The Ethics of Environmental Concern
G	Gaia
HMR	Hartshorne's Metaphysics of Animal Rights
HTSS	Holistic Thought in Social Science
LL	The Liberation of Life
LP	The Logic of Perfection
MDW	A Morally Deep World
MT	Modes of Thought
NPEE	The Nature and Possibility of an Environmental Ethic
OMC	On Being Morally Considerable
PC	The Philosophy of Civilization
PR	Process and Reality
RIM	Religion in the Making
RN	Respect for Nature
SMW	Science and the Modern World
TVO	A Theory of Value and Obligation
TTE	Towards a Transpersonal Ecology

TABLE OF CONTENTS

INTRODUCTION	1
CHAPTER 1: PROCESS THEOLOGY, VALUE, AND UTILITARIANISM IN ENVIRONMENTAL ETHICS	6
The Actual Occasion	7
Process Thinking and Utilitarianism	20
Individual Consequentialism and Nonhumans	36
Problems with Individual Consequentialism in Environmental Ethics	48
Individual Consequentialism, Process Thinking and the Nonhuman	58
CHAPTER 2: PROCESS THINKING AND INDIVIDUAL DEONTOLOGICAL ENVIRONMENTAL ETHICS	71
Individual Deontological Positions	74
A Critical Response to Individual Deontological Environmental Ethics	98
The Response of Process Thinking	115
CHAPTER 3: PROCESS THINKING AND COLLECTIVE ENVIRONMENTAL ETHICS	164
The Land Ethic and Ecological Models of the Land	165
Value and Ethics in Leopold and Callicott	179
Towards a Critique of Leopold and Callicott	188
Process Thinking and Collective Environmental Ethics	205

The Ethical Implications of Ecological Collectives in Process Thinking	219
Process Thinking and the Gaia Hypothesis	229
CHAPTER 4: A TAG WITHOUT BAGGAGE? WHITEHEAD'S PROCESS METAPHYSICS AND THE DEEP ECOLOGY MOVEMENT	250
The Metaphysical and the Ethical in Deep Ecology	253
Holism in Deep Ecology and in Process Thinking	258
The Extension and Realization of the Self in Deep Ecology and Process Thinking	274
A Critique of Holism and the Extension and Realization of the Self in Deep Ecology	288
CONCLUSION	309
BIBLIOGRAPHY	324

INTRODUCTION

One theological school in the West claims to have an intellectual alternative to the errors of classical Western metaphysics which brought on the alienation of humanity from nature and hence the eco crisis. Process theology therefore should be listened to with respect.¹

While Paulos Mar Gregorias follows this remark with substantial reservations about the metaphysics of process theology, he does not revoke his view that process thinking offers a metaphysical approach peculiarly equipped to tackle the so-called eco crisis. In holding this view he is not alone. Prominent North American process theologians, such as Charles Hartshorne and John Cobb have produced a substantial number of publications advocating a process approach to environmental issues.² Very little has been published which is critical of these claims, or which subjects them to rigorous analysis.³ To attempt such an analysis is the purpose of this thesis.

There are various possible ways of approaching such an analysis, but the most fruitful seemed to be a fundamentally comparative one. This avoided the problems of working

¹ Paulos Mar Gregorias p.39 *The Human Presence: An Orthodox View of Nature* (Madras, India: The Christian Literature Society 1980).

² Charles Hartshorne 'The Environmental Results of Technology' in ed. William Blackstone *Philosophy and Environmental Crisis* (Georgia: University of Georgia Press 1974); 'The Rights of the Subhuman World' *Environmental Ethics* 1 no.1 1979 49-60; 'The Ethics of Contributionism' ed. Ernest Partridge *Responsibilities to Future Generations* (Buffalo, New York: Prometheus Books 1981); John Cobb *Is It Too Late? A Theology of Ecology* (London: Faith and Life Series Benzinger, Bruce and Glencoe 1972); 'Ecology, Ethics, Theology' in Herman E. Daly ed. *Towards a Steady State Economy* (San Francisco: W.H. Freeman, 1973) 307-320; 'Christian Existence in a World of Limits' *Environmental Ethics* 1 no.2 1979 149-; with Charles Birch *The Liberation of Life* (Cambridge: Cambridge University Press 1981); with Herman Daly *For the Common Good* (London: Green Print 1989). This is by no means a complete listing.

³ George Sessions is critical of the environmental aspect of process thinking in his essay 'Western Process Metaphysics (Heraclitus, Whitehead, Spinoza)' in ed. George Sessions and Bill Devall *Deep Ecology* (Salt Lake City: Peregrine Books 1985) 236-242. Some aspects of process thinking are also attacked (although a quasi-process position is adopted) in Susan Keffer, Sallie King and Steven Kraft 'Process Metaphysics and Minimalism: Implications for Public Policy' *Environmental Ethics* 13 no.1 Spring 1991 23-47.

with an unacknowledged standpoint or of judging process thinking against some kind of absolute standard. Here no absolutes are presumed, but different approaches are analyzed, and their strengths and weaknesses considered. Even this procedure is somewhat circular, since the critics of any one position are the advocates of a different position themselves. Nonetheless, this kind of framework uncovers some interesting insights into process thinking in general, and its approach to the nonhuman world in particular.

Since the most extensive and careful work in environmental philosophy and theology has been produced in environmental ethics, this thesis concentrates primarily on this area. Three major approaches to environmental ethics are considered as a basis for comparison with process thinking, approaches which I have labelled individual consequentialist, individual deontological and collective consequentialist. The arguments of major representatives of each approach are described and critically examined. The process approach to ethics, examined in Chapter 1, is laid alongside each of these positions, to establish whether any similarity exists, and if so, whether process thinking is open to the same critique.

In the final chapter, process thinking is compared with a philosophical movement which claims to 'go beyond ethics': that of deep ecology. This seemed an important comparison, both because deep ecology is an important popular movement in environmental philosophy, and because of the claims which are made by some deep ecologists concerning their links with process thinking. In fact, despite statements to the contrary, the metaphysics and ethics of deep ecology proved to be inseparable, and raised again many of the questions suggested in earlier chapters.

The critical approach adopted in this thesis towards all the ethical positions examined leads to the view that, taken in isolation, any one of them - including that of process thinking - is inadequate. Thus, in conclusion, a movement towards a more pluralistic position, as is becoming increasingly popular in environmental ethics, is tentatively endorsed.

This method of approaching process theology and environmental ethics, together with the space limitations of a doctoral thesis, means that extensive limitations of both range and content are inevitable. My consideration of process theology and philosophy is limited to the later philosophical texts of A.N.Whitehead, Charles Hartshorne, and other process philosophers and theologians, such as John Cobb, Jay McDaniel and Daniel Dombrowski, who have written in the specific area of process thinking and the nonhuman natural world. In the knowledge that Whitehead's philosophical ideas were still crystallizing in 1925 and the years subsequent to this, I have not quoted from his earlier philosophical writing about issues on which he later changed his mind.⁴ In the early part of my thesis, I have drawn on much of the major secondary literature in process studies. However, in later chapters, I have primarily argued from the basic process texts themselves. With space limitations, this seemed to be the most effective way in which to present the process position.

Within environmental ethics, similar omissions have proved unavoidable. The positions which I have portrayed, and the representatives I have chosen to portray them, are by no means comprehensive. In particular, I have been guilty of presenting those who have coherent ethical approaches of their own purely in their role as critics of other ethicists. This is particularly true of Holmes Rolston and Richard Sylvan (earlier named Routley). In addition, the views of other environmental ethicists appear in somewhat truncated form (in particular Lawrence Johnson and Robin Attfield) while important pluralist ethical approaches such as that of Christopher Stone in *Earth and Other Ethics* (New York: Harper and Row 1988) and Andrew Brennan in *Thinking about Nature* (London: Routledge 1988) are given room only in the conclusion. This was, again, primarily due to a lack of space.

Not only are some important process thinkers and environmental ethicists omitted, but also some subjects. Nowhere, for instance, do I consider in any detail the effect of different ethical positions, including process ethics, on human population. This is a key

⁴ For a full analysis of Whitehead's changing views, see Lewis Ford *The Emergence of Whitehead's Metaphysics 1925-1929* (Albany, New York: State University of New York Press 1984).

issue, on which, I suspect, process thinking might edge towards affirming Derek Parfit's aptly named 'Repugnant Conclusion'.⁵ I also do not examine the literature surrounding the question of 'animal liberation' in great depth, although the moral status of nonhuman animals is of broad significance to the thesis. More importantly, perhaps, there is no rigorous analysis of the is/ought problem in environmental ethics. A great deal has already been written on this subject.⁶ To echo Ernest Partridge's remark 'A library of complex and technical philosophical treatises have been written on that question. We cannot begin to address it here'.⁷ Since many of the positions considered in this thesis are consciously or unconsciously naturalistic (including process thinking, which one might describe as a kind of expanded naturalism) to address this issue in acceptable detail would require another thesis. Where the is/ought question is of particular significance, it is noted in the thesis; otherwise, I do not dwell on it.

These limitations aside, this thesis examines process theology in the light of central

⁵ Derek Parfit *Reasons and Persons* 351-441 (Oxford: Clarendon Press 1984); see Robin Attfield's discussion in *A Theory of Value and Obligation* (London: Croom Helm 1987). Richard Sylvan has also written interestingly in this area: 'People of the Land: The Ethics of the Population Case' in *Overpopulation, resources, environment: focus Australia* Richard Sylvan and David Bennett (Number 15, preprint series in environmental philosophy, Australian National University 1987).

⁶ Holmes Rolston: 'Is there an Ecological Ethic?' and 'Can and Ought we to follow Nature?' *Philosophy Gone Wild* (1979; Buffalo, New York: Prometheus 1989); Tom Regan 'On the Connection between Environmental Science and Environmental Ethics' *Environmental Ethics* 2 no.4 1980 363-367; Richard and Val Routley 'Human Chauvinism and Environmental Ethics' *Environmental Philosophy* ed. Don Mannison, Michael McRobbie, Richard Routley (Monograph Series no.2, Australian National University 1980); Ernest Partridge 'Values in Nature: Is Anybody There?' *Philosophical Inquiry* 8 no.1-2 96-110 and 'Can the Human Ecologist Escape Philosophy?' (Paper for the Centre for the Study of Values and Social Policy, University of Colorado); Robert Elliot 'Metaethics and Environmental Ethics' *Metaphilosophy* 16 no.2/3 July 1985 103-117; Frank De Roose 'Towards a Non-Axiological Holistic Ethic' *Philosophica* 39 1987 no.1 77-100; Tom Colwell 'The Ethics of Being Part of Nature' *Environmental Ethics* 9 no.2 Summer 1987 99-114; J.Baird Callicott 'Hume's Is/Ought Dichotomy and the Relation of Ecology to Leopold's Land Ethic' *In Defense of the Land Ethic* (Albany, New York: State University of New York Press 1989) 117-127. Most book length studies also include sections on this question.

⁷ Partridge p.17 'Can the Human Ecologist Escape Philosophy?' op.cit.

positions in environmental ethics. It is hoped that this investigation will cast some light on remarks such as those by Paulos Mar Gregorias with which I began. In order to provide a secure underpinning for this comparison, I now turn to the derivation of value in process thinking.

CHAPTER 1

PROCESS THEOLOGY, VALUE AND UTILITARIANISM IN ENVIRONMENTAL ETHICS

I suggest that you take as a model for your essay on Whitehead's moral philosophy a well-known treatise on the Snakes of Ireland.⁷

This response, received by Paul Schillp on announcing his intention to write a paper on Whitehead's moral thinking, is an understandable one. Whitehead's primary concern, in his later philosophical work, was not moral philosophy, but the construction of a new metaphysics. It is to this task that his philosophical thinking was dedicated, and he never attempted to construct an ethical system. Ethics were, in this sense, secondary to his purpose.

Despite this, a clear evaluative structure flows from Whitehead's process metaphysics, a structure developed by other process thinkers, in particular Charles Hartshorne. In this chapter, I will consider the way in which value is generated in process thinking, initially by focusing on the formation of the 'actual occasion' or 'entity' in Whitehead's system. From this micro-level, I will move on to consider the human, macro-level of ethics which is supported by this process understanding of value. Resemblances between this ethical system and that of utilitarian ethical systems will be considered: first the utilitarianism of J.S.Mill, and secondly the more recent consequentialist systems consciously constructed to take the nonhuman world into moral consideration. These similarities raise the question whether process thinking is open to the same criticisms as utilitarianism, and in particular whether it shares with utilitarian systems an inability to come to terms with many of the problems generated by environmental ethics. This examination will provide a foundation for the comparison of process thinking with other approaches to environmental ethics in Chapters 2 and 3.

⁷ Paul Schillp p.593 *The Philosophy of A.N. Whitehead* (1941; New York: Tudor Press 1951).

THE ACTUAL OCCASION

The 'actual occasion', or 'actual entity', is the fundamental component of Whitehead's system, and of all process systems that originate in a Whiteheadian context.¹ As Whitehead states:

'Actual entities'...are the final real things of which the world is made up. There is no going behind actual entities to find anything more real.²

Everything which is actual in the universe is an actual occasion or is composed from them. Describing actual occasions is, however, more difficult. Whitehead's first description of them in *Process and Reality* is as 'drops of experience, complex and interdependent'.³

In characterizing actual occasions as 'drops' Whitehead uses language directly dependent on that of William James.⁴ It is, nonetheless, a peculiarly apt expression for his own position. The word 'drop' first suggests the spatial extension which actual occasions possess: 'Every actuality in the temporal world is to be credited with a spatial volume

¹ Whitehead uses these terms synonymously, and there is no convention for using one rather than the other. I have, however, opted to use the term 'actual occasion' throughout rather than 'actual entity.' This is both to avoid confusion with 'God' (whom Whitehead describes as an actual entity, rather than an actual occasion) and also because 'occasion' emphasises more strongly its transitory nature.

² Whitehead p.18 *Process and Reality: An Essay in Cosmology* (PR). First published UK 1929 (Cambridge University Press), US 1929 (Macmillan). Edition quoted here: The Corrected Edition ed. David Ray Griffin and Donald W. Sherburne (New York: The Free Press, Macmillan 1978). All references are to the Corrected Edition.

³ *ibid.*

⁴ William James: ch.10 *Some Problems in Philosophy* (London: Longmans 1911). Lewis Ford points out that Whitehead had developed his epochal theory of time before he came across James' description of experience 'growing by buds or drops of perception' in J.S.Bixler *Religion in the Philosophy of William James* (Boston: Marshall Jones Company 1926). Ford: p.52, 64 *The Emergence of Whitehead's Metaphysics 1925-1929* op.cit.

for its perspective standpoint'.⁵ Secondly, it indicates a degree of discreteness, of self-completion. This is central to Whitehead's system, but should not be misinterpreted. An actual occasion is discrete as far as its contemporary occasions are concerned; 'contemporary events happen in causal independence of one another'.⁶ Time is atomic, being composed from distinguishable and extended drops.⁷ This does not mean that any single actual occasion is unaffected by *past* actual occasions; they are vital to its formation. A third suggestion conveyed by the image of a 'drop' is that of constant process and growth, up to a point of fullness:

Each actual thing is only to be understood in terms of its becoming and perishing. There is no halt in which the actuality is its static self, accidentally played upon by qualifications derived from the shift of circumstances. The converse is the truth.⁸

However, this statement also requires careful qualification. The fact that the actual occasion is a process does not, for Whitehead, mean that it is divisible, that at any point it has a past, present or future. To understand this requires a closer examination of the nature of the actual occasion.

Actual occasions are, Whitehead argues, drops of experience. At the most fundamental level of the universe, then, is subjectivity or experience. This assertion forms part of Whitehead's case against dualism, and a rejection of the Cartesian view that the human mind is the only location of subjectivity in the created world.⁹ Human experience is not radically different from the rest of the natural world; it rather reflects the way

⁵ PR 68.

⁶ PR 61.

⁷ The 'emergence of temporal atomicity' in Whitehead's thinking seems to have happened quite late in his philosophical career. Lewis Ford p.51 - 65 op.cit.

⁸ Whitehead *Adventures of Ideas (AOI)* (1933; Harmondsworth, Middlesex: Pelican 1948).

⁹ Indeed, to press the contrast further, Descartes also held that the human mind, where subjectivity was exclusively located, was unextended; he correlates extension with lack of subjectivity. Descartes: *Sixth Meditation* (1641).

that the world actually is.¹⁰ Indeed, at root, Whitehead derives his concept of actual occasions from his understanding of human experience. Human experience is a very selective manifestation of the general experience of actual occasions. 'Consciousness' Whitehead remarks 'is the crown of experience, only occasionally attained, not its necessary base'.¹¹ Consciousness is a narrowing and a focusing, a highlighting of particular areas of experience, to the exclusion of more general experience. Actual occasions themselves, while they have subjectivity, have no consciousness.¹²

An actual occasion has no existence outside its own becoming. Being *is* becoming. Once an occasion is no longer in the process of coming to be, it has perished. There is 'no halt in which the actuality is its static self'; or, as A.H. Johnson puts it:

All you have are the processes of growth towards actual entityhood and the demise of actual entities. In a sense you don't have an actual entity as such, because you never catch one complete. It is either coming or going - never here.¹³

Thus it is essential to consider the constituents and the development of actual occasions in order to understand them.

There are four vital components which make any actual occasion what it is: temporally preceding actual occasions which have now perished; eternal objects; the initial aim

¹⁰ In this subjectivization of the natural world, Whitehead is following a longstanding Continental philosophical tradition. Eagleton's comments about Hegel's system 'modelling Nature itself after the freely self-generative subject, thus grounding that subject in a world whose structure it shares', could equally be made of Whitehead. Eagleton p.131 *The Ideology of the Aesthetic* (Oxford: Basil Blackwell 1990). The term 'subjectivization' of nature is to be preferred to 'personalization of nature' adopted by James Carpenter to describe Whitehead's system. James Carpenter p.105 *Nature and Grace* (New York: Crossroad 1988).

¹¹ PR 267.

¹² For a detailed explanation, see John Cobb p.29f *A Christian Natural Theology* (ACNT) (London: Lutterworth Press 1965).

¹³ A.H. Johnson p.35 *Whitehead and his Philosophy* (Lanham, Maryland: University Press of America 1983).

provided by the primordial nature of God; and the subjectivity of the actual occasion itself. I will take each of these constituents singly.

Each actual occasion comes to be in the cradle of other, perished actual occasions. These perished occasions provide objective data which the currently actualizing actual occasion can incorporate into itself. The actualizing occasion is said to *feel* or *prehend* these perished actual occasions. However, it is not obliged to absorb all of them into itself. It may negatively prehend an objectified actual occasion, which means that it may exclude it. Every actualizing (or, in Whitehead's preferred term, concreting) occasion prehends, either positively or negatively, every preceding actual occasion in the universe: 'An actual entity has a perfectly definite bond with every item in the Universe'.¹⁴ However, most of these are felt 'vaguely', providing a kind of background for the concreting occasion. The feeling of a perished actual occasion by a concreting one is described by Whitehead as a 'physical' feeling or prehension. This contrasts with the feeling of an eternal object, which Whitehead describes as a 'conceptual' prehension.

Eternal objects provide a second kind of data for the actual occasion. Whitehead describes them as 'pure potentials for the determination of fact'.¹⁵ They are abstract potentials for things which might be actualized: colours or shapes for instance. It is impossible to avoid a comparison between eternal objects and Platonic forms, but there are crucial differences between them. For Plato, it is the Form which is really real, while for Whitehead and process thinkers in general, it is the *actual* which is *really real*, and the abstract eternal object is dependent on the actual for instantiation. As Pols points out, eternal objects ingress (into the actual world) and are meant to ingress; they do not, like Platonic Forms, have a life of their own.¹⁶ By its very nature, an actual occasion may only actualize some of the total array of eternal objects: for instance, it cannot actualize two different colours simultaneously. The context in which the actual

¹⁴ PR 41.

¹⁵ PR 22.

¹⁶ Edward Pols p.7 *Whitehead's Metaphysics* (Carbondale and Edwardsville: Southern Illinois University Press 1967).

occasion comes to birth also limits the eternal objects it may actualize. Only certain eternal objects are relevant to any one actual occasion: the colour spectrum is not relevant to an actual occasion which forms part of something transparent. Relevant and compatible eternal objects, however, together with the array of perishing actual occasions which surround the concurring actual occasion, constitute two of the factors involved in the creation of the actual entity.

It is important to notice that Whitehead's concept of eternal objects is not accepted by all process thinkers. Hartshorne, for example, considers that eternal objects are regrettably Platonic, commenting: 'I do not believe that a determinate colour is something haunting reality from eternity, as it were, begging for instantiation, nor that God primordially envisages a set of such qualities'.¹⁷ Rather than these 'eternal universals, independent of time' Hartshorne suggests, following the philosopher Peirce, that all specific qualities are emergent and time dependent. He comments 'Something like this blue can occur over and over again, but not precisely this blue. Particular qualities in their absolute definiteness are irreducibly relational and historical'.¹⁸

Consideration of the aim of the actual occasion is a complex and difficult one in process studies, as many of Whitehead's interpreters agree.¹⁹ Whitehead himself is not entirely clear exactly what role he considers the aim of the occasion to play. He certainly speaks of an *initial aim* supplied by the primordial nature of God to the actual occasion. To make sense of this, of course, it is vital to consider briefly Whitehead's understanding of God.

¹⁷ CSPM 59.

¹⁸ CSPM 64.

¹⁹ ACNT 153; Pols p.42 op.cit; Ross p.74 *Perspective in Whitehead's Metaphysics* (Albany, New York: State University of New York Press 1983) are just some examples of this.

It has been argued that a theistic underpinning is unnecessary to Whitehead's system.²⁰ It is certainly true that the concept of God elaborated in *Process and Reality* is a relatively late development.²¹ Nonetheless, it would be very difficult to contend that Whitehead's system - in particular its value structure - could be maintained in the form which it takes in *Process and Reality*, without God.

In *Process and Reality*, God is presented as dipolar, with two aspects, a *primordial* nature and a *consequent* nature. The primordial nature is 'free, complete, primordial, eternal, actually deficient and unconscious'.²² It is abstract and conceptual, 'the unlimited conceptual realization of the absolute wealth of potentiality'.²³ While the primordial nature of God does not create eternal objects ('his nature requires them in the same degree that they require him'),²⁴ it orders them according to their relevance to each concurring actual occasion. As another perspective on the same activity, the primordial nature acts as a lure to each actual occasion, that it should concur in accordance with the ordering presented to it by God. This will become clearer when the initial aim is examined.

The consequent nature of God, in contrast, is 'determined, incomplete, consequent, 'everlasting', fully actual and conscious'; 'the objectification of the world in God'.²⁵ In the consequent nature God feels the world and is affected by it. Every new occasion adds to the consequent nature; hence this aspect of God, in contrast with the primordial nature, is always incomplete, always growing and changing. Thus the experiences of the

²⁰ Cobb 'The 'Whitehead Without God' debate: A Critique' *Process Studies* 1 no.2 1972 91-100; Donald Sherburne 'The Whitehead Without God' Debate: A Rejoinder' *Process Studies* 1 no.2 1972 101-124.

²¹ See Ford op.cit. p.101f for detail on the way in which Whitehead's concept of God may have developed.

²² PR 345.

²³ PR 343.

²⁴ PR 257.

²⁵ PR 345.

actual occasions in the world become part of God, and, while their immediate subjectivity has perished, they are preserved, or 'saved' objectively within the consequent nature of God.²⁶

The extent to which Whitehead intends to integrate the primordial and consequent natures of God is somewhat unclear. He does comment that the consequent side of God is integrated with the primordial side.²⁷ Randall Morris, adopting this interpretation, argues that the 'consequent nature of God is better understood as the unity of God's conceptual vision and physical feelings' rather than the physical feelings alone.²⁸ This question will not be further pursued here, although it does have one important implication for this study, as will become clear later.

Returning, then, to the initial aim of the actual occasion, it is the abstract, primordial nature of God which supplies this to the actual occasion. The initial aim:

determines the initial gradations of relevance of eternal objects for conceptual feeling; and constitutes the autonomous subject in its primary phase of feelings with its initial conceptual valuations [that is, of eternal objects] and with its initial physical purposes.²⁹

This passage also introduces the fourth element in the formation of the actual occasion which is, in fact, inseparable from the initial aim: the subjectivity of the actual occasion itself. The initial aim presents to the actual occasion a range of possibilities which it may choose to actualize. This initial aim is taken over by the subjective aim

²⁶ PR 356. Marjorie Suchoki in her book *The End of Evil* (Albany New York: State University of New York Press 1988) argues the possibility from a process perspective of the retention of the subjectivity of the actual occasions in the consequent nature of God. The maintenance of such a position requires a considerable development from Whitehead, and will not be further considered here.

²⁷ PR 345.

²⁸ Randall Morris p.30-31 *Process and Politics: Towards a Political Theology based on the thought of A.N.Whitehead and C.Hartshorne* (D.Phil thesis: Oxford University 1986).

²⁹ PR 244.

of the concreting occasion itself, which, ultimately, makes what was potential become concrete and real. Thus, the initial aim of God, which grades the actual occasions, together with the actual world of perished actual occasions, 'jointly constitute the character of the creativity for the initial phase of the novel concrecence'.³⁰

The subjectivity of the actual occasion finally makes potentiality actual. Characteristic of the actual occasion is its freedom, or autonomy. Ultimately, the decision about self-actualization is freely made by the concreting occasion, within its necessary contextual constraints.³¹ It is important that the initial aim provided by the primordial nature of God, luring the occasion on to actualization, is seen as persuasive, rather than coercive. The occasion is never obliged to concreate in any particular way; it is a 'self-creating creature'.³²

Whitehead speaks of the *phases* of the actual occasion, internal stages in its self-actualization. This is problematic, since as we have seen, he insists that an actual occasion is indivisible. It appears that the phases of the occasion occur, in some sense, outside time; that the discrete occasion is what time is, what time is made from, as an indivisible whole.³³ Whitehead describes these phases as the conformal phase and the supplemental phase. The conformal phase of the actual occasion is composed from physical feelings of initial data: it can be called the physical pole of the actual occasion. These feelings are largely repetition of the data already existing in the world; the physical pole 'conforms' to the past. In contrast, the supplemental phase is composed from conceptual feelings of eternal objects; it can be called the mental pole of the actual occasion. It is here that originality or novelty can be generated, where new eternal objects are combined with physical feelings from already existing data to produce a new whole. Thus, the subjective aim of the actual occasion selects a

³⁰ PR 245.

³¹ As Whitehead comments 'no actual entity can rise beyond what the actual world as a datum from its standpoint - its actual world - allows it to be'. PR 83.

³² PR 85.

³³ This problem is tackled with great lucidity by Pols, p.42ff op.cit.

combination of physical and conceptual feelings in order to generate its own, complete, subjectivity. Different actual occasions, however, coming to be in different contexts, have widely variant emphases on the physical and mental poles. The stronger the mental pole, the greater the degree of novelty possible; the stronger the physical pole, the more the occasion repeats, or conforms to, what already exists.

This examination of physical and mental poles, and degrees of novelty and repetition, leads inevitably to a consideration of the value generated by an actual occasion.

Value and the Actual Occasion

Whitehead's metaphysical system is a teleological one, and this teleology forms a backdrop to the concretion of each actual occasion with its own telos. Since each actual occasion contributes to God's consequent nature, the way in which it actualizes itself has an effect on God. God's aim in the Universe is at the 'fulfilment of his own being'.³⁴ Thus, the lure of God tries to persuade each occasion to actualize itself in the way which best fulfils God's being. That which fulfils God's being is the ultimately valuable, since it is enjoyed by God and preserved in God's consequent nature. It is thus necessary to consider what actually does fulfil God's being.

At the most fundamental level, what is actual is valuable, and since actuality is exclusively composed from actual occasions, just by existing, actual occasions generate value and contribute to God's being. As Whitehead comments: 'Value is inherent in actuality itself'.³⁵ The locus of this value is the subjectivity or experience of the actual occasions. To exist, in Whitehead's system, is to have some kind of self-enjoyment and thus, self-valuation:

...we see at once that the element of value, of being valuable, of having value in itself, of being an end to itself, of being something which is for

³⁴ PR 105.

³⁵ A.N.Whitehead p.100 *Religion in the Making (RIM)* (Cambridge: Cambridge University Press 1926).

its own sake, must not be omitted in any account of an event as the most concrete actual something. Value is a word I use for the intrinsic reality of an event.³⁶

The location of value is in, and only in, actual occasions; it has no existence outside or abstracted from them, and it is present in each of them. However, value is not equally present in all actual occasions. The amount of value generated is largely dependent on the strength of the mental pole or supplementary phase.

As we have seen, the physical pole, or conformal phase, of the actual occasion largely repeats the data which already exists in the world around it. In some occasions, the physical pole is extremely strong, outweighing the weak mental pole. Such occasions fail to integrate new eternal objects into their experience. Other occasions have a strong mental pole, with conceptual, as well as physical feelings, and integrate new eternal objects into their actualization to make a new synthesis. As a general rule, the occasions with a strong mental pole are more valuable.

However, caution is needed in explanation here. It is not because the synthesis achieved by occasions with a strong mental pole is new that it is valuable. Originality or novelty is not in itself valuable; it is an instrument to the achievement of another goal. As expressed by Lynn Belaief:

The introduction of novelty is the necessary condition for promoting creative advance: it is good if it is ultimately able to promote a higher type of order...Novelty may promote or destroy order; it may be good or bad.³⁷

A similar view is expressed by Pols:

³⁶ Whitehead p.117 *Science and the Modern World (SMW)* (1925; Harmondworth, Middlesex: 1938).

³⁷ Lynn Belaief p.128 *Towards a Whiteheadian Ethics* (Lanham, Maryland: University Press of America 1984)

While it is true that novelty is a necessary condition for the heightening of intensity, it is not true that each novelty is a sufficient condition for the heightening of intensity.³⁸

Several alternative sources of value are expressed here: the creative advance, a higher type of order, and intensity. These bring out the essential understanding of value in Whitehead's system. Novelty is essential for change to happen; without novelty, there would be only repetition. However, novelty is necessary but not sufficient for creative advance. The aim of advance is greater 'satisfaction' which is expressed by Whitehead as intensity of experience: 'the end is concerned with the gradations of intensity in the satisfactions of actual occasions'.³⁹ The more intense the experience, the more it is valued by the actual occasion, and hence by God.

However, as is suggested by the expression 'higher type of *order*', to stop here would be to be oversimplistic. It is not pure intensity which is of value. Intensity must be ordered, rather than chaotic. Chaotic or disordered intensity is intensity generated by conflicts or incompatibilities within the feeling of an actual occasion, generated when an occasion prehends conflicting perished actual occasions. Ordered or harmonized intensity is composed from contrasts, rather than conflicts. An actual occasion which produces a high level of ordered intensity is described by Whitehead as 'beautiful'. Other occasions, however, produce intense but unharmonious experience (aesthetic destruction) or harmonious but unintense experience (triviality). An intense experience which lacks harmony is described by Whitehead as 'the feeling of evil in the most general sense, namely physical pain and mental evil, such as sorrow, horror, dislike'.⁴⁰ Conversely, a harmonious experience which lacks intensity is described as 'the loss of the higher experience in favour of the lower experience'.⁴¹ In humans, triviality can be described

³⁸ Pols, p.67 op.cit.

³⁹ PR 83.

⁴⁰ AOI 295.

⁴¹ RIM 95.

as 'degradation - the comparison of what is with what might have been'.⁴²

It will be clear from this description of value that it is *aesthetic*, rather than *ethical*. Ethical value is, in process thinking, a subset of aesthetic value. 'All order is therefore aesthetic order, and the moral order is merely certain aspects of the aesthetic order'.⁴³ Aesthetic value is generated from harmony and intensity of experience; ethical value is defined, by Hartshorne, as 'not the value of experiences themselves, but rather the instrumental value of acting so as to increase the intrinsic value of future experiences of those of others than oneself'.⁴⁴ Ethical acts, (only possible at the level of the human being, rather than the actual occasion which lacks consciousness) are those which generate the greatest aesthetic value overall. This may mean the sacrifice of some present harmonious intensity, in order to generate greater harmonious intensity in the future; the renunciation of some aesthetic value now, in order to generate more total aesthetic value.

At the level of actual occasions, where to speak of 'ethics' is inappropriate, the initial aim provided by the primordial nature of God takes into account what one might call the 'ethical interest'. That is to say, the initial aim points towards the best possible actualization for that occasion - a 'patterned intensity of feeling arising from adjusted contrasts' - in the light of the effect of such an actualization on other, future occasions.⁴⁵ As Cobb expresses it:

The initial aim is always that aim at the ideal harmony possible for that occasion. It is the aim at a balance between the intensity of that occasion's experience and its contribution beyond itself.⁴⁶

⁴² RIM 97.

⁴³ RIM 105.

⁴⁴ Charles Hartshorne p.10 *Omnipotence and Other Theological Mistakes* (Albany, New York: State University of New York Press 1984).

⁴⁵ PR 244.

⁴⁶ ACNT 128.

This does not mean that the occasion is determined by the initial aim. Some indeterminations are always present, to be decided by the freedom of the actual occasion. But even so, it is clear that actual occasions do not always actualize in accordance with the initial aim; that is to say, not every actual occasion produces maximum harmonious intensity, taking into account the effect on future occasions. This is because the subjective aim of the actual occasion, into which the initial aim is absorbed can, through the phases of the occasion, modify the initial aim.

This, however, generates its own difficulty, aptly summarized by Randall Morris:

The freedom of the actual entity would appear to reside in the ability of the actual entity to modify its initial aim, to make some specific aim its own. However, since the initial aim includes a specific ideal, which is God's ideal for that occasion, the data and location of which the actual entity initially conforms to, must we not conclude that any modification is, in fact, degradation?⁴⁷

Presenting the initial aim as a range of possibilities may be intended to solve this difficulty, but as Morris correctly suggests, one of the possibilities must produce maximum harmonious intensity, and so must be preferred over others as the specific ideal for that occasion. Thus the concept of a range of possibility within the initial aim just pushes the problem one step back. The conclusion which can be drawn from this - of some significance to this thesis - is that the greatest fulfilment possible for the actual occasion is to conform to the aim presented to it by God: that is, to so act that maximum total harmonious and rich experience is generated for the consequent nature of God, despite the possible sacrifice of harmonious and intense experience which this might entail for the occasion itself. Thus, if the occasion either concretes more trivially or more disharmoniously than it was possible for it; or if it chooses its own maximal harmonious and intense experience at the expense of future experience, it has failed to generate maximum possible value in the world. That less value is created does not, of course, mean that the occasion behaves unethically; ethics is only possible where experience becomes conscious, in humans and conceivably a few other mammal species.

⁴⁷ Morris p.23 op.cit.

This value shortfall is, in a sense, the forerunner of ethics in the same way as the subjectivity of the actual occasion is the forerunner of consciousness. Ethics is the supreme and most developed form known of the decisions about concretion taken by the actual occasion.

Consideration of process ethics moves from the micro-level of value generation by actual occasions to the macro-level of the human being. In process thinking, human beings, like all other living and non-living objects, are societies of actual occasions. Together with some other mammals, they are marked by the peculiarly powerful mental poles of their constitutive actual occasions. This means that they have a high potential for the generation of harmonious and intense experience.

This high value potential of human beings, together with their ability to make ethical decisions, is of central importance in this study. But whether on a micro- or a macro-level, the ultimate aim is still to generate maximum harmonious and intense experience for the consequent nature of God. The ethical system engendered by such an approach will be considered in the following section.

PROCESS THINKING AND UTILITARIANISM

God's purpose in the creative advance is the evocation of intensities.⁴⁸

This quotation makes very clear the teleological nature of a process system. The primordial nature of God acts in the world, luring the concreting actual occasions on to ever greater levels of harmony and intensity. These actual occasions, when they are complete, are absorbed into the consequent nature of God. Thus God, by acting in this persuasive manner in the world, lures it towards 'depth of satisfaction as an intermediate step towards the fulfilment of his own being'.⁴⁹ The consequent nature of God is

⁴⁸ PR 105.

⁴⁹ *ibid.*

thus 'ever enlarging itself' to integrate all the actual occasions that have ever existed.⁵⁰ Process thinking, then, subscribes to a contributory theory of value: all value generated by the harmony and intensity of the actual occasions contributes to God's consequent nature.

From this, certain characteristics of process ethics emerge. Since process as a metaphysical system is teleological, so also is process ethics. Ethical behaviour consciously conforms with God's aim at harmonious intensity. Thus, process ethics is consequentialist: what matters, ethically, is the production of harmony and intensity of experience. In addition, process is a maximizing ethical system. Since all value produced is absorbed into God's consequent nature - one might say that this aspect of God corresponds to the sum of all valuable experience - the more value which is generated by actual occasions, the more fulfilment is possible for God's being. The ultimate aim of ethical behaviour is maximum total value for the consequent nature of God. Of course, as Hartshorne makes clear, God's consequent nature can never be wholly fulfilled: 'It can reach no final maximum, but is endlessly capable of increase';⁵¹ it is, as Whitehead indicates, always 'incomplete'.⁵²

In possessing the characteristics of consequentialism and maximizing value, process ethics is, in structure at least, similar to many utilitarian approaches, in particular classical utilitarianism.⁵³ This is hardly surprising, since utilitarianism itself may be described as a type of process philosophy. What is important for utilitarianism is

⁵⁰ PR 349.

⁵¹ Hartshorne p.310 'The Aesthetic Matrix of Value'(AMV) *Creative Synthesis and Philosophic Method* (London:SCM 1970).

⁵² PR 345.

⁵³ Process ethics, like the majority of utilitarian systems, is totalizing, as well as maximizing. Some utilitarian systems - in particular those developed with the ethical consideration of future generations in mind - aim at highest *average*, rather than highest *total* utility overall. This is still a *maximizing* approach. Process is, however, clearly a totalizing approach, since the consequent nature of God integrates and consists of all experience. I will only be discussing similarly total approaches in this thesis.

changes in states of affairs, that is to say, the process, rather than things in themselves. This is, Bernard Williams comments, due to the consequentialist nature of utilitarianism:

I take it to be the central idea of consequentialism that the only kind of thing that has intrinsic value is states of affairs, and that anything else that has value has it because it conduces to some intrinsically valuable state of affairs.⁵⁴

It is the consequences of an action which are morally relevant, rather than intrinsic or absolute rights or wrongs which exist independently of the consequences (as in a deontological ethics). Many utilitarian systems also aim at maximizing value or utility - however it might be defined - by achieving the best balance of good consequences over bad.

Thus many utilitarian and process approaches to ethics share several crucial *methodological* characteristics: those of consequentialism and value maximization. Obviously, there are also important *metaphysical* differences, primarily that process is a theistic system. In fact, the presence of the consequent nature of God constituting the sum of experiences gives process thinking an anchor for its ethical perspective which is lacked by utilitarians, where locating a 'general good' is somewhat problematic (since there is nothing which corresponds to the sum of experience). A second metaphysical difference is the central role of the actual occasion in process thinking: human beings, and other sentient organisms, rather than being the primary individuals, are complex societies of actual occasions. Value is, then, in process thinking, focused on the actual occasions of which human beings (and, indeed, everything which exists) are composed. However, despite their deeply divergent metaphysical frameworks, process thinking and some forms of utilitarianism at least, share an ethical affinity.

⁵⁴ Bernard Williams p.83 'A Critique of Utilitarianism' in J.C.C.Smart and Bernard Williams *Utilitarianism: For and Against* (Cambridge:Cambridge University Press 1973).

Process Thinking and Mill's Utilitarianism

Mill's utilitarianism is, as is well known, based on pleasure and pain.⁵⁵ Value (which, as a consequentialist, Mill locates in 'states-of-affairs' rather than 'things-in-themselves') is experiential, relating to the states of feeling in organisms which have this capacity. Here, Mill differs from some forms of consequentialism, which are not experience-centred (for instance, that of Robin Attfield, as will become evident in the next section). Mill's locus of value in experience is, of course, congenial to the process understanding of value, as relating to the subjective feelings of concreting actual occasions. At first sight, however, Mill's focus on pleasure and pain seems very different from the process value criteria of harmony and intensity of experience.

Mill's understanding of pleasure and pain is considerably more complex than this initial comparison would suggest, and more complex too than that of his utilitarian predecessor, Bentham. Mill differentiates between different qualities of pleasure, as well as quantities of it; and these qualities closely resemble process concepts of valuable experience. As Mill comments in *Utilitarianism*:

It is indisputable that the being whose capacities of enjoyment are low, has the greatest chance of having them fully satisfied; and a highly endowed being will always feel that any happiness which he can look for, as the world is constituted, is imperfect. But he can learn to bear the imperfections, if they are at all bearable; and they will not make him

⁵⁵ An important division between utilitarians, which I do not intend to examine in detail in this thesis is that between act-utilitarians and rule-utilitarians. They differ as to how to achieve the best consequences, whether by considering the effects of each individual action or by acting according to a rule which everyone should follow in similar circumstances. Process thinking naturally tends towards act-utilitarianism rather than rule-utilitarianism. The emphasis on change and flow makes the formation of any moral rules, even those based on consequences, very difficult. The individual situation of each actual occasion as it comes to be is the focus of value. It would, nonetheless still be possible to argue for a rule-utilitarian position in process thinking, since it could be argued that the best overall consequences for the consequent nature of God could be thus achieved. There is some dispute as to whether Mill should be classified a rule- or an act-utilitarian, although this is, in essence, an anachronistic question. The former position has been argued (eg by Anthony Quinton in *Utilitarian Ethics* London: Macmillan 1973); but some evidence suggests otherwise.

envy the being who is indeed unconscious of the imperfections, but only because he feels not at all the good which those imperfections qualify. It is better to be a human being dissatisfied than a pig satisfied; better to be a Socrates dissatisfied than a fool satisfied...⁵⁶

The broadening of the concept of pleasure here in Mill brings it very near to the process idea of harmony and intensity of experience. The contentment of a pig, or of a fool, is like a harmonious experience which lacks intensity; it is of less value than an experience with a greater degree of intensity, even if it lacks the same amount of harmony. Mill also considers that value is lost if a less rich, or less intense way of life is adopted, through electing to take the 'nearer good'. This is identical to the process concept of triviality, where the most intense experience possible is not actualized, and hence generates less value than it might otherwise have done. Whitehead, for instance, comments that:

Good people of narrow sympathies are apt to be unfeeling and unprogressive, enjoying their egotistical goodness. Their case, on a higher level, is analogous to that of a man completely degraded to a hog.⁵⁷

Mill and Whitehead thus consider intense, complex experiences to be of more value than simple, trivial experiences. Mill argues for this as a matter of human preference: we would all prefer an intense, even if dissatisfying experience to a trivial, satisfying one; we would all rather be a sad Socrates than a happy fool. While issuing in the same conclusion, Whitehead's reasoning here is rather different; while it may be true that the generation of more intense experience may be preferred by human beings, its ultimate importance is the contribution which it makes to the consequent nature of God.

The similarity between Mill and Whitehead has passed largely unnoticed in process writing. Indeed, John Cobb, one of Whitehead's most widely known interpreters, attacks utilitarianism vehemently in *A Christian Natural Theology*. Equating utilitarianism, it seems, with a simple, Benthamite position, Cobb rejects its ethical approach:

⁵⁶ John Stuart Mill p.260 *Utilitarianism* (1861; Glasgow: Fontana 1979).

⁵⁷ RIM 96.

An old example [of the case against it] is that many of us would prefer to share with Socrates an experience of pain than to share with a pig the experience of contentment...Values must be correlated with reflective preferences, or assertions about them are meaningless and arbitrary.⁵⁸

In fact, Cobb is here making the same objection as Mill to Benthamite utilitarianism: Bentham's calculus of pleasure and pain is an oversimple one, failing to take into account, for instance, the more profound experiences which would be preferred after thought rather than immediate and thoughtless pleasures. Mill most definitely thinks, like Cobb, that to have more complex experience is a better state, even if this brings more dissatisfaction.⁵⁹ Paul Custodio Bube, in his consideration of value in Cobb, comments that Cobb is 'ironically borrowing from John Stuart Mill's version of hedonism' by using Mill's very example of a pig and Socrates.⁶⁰ But if Cobb is borrowing this example, he is doing so unconsciously (he does not appear to realize that this example comes from Mill). The real irony is that, despite his attack on utilitarianism, by a different system, Cobb has come up with something very close to it.

The similarity of process thinking - in particular of Hartshorne's approach - to Mill's understanding of pleasure and pain has been argued by John Moskop and stimulated a response by Thomas Nairn.⁶¹ Their exchange is of considerable interest to this study.

Moskop likens process thinking to Mill's utilitarianism in a broader context than purely that of his complex understanding of the qualities of pleasure. He suggests five key

⁵⁸ ACNT 101.

⁵⁹ John Stuart Mill p.260 *Utilitarianism* op.cit.

⁶⁰ Paul Custodio Bube p.47 *Ethics in John Cobb's Process Theology* (Scholar's Press, Atlanta, Georgia: The American Academy of Religion Series No.62 1988).

⁶¹ John Moskop 'Mill and Hartshorne' *Process Studies* 10 no.1 1980 p.18-33; Thomas Nairn 'Hartshorne and Utilitarianism: A Response to Moskop' *Process Studies* 17 no.3 1988. The similarity is also noticed in passing by Randall Morris, who comments 'Morality consists in the maximization of experience. Each philosopher provides his own version of the principle of utility' Morris, p.124-126 op.cit.

theses on which Mill and Hartshorne agree. Three of these: that the aim of ethical behaviour is to further the good; that the good is experiential and that there are morally significant differences of quality between experiences, have already been proposed. A fourth, that the experience of all sentient beings is morally considerable, will be considered in the following section. His fifth thesis, however, seems to be a profound misunderstanding of the process position, and perhaps represents an attempt to read Hartshorne through inappropriately Mill-coloured spectacles. Moskop's thesis here reads:

experience is valuable in so far as it exhibits a balance between two poles (which Mill calls 'tranquillity' and 'excitement' and Hartshorne calls 'harmony' and 'intensity').⁶²

Yet tranquillity and excitement for Mill are not the same as intensity and harmony for Hartshorne. Tranquillity and excitement are, first, of limited significance to Mill, being merely one of the ways in which he elaborates the concepts of pain and pleasure. Harmony and intensity are, however, of crucial importance to process thinking. More importantly, Moskop accurately describes tranquillity and excitement as 'poles' for Mill: people oscillate between them, and one is a preparation for the other. A pleasurable life would be composed from both tranquil and exciting experiences. But it is clear that they are mutually *preclusive* experiences. It is impossible to be both tranquil and excited simultaneously. The two are at different ends of one scale. However, this is not true of harmony and intensity in process thought. In the papers which Moskop cites,⁶³ as he points out, Hartshorne discusses the nature of *contrast* and intensity, and even goes so far as to say: 'It is an aesthetic principle that intensity of experience depends on contrast'.⁶⁴ But Moskop seems to have confused *contrast* with *conflict*. It would only be the case that intensity is on the other end of the scale from harmony if intensity *meant* conflict. But intensity should be, as Whitehead makes clear, an ordered state not

⁶² Moskop p.18 op.cit.

⁶³ AMV and 'Beyond Enlightened Self-Interest: A Metaphysics of Ethics' (BSI) *Ethics* 84 no.3 April 1974 210-216.

⁶⁴ BSI 215.

one of conflict.⁶⁵ It is *possible* to have an intense and harmonious experience at the same time, although this is uncommon because a greater capacity for intensity makes conflict more likely. But it does not *necessitate* it. It is perfectly *possible* for Socrates to be satisfied and hence to have an intense and harmonious experience which would be of more value than an intense but non-harmonious experience. The aim, in process thinking, is to maximize both harmony and intensity as much as possible. Thus, Moskop is mistaken to argue that both Mill and Hartshorne 'recognize the importance of a balance between simple, harmonious experiences (tranquillity) and more complex or intense experiences (excitement)'.⁶⁶ In fact, only Mill recognizes this balance. For Hartshorne, the 'balance' is that of an experience which neither has intensity but lacks harmony (the sad Socrates) nor one which has harmony but lacks intensity (the happy fool). The more intensely harmonious, or harmoniously intense, an experience is, the better. Certainly, there is no virtue for Hartshorne in oscillating between the two positions.

Moskop also comments that excitement and tranquillity are not used by Mill as synonyms for higher and lower pleasures. Yet a process thinker *does* consider that a more intense experience is a higher one. A very intense experience with very little harmony is valued far more than a very harmonious experience with very little intensity.⁶⁷ So an unhappy Socrates (intense but not harmonious experience) is of much more value than a happy pig (harmonious, but not intense experience). Thus they do not act as value balances for one another in the way that tranquillity and excitement do.

While this comparison between Mill and Hartshorne pushes the resemblance between

⁶⁵ PR 115.

⁶⁶ Moskop p.23 op.cit.

⁶⁷ In opposition to this, Cobb does say that '...great strength accompanied by serious discord may be inferior to a simple and placid harmony'. ACNT 102. This is, however not backed up elsewhere in his own work, or in other process thinkers where a discordant intense experience seems to be of more value than a trivial harmonious one. Indeed, this appears to be the whole point of the Socrates/pig analogy.

them too far, it does not destroy Moskop's underlying contention. In many respects, both of structure and of content, process ethical thinking does resemble the utilitarianism of John Stuart Mill.

Nairn and the Problem of Justice

Thomas Nairn, in his article responding to Moskop's argument, makes several criticisms of the view that process thinking is closely related to Mill, or indeed to hedonistic utilitarianism in general. His initial remarks concern the metaphysical divide between process thinking and utilitarianism - in particular, the theistic nature of the process system. However, as we have seen, the acknowledgement of a different metaphysical foundation does not mean that there can be no ethical similarity between the two positions.

Nairn's more substantial criticism concerns the question of justice in process and utilitarian ethics. His fundamental argument is that, if process ethics behave like utilitarianism, and God is at the root of ethics, then God must be behaving, or wanting others to behave, in a utilitarian way. This, for Nairn, is a violation of his own, as well as Hartshorne's concept of God. He comments: 'An unjust God, however,...would be unloving, and therefore would not be God at all'.⁶⁸

Fundamental to this criticism is Nairn's belief that utilitarianism is an unjust ethical system. If God were to behave in the way in which Moskop describes - a way akin to utilitarianism - then God would be unjust.⁶⁹ Since God cannot be unjust, either Moskop's interpretation of Hartshorne, or Hartshorne himself, must be wrong. Nairn chooses to defend Hartshorne against Moskop, and to argue therefore that process ethics does not support a utilitarian position.

⁶⁸ Nairn, op.cit. p.175.

⁶⁹ Mill himself, of course, deals with just this problem and argues that a moral God 'must fulfil the requirements of utility to a supreme degree'. Mill, p.273 op.cit.

Lying behind this accusation that utilitarianism is unjust is Nairn's understanding of utilitarianism as a maximizing value system. We have already seen that process thinking can be accurately so characterized. Some philosophers have expressed doubts as to whether Mill himself intended to be thus understood. Sprigge, for instance, suggests that, by distinguishing different qualities of pleasure and pain, Mill may have understood them to be incommensurable.⁷⁰ Such value incommensurability could make summing pleasures impossible. If this is a correct interpretation of Mill, then he differs in this respect from process thinking, and indeed from most utilitarian approaches, which do aim at the best overall consequences or production of maximum utility, (however utility may be understood). It is this very aggregative, maximizing nature of utilitarianism which leaves it open to the criticism that it is unjust. Since process ethics adopt the same maximizing methodology, one would expect process thinking to be vulnerable to the same justice critique. After all, as Hartshorne comments: 'to be ethical is to seek aesthetic optimization of experience for the community'.⁷¹

It is essential to have some kind of definition of what is meant by justice in this context. In general, justice concerns that which is fair or impartial, usually when making decisions about the treatment of individuals, or arbitrating in a situation of conflict. However, when the 'problem of justice' in both utilitarian and process thought is being considered, a slightly more precise understanding is usually in mind: that of the limits of what one may do to someone else, the issue of personal inviolability, equity and rights. Bernard Williams describes justice in this sense as 'respect for the integrity of the individual'.⁷² Both process thinkers and utilitarians have been accused of failing to respect this integrity and putting no ultimate limits on what may be done to create more utility or harmony and intensity of experience. J.L.Mackie, for instance, argues that:

⁷⁰ T.L.S.Sprigge p.18 *The Rational Foundations of Ethics* (1988; London: Routledge 1990).

⁷¹ BSI 214.

⁷² Smart and Williams p.108 op.cit.

On a utilitarian view, transferring a satisfaction from one person to another, while preserving its magnitude, makes no morally significant difference.⁷³

In other words, so long as the same amount of pleasure⁷⁴ is generated, the *distribution* is immaterial. Thus an action may cause some individuals acute suffering, but if their suffering is outweighed by the much increased happiness of others, then the action is morally justifiable - indeed, desirable. Similarly, it could be argued that in a process ethical system an action which trivializes or deharmonizes the experience of some individuals, but which, overall, increases harmonious and intense total experience is morally desirable. Yet such behaviour appears to be unjust. In other words, utilitarianism and process thought can allow, or even provide a moral imperative for, acts which seem to be unjust or reprehensible to someone who accepts an idea of personal inviolability. Tom Regan, a critic of utilitarianism, argues that utilitarianism treats individuals as:

mere receptacles of what has positive value (pleasure) or negative value (pain). They have no value of their own; what has value is what they contain.⁷⁵

As an analogy for this, he describes individual organisms as cups, containing either sweet or bitter liquids (pleasures and pains). The aim of moral decisions must be to achieve the best aggregative balance of sweet and bitter between the cups, involving redistribution or the breaking of cups if necessary. The cups in themselves are not of value; the value is in the balance of sweet and bitter that they contain. What matters is the best possible distribution of the liquids between the cups - even if some end up without any liquid at all.

⁷³ J.L.Mackie 'Rights, Utility and Universalization' R.G.Frey (ed.) *Utility and Rights* (Oxford: Basil Blackwell 1985).

⁷⁴ Pleasure should be taken here in the broadest possible sense, that is, to incorporate satisfaction.

⁷⁵ Tom Regan p.209 *The Case for Animal Rights (CAR)* (London: Routledge 1984).

This picture also gives a powerful expression of process ethical thought. However, while in Regan's terms, utilitarians accept the existence of cups, but do not value them, process thought would not accept the existence of the cups at all. There are no individuals outside their experiences who feel pleasures and pains or preference satisfactions; there are only the experiences themselves, grouped into societies of actual occasions, but with no sort of cup containing them. The individual is the sum of his/her experiences, and although in humans and some other animals there is a unifying centre, it is the individual actual occasions constituting them which ultimately have value.

This creates a more fluid approach than even utilitarianism can countenance. The idea of the discrete individual is secondary to the interrelating processes which constitute existence. Max Stackhouse, for instance, describes process as a philosophy where concrete entities are dissolved into a web of relationships.⁷⁶ As he goes on to comment, this throws up great problems for process thought:

There is a 'thinginess' about life that does not easily dissolve into its relationships; there is a reality about a self - a Socrates or Jesus, a John Smith or Jane Doe - that is not easily accounted for by appealing to a "synthesis of a multiplicity of relations"⁷⁷

It is this lack of 'thinginess', which is the fundamental cause of unease concerning process attitudes to justice. As Henry Clark argues, process thought, on this count, becomes unable to 'productively address the issues of personal inviolability, equity and rights'.⁷⁸

Process thinkers have attempted to defend themselves against this attack. Paul

⁷⁶ The parallels between process philosophy and so-called deep ecology are very striking at this point. This will be further examined in Chapter 4.

⁷⁷ Max Stackhouse p.108 'The Perils of Process: A Response to Sturm' in Cobb and Schroeder (eds.) *Process Philosophy and Social Thought* (Chicago: Centre for the Scientific Study of Religion 1981).

⁷⁸ Henry W. Clark p.136 'Process Thought and Justice' Cobb and Schroeder op.cit.

Custodio Bube, for example, in his consideration of the ethics of John Cobb, argues that process thinkers do have a concept of rights and a belief in personal inviolability.⁷⁹ In support of this contention, he turns to Cobb's conception of the soul: the close unity of the actual occasions composing the human individual. This uniquely integrated soul, Bube claims, provides a process basis for human rights. A human is irreplaceable;⁸⁰ no other human individual can have identical rich experience, and therefore each human is more than just part of a wider web of experiences. Bube thus describes human individuals as inviolable, although he later qualifies this by commenting that Cobb himself would not consider inviolability to be absolute.⁸¹ (In fact, to my knowledge, Cobb does not use the word at all).⁸²

There is little to substantiate Bube's claim. The unity of the human soul, Bube says, comes from its high degree of order and originality. This could equally well be expressed as its potential for rich experience, since it is composed from ordered (harmonious) originality (which is significant not in itself, but because it allows the creation of new intensities, rather than the repetition of past experiences). In other words, the individual human soul is important because of the potential experiences associated with it, rather than the experience being important because of the individual soul. For process thinkers, human lives are therefore usually inviolable because of the harmony and intensity, or richness, of experience of which the individual is capable. However, in a situation where violating a human life would maximize total richness of experience, it is the richness of experience, rather than the inviolability of life, which has priority. This seems to be a clear ethical principle of process thinking, and Bube, by repeatedly using language to suggest the opposite, obscures the issue. Even Bube repeats that the realization of maximal beauty is the aim of God, and thus should be the aim of all life. This statement is without caveat, and clearly stands in tension with inviolability.

⁷⁹ Bube, p.119 op.cit.

⁸⁰ The question of replaceability is one to which I shall return in the next section.

⁸¹ Bube p.139 op.cit.

⁸² Cobb also explicitly denies that human life is sacred or of infinite value:p.166 *The Liberation of Life (LL)* op.cit.

While Bube's use of language is ambiguous, that of Cobb, about whom he is writing, is much more unequivocal. Cobb also speaks of rights, but rejects any 'absolutist arguments' for them.⁸³ He concludes: 'There are no absolutes here. There is the general principle - to act so as to maximize value in general...',⁸⁴ and again: 'The ethical requirement is that we provide circumstances which promote richness of feeling'.⁸⁵

Cobb repeatedly asserts the primacy of maximizing rich (that is, harmonious and intense) experience as the fundamental ethical principle. Of course, this usually corresponds with what is best for an individual human being. But where there is conflict, it is the promotion of richness of experience at which, according to process thinking, ethical decisions should aim. In the face of this, Bube's argument that the unity of the human soul is such that it is inviolable is little supported in the rest of process writing.

We can now return to Nairn's contention that Hartshorne's process ethics cannot be utilitarian, since this would make God unjust. His statement in itself begs a question, since Nairn is working with the dogmatic assumption - from outside the process system - that God must be just in the sense of protecting personal inviolability and rights. Coming with this assumption, if he wishes to defend Hartshorne as a theologian, he has to assert that process ethics does not resemble utilitarianism and look for evidence for this. In doing so, he sidesteps the real ethical questions, and charges Moskop with ignoring or even opposing views with which Moskop does not in fact quarrel. For instance, Moskop has no argument with Nairn over the location of value in God, nor with the idea that God suffers with the occasions that make up the world and appreciates all individuals. It is, in fact, Nairn who avoids confronting the important ethical issues

⁸³ LL 175. Rights language is frequently used in process ethical writing, particularly among those who write on 'animal rights'. However, to anticipate some of the conclusions of chapter 2, rights can always be overridden if harmony and intensity of experience are thereby increased. This echoes Mill's understanding of rights, where rights are based on utility. Mill p.309 op.cit.

⁸⁴ LL 174.

⁸⁵ LL 205.

which are raised by his own work.

Nairn himself argues that 'the aim of ethics is not the balancing of interests, but rather the creating of a more harmonious world as a gift for God'.⁸⁶ Although this is a rather partial definition (since Nairn has neglected to mention intensity, which is more significant) it is essentially a process one, and one with which Moskop would not quibble. There has been no suggestion that the purpose of process ethics is to balance interests; this is not essentially a process position at all. Nairn's alternative, 'to create a more harmonious world', includes the maximizing element 'more', and is far closer to a process ethic. Moskop's concern, however, is in how this rather vague aim translates in practice, that is to say, when conflicts arise, as they inevitably do in a world where there is freedom. Nairn accepts that such conflicts requiring ethical solutions must happen.⁸⁷ At this point he introduces Hartshorne's concept of *tragedy* (also used by Bube). It is not God's will that any individual should suffer, and when they do, it is a tragedy for the individual, and also for God, who shares in the suffering. Again, this seems to be a perspective that Moskop would not contest. That God shares in suffering, and that suffering is tragic, is a contention put forward by all process theologians (and a large number of others besides). However, this does not help in answering the question: How should one behave morally in a situation of conflict? How should one make ethical decisions? The only answer to this question which can be drawn from Nairn's paper is that since God 'is not indifferent to any suffering but in fact shares in all' one should act so as to minimize suffering i.e. in a directly (negative) utilitarian way!

At root, the problem seems to be Nairn's much stronger understanding of the centrality of the individual human being (or other organism) than that which process thinking can countenance. It is not that God wishes the weal of one and the woe of another, but rather that God wishes to generate maximum value or richness of experience from the inevitable conflicts of existence, and that ethical behaviour is action according to this

⁸⁶ Nairn, op.cit. p.173.

⁸⁷ Nairn, op.cit. p.175.

end. If this means woe to some actual occasions or societies of actual occasions, overall it is still for the best - an outcome which again sounds utilitarian. Nairn's argument, while developing the theistic element, has failed to change the basic conclusion: that process ethics behaves in an aggregative, maximizing way, and in this respect resembles many utilitarian approaches; that both are vulnerable to a justice critique; that the process understanding of an individual is even less well defined than that of utilitarianism.

One further important point remains to be made here about the human (or animal) individual. While this analysis may undercut the substantiality of organismic individuality, it is not intended to deny the importance of individuals such as human beings in the process system. Human beings, and some other animals, are described as 'monarchies' in a process system: that is to say, they have a dominant or presiding actual occasion which generates a degree of unity and control among the actual occasions which actualize within its sphere of influence. This contrasts with other societies of actual occasions, 'democracies', which lack such co-ordination and which have no controlling centre. The closeness and co-operation of monarchical societies allows for the generation of much more valuable experience than could be a characteristic of the more disparate democracy or possible for the individual actual occasion if it were outside the society. In this sense, the whole is more than the sum of its parts, since as a whole it is capable of generating far more rich experience than its parts. However, this does not mean that a whole, such as a human being, is more valuable than its experiences: that is to say, there is nothing outside those experiences, no cup as Regan would describe it. Nonetheless, monarchical societies - human beings, and some higher animals - generate the most harmonious and intense, rich and valuable experience known in the Universe (other than that of the consequent nature of God). These monarchical societies of actual occasions are thus the most important components of the process system. It is for this reason that I have called process thinking an *individual* consequentialist system: its focus is on the experience of individual organisms. This is not intended to be an absolute label; indeed, process thinking, in the context of environmental ethics as will become clear later, is less individualist in focus than the (broadly) utilitarian approaches to be considered in the next section. However, it stands

in contrast with the collective consequentialist ethical systems to be considered in Chapter 4.

In summary, then, despite metaphysical dissonance, process ethics is consequentialist, maximizing and totalizing and to this extent resembles many utilitarian approaches. As with Mill, value is exclusively experiential and supremely located in complexity and profundity. Thus the quality of experience, as well as its quantity, is of significance, although in process thinking this does not make different experiences incommensurable. Individual higher animals, in both hedonistic utilitarianism and process thinking are the primary generators of such value. The similarities of process thinking to utilitarianism open process ethics to some traditional criticisms of utilitarianism: in particular to the charge of injustice. In the less traditional field of environmental ethics, however, new problems with the process position arise, which I will begin to examine in the following section.

INDIVIDUAL CONSEQUENTIALISM AND NONHUMANS

From Bentham to the present day, utilitarian philosophers have, to a greater or lesser degree, extended ethical concern to nonhuman animals. It was Bentham, after all, who wrote the famous words:

It may one day come to be recognised that the number of the legs, the villosity of the skin, or the termination of the *os sacrum* are reasons equally insufficient for abandoning a sensitive being to the same fate... The question is not, Can they *reason*? nor Can they *talk*? but, *Can they suffer?*⁸⁸

Admittedly, in the past, many hedonistic utilitarian philosophers have omitted the pleasures and pains of animals. That this cannot be logically supported is increasingly acknowledged even by utilitarian philosophers who formerly ignored the position of

⁸⁸ Jeremy Bentham p.411-2 Ch.17 'An Introduction to the Principles of Morals and Legislation' William Hamson (ed.) 1823 ed. *A Fragment on Government and an Introduction to The Principles of Morals and Legislation* (Oxford: Basil Blackwell 1943).

nonhuman animals. J.C.C. Smart, for example, who previously allowed nonhuman animals only parenthetical moral worth⁸⁹ has, subsequently revised his views:

I now think that the 'perhaps' of all sentient beings should be much more uncompromising. It is a merit of utilitarianism, with its stress on happiness and unhappiness, that lower animals must be considered along with human beings so that they are not debarred from full and direct consideration because they are not 'rational'.⁹⁰

Alongside hedonistic utilitarianism, such as that of Bentham and Smart, other individual consequentialist approaches have also insisted that the consequences of human actions for nonhumans should be taken into account when making ethical decisions. In this section, three such approaches will be examined: those of Peter Singer, Donald VanDe Veer and Robin Attfield. Process thinking will be compared to these approaches, with a view to clarifying it and its accompanying strengths and weaknesses.

Hedonistic and Preference Utilitarianism: Peter Singer

Peter Singer's *Animal Liberation: Towards an End to Man's Inhumanity to Animals* (London: Jonathan Cape 1976) was his initial presentation of a hedonistic utilitarian position advocating the inclusion of nonhuman animals. This initial view was subsequently developed in a number of articles, most prominently in his *Practical Ethics* (OUP 1979) and his article 'Killing Humans and Killing Animals' *Inquiry* 22 1979. His developed position is a (perhaps unhappy) coalition of hedonistic and preference utilitarianism, which can be described as a *three-tier*⁹¹ ethical system.

⁸⁹ 'the only reason for performing an action A rather than alternative action B is that doing A will make mankind (or, perhaps, all sentient beings) happier than will doing B.' Smart and Williams op.cit. p.30.

⁹⁰ J.C.C.Smart p.283 'Utilitarianism and Generalized Benevolence' *Essays Metaphysical and Moral* (Oxford: Basil Blackwell 1987).

⁹¹ Attfield calls this a 'two-level' theory p.171 *Ethics of Environmental Concern (EEC)* (Oxford: Basil Blackwell 1983); but I wish to draw attention to the third level, or tier, because of its contrast with process thinking - and, indeed, with Attfield himself.

Fundamental to Singer's hedonistic utilitarianism, as indeed it must be, is the capacity of an organism to have subjective experience. It is this capacity which allows it to feel pleasure or pain, and hence to have valuable experiences. Value, or at least intrinsic value, is identified with pleasurable subjective experiences; having such experiences means that an organism should be taken into account when moral decisions are being made. In Singer's terms, the organism is 'morally considerable'. The capacity to have painful or pleasurable experiences also means that an organism has interests; such a capacity is in fact a 'prerequisite for having interests at all'.⁹² An organism which can feel pain has an interest in avoiding it; an organism which can feel pleasure has an interest in sustaining or increasing it.

This presentation of utilitarianism in terms of interests, rather than directly as pleasures and pains, broadens Singer's scope. He can give consideration to interests which would not normally fall directly under the narrow categories of simple pleasure and pain. However, as he points out, this does not substantially change his position. Mill's broad sense of pleasure would encompass most of what Singer wishes to consider by interests.⁹³

Only those organisms which can have subjective experiences, and hence can have interests, are, for Singer, morally considerable. Where 'a being is not capable of suffering, or of enjoyment, there is nothing to be taken into account'.⁹⁴ This generates a boundary, beyond which moral behaviour is inapplicable. Into this category fall mollusca, insects, plants and nonliving objects, natural or artificial. They have no experiences, and hence no interests. This constitutes the 'third tier' in Singer's ethical system: those individuals and objects which lack moral considerability.

⁹² Singer p.27 *Animal Liberation (AL)* (1976; St Albans: Paladin Books, Granada 1977).

⁹³ Singer p.13 *Practical Ethics* (Cambridge: Cambridge University Press 1979)

⁹⁴ AL 175.

In *Animal Liberation* the only boundary which Singer created in his system was that between morally considerable, sentient organisms and morally inconsiderable, insentient organisms and objects. All morally considerable animals, including humans, have, according to Singer, an equal interest in avoiding pain and in generating pleasure:

The interests of every being affected by an action are to be taken into account, and given the same weight as the like interests of any other being.⁹⁵

However, even on Singer's earlier and simpler account, this does not mean that if, for example, an amount of suffering must be inflicted on either a nonhuman animal or a human being, there is no moral difference between the two. While this may be the case inasmuch as the suffering alone is concerned, other interests may be affected. Human beings have extra interests not possessed by nonhuman animals which would make the infliction of the pain on a human being worse. A human may, for instance, anticipate pain, or subsequently remember it vividly, which means that the same amount of pain may generate greater bad experience for a human being than a nonhuman animal. Similarly, other human beings, or human society as a whole, may be affected by human suffering in a way which would not be the case for a nonhuman animal. Thus it may be preferable, overall, to inflict suffering on a nonhuman animal than on an adult human being. Given these conditions, however, a human being with a severe mental handicap, or a baby, may not have the same 'protection by side-effects' (such as anticipation or memory) as an adult human being. It would be preferable to inflict suffering on a baby than an adult, and indeed, there are circumstances where it would be better to inflict suffering on a baby than an adult nonhuman mammal, such as a chimpanzee. It is the *interests* of the organism which are morally relevant, rather than its species. This allows Singer to avoid being charged with the word he popularized himself: speciesism.

However, Singer later acknowledges that this position, being a kind of expanded classical hedonistic utilitarian one, is seriously flawed. Hedonistic utilitarianism focuses on the value of experiences, rather than on the organism which has them. The aim of

⁹⁵ AL 25.

ethical behaviour is to maximize pleasurable experience. This not only has the consequence, as we saw earlier, of ignoring the distribution of such experiences; it also carries the suggestion that if an organism can be painlessly killed (so as not to produce painful experience) and replaced, by an organism that would not otherwise have existed, with the same or greater level of pleasurable experience, this would be morally acceptable. Thus hedonistic utilitarianism seems to support a 'replaceability' hypothesis, where organisms can be substituted for one another. Human beings are not excluded from this position, although possible negative 'side-effects' are greatest in the human case (such as anticipation, grief and disturbance in the community which can generate offsetting negative experiences). But this is by no means guaranteed.

As Singer realizes, his interest utilitarianism, based very heavily on pleasurable and painful experience, is also open to this interpretation. His awareness of the problem of 'replaceability' leads him to adopt a form of preference utilitarianism, which he 'adds-on' to his hedonistic utilitarianism.⁹⁶ Thus, in more recent writing, Singer divides the 'morally considerable' into two groups: the conscious and the self-conscious. The conscious (the second tier) are organisms which have pleasurable and painful experiences, but have no self-awareness, no conception of themselves as persisting into the future, and hence no preference to go on living. They are purely the sums of their experiences:

This kind of being is, in a sense, impersonal...in killing it, one does it no personal wrong, although one does reduce the quantity of happiness in the universe. But this wrong, if it is wrong, can be counterbalanced by bringing into existence a similar being which will live an equally happy life.⁹⁷

Thus they are replaceable; as Frey puts it, they can be replenished, as a glass of water, once drunk, can be refilled.⁹⁸

⁹⁶ Frey calls this, rather insultingly, the 'preference utilitarian hat in Singer's cupboard' p.162 R.G.Frey *Rights, Killing and Suffering* (Oxford: Basil Blackwell 1983).

⁹⁷ Singer p.102 *Practical Ethics* op.cit.

⁹⁸ Frey p.161 op.cit.

This is not the case with the first tier, or 'self-conscious' organisms. Self-conscious organisms have conceptions of themselves as individuals who endure through time. They have desires and preferences about the future, primarily the preference to go on living. These preferences are morally significant in preference utilitarianism, which:

...takes into account the preferences of all affected by an action and weighs them according to the strength of preference under certain conditions of knowledge and reflection. Preference utilitarians count the killing of a being with a preference for continued life as worse than the killing of a being with no such preference.⁹⁹

Thus preference utilitarianism acts, for Singer, as a kind of ringfence to guard self-conscious organisms - normal adult human beings, and adult 'higher' mammals such as primates and whales - against painless destruction and replacement. Their awareness of their own individuality and their preference to go on living gives them a moral significance not available to those who are sentient, but not self-conscious.

Singer has developed a hybrid utilitarianism which provides different levels of moral considerability for different kinds of sentient organisms. This assists him in making ethical decisions where interests conflict. The problem of resolving conflicts also occupies VanDe Veer.

Two-Factor Egalitarianism: Donald VanDe Veer

Both stimulated and concerned by Singer's account in *Animal Liberation*, VanDe Veer attempted to develop a more discriminating and detailed account of the relative weighting of human and nonhuman animals when making moral decisions - which he calls a 'theory of interspecific justice'.¹⁰⁰ Alarmed both by accounts that failed to take nonhuman animals into consideration at all, and equally by those which claimed to be strongly egalitarian, VanDe Veer proposed a kind of middle way, which he called 'Two-Factor Egalitarianism'.

⁹⁹ Peter Singer p.152 'Killing Humans and Killing Animals' op.cit.

¹⁰⁰ Donald VanDe Veer p.52 'Interspecific Justice' *Inquiry* 22 1979.

Like Singer, VanDe Veer's position is not far removed from classical hedonistic utilitarianism. The ability to feel pleasure or pain and hence to have interests gives an animal moral considerability. The difficulty, however, is to make decisions when the interests of different sentient individuals, in particular human and nonhuman animals, conflict. In contrast with Singer, however, VanDe Veer does not turn to the problem of painless killing and replaceability, and adopt a principle of adjudication based on whether or not sentient animals have preferences. Indeed, VanDe Veer misses the force of this difficulty, commenting that 'generally, when it is in some creature's interest not to suffer, it is also in its interest not to die (and hence not to be killed.)'.¹⁰¹ This assumption, as was clear from Singer's account, is by no means a secure one.

VanDe Veer instead develops a discriminatory principle based on 'psychological' or 'mental' capacities. Thus although like Singer, VanDe Veer has a relatively clear demarcation of moral considerability (the ability to feel pleasure or pain) he does not have two clear categories above this, but rather a grading of superior and inferior psychological capacities.

Alongside this discriminatory principle, VanDe Veer also distinguishes between different categories of interests: basic, serious and peripheral. A creature has a 'basic' interest in something which is essential for its survival, a 'serious' interest in something which 'although it can survive without it, is difficult or costly (to its wellbeing) to do so' and a 'peripheral' interest in something which it is of only mild significance to its welfare.¹⁰²

Thus, VanDe Veer grades both organisms and interests. The more serious the interest and the more psychologically complex the organism, the stronger the positive weighting. This leads to several clear-cut conclusions. If, for instance, conflicting interests are of equal weight, the psychologically more complex organism takes priority. A basic interest will always trump a peripheral interest, however psychologically complex the

¹⁰¹ *ibid.*

¹⁰² VanDe Veer p.56 *op.cit.*

organism with the peripheral interest may be. However, the situation is less straightforward where the serious interest of a psychologically superior organism conflicts with the basic interest of a less complex one. Under such circumstances, VanDe Veer thinks that the psychologically more complex organism should have priority, and the basic interest should be sacrificed to the serious one.

The aim of VanDe Veer's discriminatory principles - as Peter Singer's - is to achieve maximum total utility.¹⁰³ The subordination of peripheral to basic interests and of psychologically inferior to psychologically superior organisms is aimed at achieving this end. The more psychologically sophisticated an animal, according to VanDe Veer, the better the experience produced; the more basic the interest, the more satisfaction in having it met. Failure to acknowledge VanDe Veer's principles, then, at least in a broad sense, will result in a loss of total utility. If one were to be, in VanDe Veer's terms, a 'radical speciesist', holding it to be morally acceptable to inflict suffering on nonhuman animals for a trifling reason, a loss in total utility would result. The small gain in human utility would be vastly outweighed by the loss to suffering nonhuman animals. Similarly, the 'species egalitarian' position which would treat members of all species equally, 'blatantly ignores relevant differences' and by doing so fails to maximize the utility which would be gained by a positive weighting to the psychologically more complex.¹⁰⁴

Thus, VanDe Veer elaborates a position in many essentials similar to that of Singer. Unlike Singer, however, he integrates the two tiers of moral considerability into one scale of psychological complexity and categorizes interests into different degrees of significance. He thus provides a more detailed account of the prioritization involved in making moral decisions. In this respect, Attfield is even more meticulous.

¹⁰³ VanDe Veer p.59 op.cit.

¹⁰⁴ VanDe Veer p.57 op.cit.

Robin Attfield: Practice-Consequentialism

Attfield acknowledges a considerable philosophical debt both to Singer and to VanDe Veer. This debt is, however, more obvious in his earlier book *The Ethics of Environmental Concern* than in his later articles and *A Theory of Value and Obligation* (Croom Helm 1987). In some respects Attfield also resembles the individualist deontological philosophers who will be considered in the next chapter. Indeed, occasionally, especially in his earlier work, he sounds confusingly like them. This is particularly acute in his understanding of intrinsic value.

As was made clear earlier in this chapter, consequentialist ethical systems consider it to be 'states of affairs' rather than things or organisms which have intrinsic value. Ethical behaviour is aimed at securing the best state of affairs, whatever the 'best' may be interpreted as in a particular system. Attfield, however, in *The Ethics of Environmental Concern* frequently claims that it is organisms which have intrinsic value. This is a view alien to consequentialist ethics, a point noticed by Paul Taylor:

Attfield's arguments are marred by a failure to distinguish the concept of 'intrinsic value' from 'inherent worth'. The utilitarianism Attfield espouses is not seen to be logically incompatible with the principle that each organism has inherent worth as an individual, a principle he also appears to hold.¹⁰⁵

Attfield seems more aware of this difficulty in his later work, where he stresses that it is states of affairs rather than organisms which have intrinsic value:

I in fact hold that it is not objects as such which are of intrinsic value, but rather their states, activities and/or experiences. Beings can therefore

¹⁰⁵ Paul Taylor p.270 *Respect for Nature (RN)* (Princeton: Princeton University Press 1986). The force of this comment is lost without an understanding of Taylor's definitions of 'intrinsic value' and 'inherent worth', which I shall discuss at more length in the next chapter. In summary, intrinsic value is, for Taylor, experienced value, a positive experience; inherent worth is unexperienced value, ascribed to any living organism which has a good of its own.

be *bearers* of intrinsic value.¹⁰⁶ (Italics mine.)

What state of affairs does Attfield consider to be intrinsically valuable? Here he diverges significantly from both Singer and VanDe Veer, and indeed from hedonistic utilitarianism in general.¹⁰⁷ For both Singer and VanDe Veer, intrinsic value is experiential. The ability to experience is the prerequisite for having interests or preferences, and hence for moral considerability.

However, Attfield severs this exclusive link between experience and value, an uncoupling of central importance in environmental ethics. He extends moral considerability beyond the boundary of sentience or experience, thus rendering some items in Singer's 'third tier' morally considerable. Hedonistic utilitarianism is rejected as being 'severely impoverished and defective'.¹⁰⁸ Attfield argues that intrinsic value is located in the state of flourishing, of exercising the basic capacities of a species, and in order to do this, of having basic needs met. An organism which has the capacity to develop and flourish has an interest in doing so.

It is clear from this description that such categories do not apply only to human beings or even to sentient organisms, but to all organisms that can be said to have a wellbeing

¹⁰⁶ Robin Attfield p.63 'Deep Ecology and Intrinsic Value: A Reply to Andrew Dobson' *Cogito* Spring 1990.

¹⁰⁷ Sumner, in his review of EEC comments that Attfield's position is a 'slight modification' of classical utilitarianism, rather than a divergence from it. Like classical utilitarianism, Sumner argues, Attfield is individual-based and value-maximizing. Although the realization of capacities advocated by Attfield is not the same as maximizing greatest happiness, Sumner suggests that Mill's more sophisticated understanding of happiness 'consists of something like the exercise of essential human powers'. Attfield, replying to Sumner, accepts that this may be so, but comments: 'It seems better to make this explicit in a value theory rather than to rely on its tacit inclusion'. Wayne Sumner 'Review of Attfield' *Environmental Ethics* 8 no.1 Spring 1986 p.77-82; Attfield p.201 EEC 2nd Ed. (not in 1st Ed.) (Athens: University of Georgia Press 1991).

¹⁰⁸ Robin Attfield p.32 *A Theory of Value and Obligation (TVO)* op.cit.

- that is, all living organisms.¹⁰⁹ All organisms, regardless of their sentience, can be bearers of intrinsic value. Plants, insects and bacteria, for instance, have a wellbeing and can flourish. Inanimate objects, however, which have none of these capacities, cannot generate intrinsic value and are still morally inconsiderable.

This position makes the development of interspecific priority principles vital. The greater the number of organisms admitted to moral considerability, the greater the potential for conflict and the need, in a consequentialist system, to establish which behaviour will produce the best overall consequences.

Attfield, especially in *The Ethics of Environmental Concern*, is clearly impressed by VanDe Veer's Two-Factor Egalitarianism. VanDe Veer's failure to take insentient organisms into account, and his willingness to sacrifice basic interests to serious ones where psychologically more complex organisms are concerned is, however, questioned. Attfield initially concludes that:

...it has to be understood that creatures with capacities for more valuable forms of life receive priority over others only where the ability to exercise those capacities is genuinely at stake.¹¹⁰

This would, Attfield argues, prevent the argument that eating meat from factory farms is a case where a serious interest of a psychologically superior organism conflicts with a basic interest of a psychologically inferior organism, and hence takes priority. Not eating meat (unless it is a necessity for survival) does not threaten the capacities of 'superior' organisms and hence cannot be justified on this principle.

In *A Theory of Value and Obligation*, Attfield develops a much more sophisticated set of priority principles which are intended to govern interhuman relationships, as well as

¹⁰⁹ VanDe Veer hints at such a position, but fails to develop it, by commenting that even protozoa have a wellbeing and something which is in their interest. VanDe Veer p.58 op.cit.

¹¹⁰ EEC 177.

human/nonhuman ones. It is the latter, however, with which I am particularly concerned. This schema still resembles VanDe Veer's, although Attfield introduces a considerable number of new elements. Like VanDe Veer, Attfield retains a sliding scale of psychological complexity and hence the amount of intrinsic value which can be generated. Humans are at the top of such a scale, with varying degrees of psychological complexity in sentient animals beneath. Plants and insentient organisms fall below this. The intrinsic value generated by an individual plant is close to negligible. Large groups of plants, such as forests, may have greater value (although a forest is not distinctly valuable as a whole, but only as a collection of individual trees).

The second part of Attfield's weighting process is a scale of significance for needs and wants, resembling VanDe Veer's emphasis on interests. Attfield divides needs into 'survival' needs and 'basic' needs, where the former normally has priority. (Under exceptional conditions - if survival would be literally staying alive but without opportunity to flourish or develop essential capacities - this might not apply). Beyond needs are wants and preferences, over which basic needs have priority. In addition, Attfield adds the category of the length of time the satisfaction of a need or want could last: the longer the time, the greater the total utility to be derived from it. Thus, Attfield's weighting system, like VanDe Veer's, gives priority to the basic and survival needs of the most sophisticated organisms over those of less sophisticated organisms, but basic needs of less sophisticated organisms have priority over wants or preferences of the more sophisticated. This system, Attfield claims, can 'bring about an optimal balance of intrinsically valuable states of affairs over intrinsically undesirable ones'.¹¹¹

There is one further important point to be made about Attfield's position as developed in *A Theory of Value and Obligation*. He describes his system as 'practice-consequentialism' - a form of rule-utilitarianism. There are, Attfield contends 'various practices which make for or would make for, a much better world than would be

¹¹¹ TVO 95.

possible either in their absence or through alternative practices'.¹¹² Practices such as promise keeping should be followed in each case, even where the results in that particular instance may be less optimal than they would have been had the promise been broken. Overall, the belief that promises will be kept will generate a climate of trust, for instance, in society, and hence lead to better total consequences. In this respect, Attfield differs from the act-utilitarianism of Singer and VanDe Veer.

PROBLEMS WITH INDIVIDUAL CONSEQUENTIALISM IN ENVIRONMENTAL ETHICS

The difficulties faced by individual consequentialist ethics when applied to the nonhuman world are myriad; in a sense, it is the function of this thesis to demonstrate this, as embodied in the specialized form of process thinking. Many specific areas which such an ethic finds difficult to accommodate, such as predation, wilderness, species, ecosystems and differing treatments for wild and domestic animals, will be explored in later chapters, and will be passed by at this point. The focus here will be on several more general issues, which are, one might say, foundational problems, from which the more specific difficulties stem. Three main areas will be examined here, falling under the broad headings of 'Experience and Value', 'Replaceability' and 'Subjectivity of Relative Judgements'.

Experience and Value

They pick a quality that is conceded to be normally possessed by humans; they make it the basis for a capacity of rights, then they find it 'writ large' beyond the human pale.¹¹³

Although rights are not at issue here (Rodman's attack is directed at Stone, a rights advocate, as well as at Singer) the process described above is an important one. A central objection to an individual consequentialist basis for environmental ethics focuses on its assignation of intrinsic value to qualities supremely possessed by humans. This

¹¹² TVO 107.

¹¹³ John Rodman p.93 'The Liberation of Nature?' *Inquiry* 20 1977.

objection is, however, unevenly aimed at Singer, VanDe Veer and Attfield, each of whom have different emphases in this context.

For Singer, the capacity to feel pleasure and pain, and so to have interests, together with, on a higher level, the ability to have preferences, both bestows moral considerability and degrees of moral significance. VanDe Veer, like Singer, takes sentience as the basic requirement for moral considerability, and uses psychological complexity to differentiate degrees above this. Both take as a premise that intrinsic value must be experienced value: pleasurable subjective experiences, preferences and psychological complexity are all value-generating factors. Since experience, for both Singer and VanDe Veer at least, is confined to animals, and reasonably sophisticated ones at that, such criteria render all nonsentient living beings - and collectives, such as ecosystems - morally inconsiderable. The only value status they can have is instrumental value, to fulfil the needs, satisfy the preferences or give complex and pleasurable experiences to sentient animals.

In addition, those nonhuman animals which are morally considerable (on the basis of their ability to experience) are further ranked according to other human qualities (psychological complexity, preference-having). Nonhuman animals are thus implicitly - and frequently, explicitly - categorized with so-called 'marginal humans' - those humans who lack some of the abilities of normal human adults. VanDe Veer, for instance, uses a 'bright chimpanzee' and a 'retarded Downs Syndrome child' in order to make a value comparison. Rodman finds this categorization unacceptable, putting his argument with characteristic force:

Is this then, the new enlightenment - to see nonhuman animals as imbeciles, wilderness as a human vegetable? ... It is perhaps analogous to regarding women as defective men who lack penises, or humans as defective sea mammals who lack sonar capacity....¹¹⁴

At the heart of this criticism is the contention that individual consequentialism of this

¹¹⁴ Rodman p.94 op.cit.

kind fails to accept nonhuman animals on their own terms, judging them by inappropriate, human-centred standards. Of particular concern is the exclusive link of intrinsic value with experience, and the consequent inability of VanDe Veer and Singer to value anything other than organisms with nervous systems and subjective experiences.

Both Singer and VanDe Veer are aware that this criticism may be levelled at their work.

VanDe Veer comments:

Two-Factor Egalitarianism is not anthropocentric in the way that a view is if it regards species membership in homo sapiens as relevant per se...if others were to claim that Two-Factor Egalitarianism is also invidious and arbitrary in its "psychocentric" emphasis, reasons need to be stated other than that it takes species membership per se as relevant; for it does not.¹¹⁵

VanDe Veer is surely suggesting here that, while his position is not speciesist, it may well be called anthropocentric because it is geared to valuing the psyche. While human qualities, rather than species membership, are the indicators of value, value is still measured on a human-biased scale.

Singer, similarly, is aware of the accusation of anthropocentrism. He contends, however, that the connection of sentience and moral considerability is not arbitrary, but rather the only sensible position to adopt. It is not because human qualities are better than nonhuman ones, but because it makes no sense to argue that a nonsentient being can be treated badly. Since a nonsentient being cannot feel, nothing can matter to it, and consequently it is impossible to behave either morally or immorally towards it. This debate is a central one in environmental ethics, and one which spans the divide between deontologists and consequentialists. Tom Regan, for example, in many ways vehemently opposed to Singer, puts forward a similar view concerning moral considerability in *The Case for Animal Rights*. Others, both deontologists and consequentialists, reject the link between experience and value, and some between any quality particularly possessed by humans and value.

¹¹⁵ VanDe Veer p.61 op.cit.

Robin Attfield, for instance, as we have seen, does not insist that all value must be experienced. Thus he is not vulnerable to accusations of anthropocentrism in this way. Nonetheless, like VanDe Veer, Attfield does argue that complex psychological capabilities generate more intrinsic value. Thus, although his criterion for moral considerability is not the ability to experience, the more human-like psychologically a nonhuman is, the more intrinsic value it can generate. Indeed, some environmental ethicists would still argue that Attfield's presentation is thoroughly anthropocentric. His concern with flourishing and fulfilment of capacities, while not uniquely human characteristics, are ones which humans do supremely possess (and ones valued highly, in theory at least, in Western 'democracies'). In addition, Attfield focuses exclusively on individuals. Ecological systems, or species, can have no value other than that generated by the flourishing and fulfilment of an individual's capacities. There is no place for collective value (which will be examined in Chapter 3). It is only individuals, who are, by their very individuality, like humans, who can have moral considerability. Thus, even Attfield, who does not consider that all value must be experienced, has also been accused of a human bias in his ethical approach.

Replaceability

There must always be the possibility of replaceability, or the substitution of one individual for another, in ethical systems aimed at the maximization of total value. Singer's acceptance of the principle of replaceability for lower organisms which are merely 'sums of their experiences' makes explicit this implicit characteristic of total utilitarianism. However, Singer attempts to limit replaceability to the second tier of moral considerability, and to exclude the first tier. This has been questioned by both Michael Lockwood¹¹⁶ and R.G.Frey.¹¹⁷ As Lockwood comments:

He seems not to notice that a preference utilitarianism (sic) will support this thesis only if it is formulated in such a way as to render preferences themselves non-replaceable, in the sense that the frustration of one

¹¹⁶ Michael Lockwood 'Killing and the Preference for Life' *Inquiry* 22 1979 157-170.

¹¹⁷ Frey, op.cit.

preference (or set of preferences) cannot be morally counterbalanced by the creation of another preference or set of preferences which would not otherwise have existed.¹¹⁸

Lockwood does not find a satisfactory solution to this problem, which is acute. If Singer is advocating, as he seems to be, preference maximization, he cannot contend that the preference to go on living is ultimately inviolable. The individual's preference to live could be frustrated if the strength of other preferences for the individual's death were greater. Frey puts this more bluntly by suggesting it could equally well be argued from Singer's position that providing a new life was created with an equal preference for life as the individual to be killed, killing could be justified.¹¹⁹

This argument, without further development, is enough for some critics to describe Singer's utilitarian position as morally unacceptable. However, the implications of such a position even for the second ethical tier, the conscious but not self-conscious, are worth examining.

As part of his campaign not to be 'speciesist' Singer points out that his category of those without the preference to go on living is not restricted to the nonhuman. Babies, people with mental handicaps and those in comas, for example, are also in this position. The inexorable conclusion of this is that they, too, are replaceable; indeed, Singer gives an example of this with 'defective infants' being allowed painlessly to die, if the parents are prepared to try again for a non-defective one. However, as Lockwood rightfully points out, this actually applies also to 'normal' babies, presumably justifying the widespread practice of infanticide of female babies when they are born, to try again for the preferred boy. Replaceability also applies to those animals which are considered not to have a preference to go on living. Lockwood makes this point powerfully by imagining the existence of a fictional service which he entitles 'Disposapup Ltd.'¹²⁰ In brief,

¹¹⁸ Lockwood, op.cit. p.160.

¹¹⁹ Tom Regan also examines this argument: CAR 208-211.

¹²⁰ Lockwood op.cit. p.168.

Lockwood supposes that families like the happy, playful nature of puppies, but that they are not so enthusiastic about fully grown dogs. He also supposes that they take an annual holiday each year, perhaps abroad, where it is inconvenient to take the puppy - or dog as it now is. A company, 'Disposapup Ltd.', is set up to remove and painlessly kill each dog when the family goes away, and they return from their holiday to another, happy playful puppy. He argues that Singer's ethical position makes this morally acceptable.

There is no apparent way in which Singer can resist this argument. Neither, it seems, can VanDe Veer, who is, in this respect, in a very similar position to Singer (although appearing unaware of the possibility of replaceability). Like Singer, VanDe Veer advocates maximization of total utility, where utility is measured by the satisfaction of interests, the more psychologically complex, the better. Since interests are totalizable, there is no reason why one interest should not be replaced by another, if it would not otherwise have existed, provided that 'side-effects' such as 'dread of impending disaster' do not create counteracting disutilities.¹²¹

Attfield, however, is in a slightly different position, both in his rejection of the exclusive link between intrinsic value and experience, and in his practice-, rather than act-utilitarianism. Like Singer and VanDe Veer, however, he is a totalizing consequentialist, aiming at the generation of maximum total intrinsic value. It is not experiences which are totalled, but rather degrees of fulfilment of species-specific characteristics for the maximum length of time. However, this difference does not exclude him from the possibility of replaceability. As a consequentialist, it is not organisms themselves which are valuable. The value lies in the states of affairs which are generated by organisms. As with Singer and VanDe Veer, it must then be true for Attfield that, providing total value remains the same, which individual generates the value is irrelevant. Thus, it is inevitable that, within Attfield's system, one organism is replaceable by another. The killing of an organism would, of course, prevent it from flourishing and fulfilling its capacities; but the creation of a new organism which would

¹²¹ VanDe Veer op.cit.69.

not otherwise have existed, with the same opportunity to flourish and fulfil its capabilities, replaces the lost value.

It would seem possible, however, that Attfield's practice-consequentialism might constrain replaceability in a way impossible for act-utilitarianism. We have already seen that Attfield advocates, for example, keeping promises even where in the specific instance more immediate value might be generated by breaking them. Greater overall value, he contends, would result from the higher level of trust in the community when promises are kept, than would result from the mistrust when there is an expectation that promises will be broken. In similar vein, Attfield could argue that greater total value for society would be generated by not killing individuals and replacing them, even though total value might remain the same or even increase on some occasions (for instance by killing a handicapped baby in order to try for a nonhandicapped one). The security which humans might derive from the knowledge that neither they nor their offspring would be painlessly killed and replaced would override the benefit gained from the specific occasions where total value might be increased by doing so.

This practice-consequentialist argument, however, is centrally flawed, at least in the context of the treatment of nonhumans. Attfield makes it quite clear that:

Practice-consequentialism does not call on agents to consider whether each and every action, whether important or trivial, should become part of a social practice, but rather to adhere to optimific practices which are already in force, and also to comply with ones of whose adoption by the relevant agents there is a significant prospect.¹²²

While not replacing human beings is an 'optimific practice' already in force for human beings - in the Western world at least - this is not true of attitudes to nonhumans. While Lockwood's 'Disposapup' example may shock, this is largely because of the status of dogs as pets, rather than any widespread belief that the idea of replacing animals is repugnant. In fact, a policy of replaceability of nonhuman individuals is widely accepted,

¹²² TVO 110.

both for domestic and many wild animals. Nonhuman animals are frequently described as 'resources' or 'stocks' which, unlike coal and oil, can be replaced or replenished. They are renewable. The widely held nature of this belief makes it unlikely that the nonreplaceability of nonhumans would ever become a 'social-practice' and hence fails to be supported by practice-consequentialism. It is doubtful in any case whether the replaceability or otherwise of nonhumans would generate optimistic feelings of security in the human community. Replacing nonhumans would not, after all, pose a threat to human individuals. As Regan comments of Bentham in a similar context:

Since humans can have no serious worry that the employees in the nation's slaughterhouses...will any day now turn to slaughtering human beings, our knowing that these animals are killed will not cause 'the slightest inquietude' in our breast.¹²³

Thus, Attfield's position, like that of VanDe Veer and Singer, is also open to the criticism that he would allow replaceability, although his practice-consequentialism may protect humans from such a fate. That a sentient organism can in this way be replaced by another is an implication of individual consequentialist ethics which many environmental ethicists find unacceptable.

The Subjectivity of Relative Judgments

There is a very good reason why we should be suffered to eat such of them as we like to eat; we are the better for it, and they are none the worse.¹²⁴

While Bentham is much lauded for his remarks on the moral considerability of animals (quoted earlier) he himself was not a vegetarian. This fact causes Singer to comment that Bentham 'flinched' at changing his diet; that he had 'lowered his normal standards

¹²³ CAR 205.

¹²⁴ Bentham, quoted without footnote reference by Singer AL 213.

of argument' and 'turned his face away from the ugly reality'.¹²⁵ Singer considers Bentham to be inconsistent at this point, to have failed to prosecute his argument to its logical practical conclusions. But Bentham's argument is, in fact, quite logical. He argues that the slaughter of animals for food gives humans greater pleasure than it gives nonhumans pain (because, he continues, their slaughter is speedy, less painful than death in the wild, and they do not have the facility to dread it). Thus, killing nonhuman animals for food maximizes utility and is entirely consistent with Bentham's principles.

Singer's objection to Bentham, then, is based not on the principle of maximizing utility, but rather on a different evaluation of the relative experiences of human and nonhuman animals. Bentham rates the pleasure humans gain from eating meat highly; Singer considers it to be merely a 'gustatory preference' a 'taste for a particular kind of food'.¹²⁶ For Bentham, the gain to humans outweighs the loss to animals; for Singer, the loss to animals outweighs the gain to humans. In VanDe Veer's terms, Bentham considers meat eating to be a serious human interest, which outweighs the basic interests of nonhuman animals, while Singer regards it as a peripheral interest, over which the basic interests of animals have moral priority.

This raises the crucial question, for both Singer and VanDe Veer, of how relative value judgments can be made. Is it possible to compare human gustatory pleasures with the suffering of animals? How can one compare a nonhuman animal with a Down's syndrome child? VanDe Veer acknowledges this difficulty, but fails to address it:

Most evident, the principle [Two-Factor Egalitarianism] is vague. There is no precise way of determining which interests are basic, which serious and which are more peripheral, and how to rank interests precisely. Similarly, no adequate account has been offered of how to determine levels of psychological complexity.¹²⁷

¹²⁵ AL 213.

¹²⁶ AL 164.

¹²⁷ VanDe Veer p.62 op.cit.

This vagueness surely undermines the detail of his position. Are meat eating, cosmetic testing and sport hunting serious or peripheral interests? The answers to these questions are surely subjective, and thus cannot be definitive. However, this lack of certainty means that, depending upon how one judges pleasure and pain, 'everything is permitted'. Rodman notices this problem:

The location of value in the subjective experiences of sentient entities allows for no small amount of subjectivity in our moral appraisals, since our judgment about the inner experience of others is either inferential, utilizing a criteria of evidence (the presence of a nervous system, the exhibition of what we acknowledge as pain behaviour, etc) or sympathetic, depending on our imaginative/emotional capacity to identify with others' sufferings, to put ourselves in their place...¹²⁸

This can have even more disturbing implications, where personal criteria, unrelated to a criterion of evidence, are used in making relative moral judgments. Singer, in fact, demonstrates this in his comments on the morality of fishing: 'The fish's struggle against danger and pain does not suggest that the fish is capable of preferring its own future existence to nonexistence'.¹²⁹ By saying this, Singer places fish firmly into the second tier of moral considerability, the replaceable according to his system. But as Regan remarks in response: 'But if the *fish's* behaviour is insufficient to establish that the fish has this particular preference, how can the behaviour of other animals show that they do?'¹³⁰

Although he does not make this point explicitly, Regan seems to be saying that, faced by similar behaviour from other animals, Singer would deduce that they did have a preference to go on living. He refuses to deduce this from the fish, because he has a preconceived idea of the capabilities of a fish; fishes cannot be preference-havers; they are merely the sums of their experiences. Thus, the same behaviour which would have counted as evidence that another organism has preferences is discounted because Singer

¹²⁸ Rodman p.90 op.cit.

¹²⁹ Singer p.81 *Practical Ethics* op.cit.

¹³⁰ CAR 207.

is importing a personal judgment from outside the system (perhaps because, in Rodman's terminology, he cannot sympathetically identify with fish).

The basis of value in experience, then, and its accompanying refinements, in both Singer and VanDe Veer, leads to relative value judgements being based on frequently unsubstantiated personal subjective opinions. Attfield, however, is less vulnerable to this criticism, since he has severed the link between value and experience. Value is generated by the state of flourishing, or of fulfilling capacities. It is certainly true that, for Attfield, the more psychologically complex an organism is, the more value it can generate. But this is a far less subjective criterion than one based on experience. One can only imagine or infer the experiences of a caged tiger, probably with varying degrees of inaccuracy; one can, however, make objective statements about the frustration of its species-specific characteristics and its inability to flourish when confined in a cage. One need make no comment on either the experience or preferences of a fish to recognize that, when being landed, a fish is being deprived of one of its basic needs: that of breathing.

Having considered three general criticisms of the position of different individual consequentialists in this section, I will now examine process thinking as an individual consequentialist system, and consider how it might respond to these three basic points of criticism.

INDIVIDUAL CONSEQUENTIALISM, PROCESS THINKING AND THE NONHUMAN

Earlier in this chapter it was argued that process thinking is an individual consequentialist system resembling classical hedonistic utilitarianism. Thus, when considering the extension of ethical concern to the nonhuman in process thinking, one would expect it to resemble Singer's or VanDe Veer's utilitarianism (if not Singer's preference utilitarianism). This initial impression is confirmed by examining process thinking more closely.

As with Singer and VanDe Veer, experience and intrinsic value are inextricably linked

in process thinking. Value is located in the subjectivity of the actual occasion as it comes into being. Organisms, as societies of actual occasions, are matrices of this valuable experience. Indeed, since actual occasions are the components of everything that is, experience is universal.

This has important implications for process thinking about the nonhuman. At a very basic level, there is no demarcation where experience ceases to exist, and therefore where value ceases to exist. To exist is to create at least a minimal amount of value. It is the intensity and harmony of experience which adds value above this level, and which means that an organism has greater or lesser moral significance.¹³¹ Process thinking, thus, has some points of correspondence with Singer and VanDe Veer and some with Attfield. Like Singer and VanDe Veer, but unlike Attfield, process thinking contends that value is experiential; unlike Singer and VanDe Veer, process thinkers extend experience, and therefore value, into plants and other nonsentient organisms.¹³²

This apparent coincidence of views with Attfield is, however, not more than superficial. It is not the generation of experience which Attfield considers to be valuable, but the fulfilling of capacities. There is obviously a connection between the two kinds of value, since the flourishing and fulfilment of any organism, in process terms, is likely to produce rich experience; but for process thinkers it is the experience, rather than the state of flourishing, which is valuable. Expressed in another way, for process thinkers plants are valuable because of their subjective experience; while for Attfield, the value of plants is nonexperiential and objective. It seems clear from this that the process position is closer to that of Singer than Attfield. The process insistence that experience is both the prerequisite for and the locus of value is a methodological identity which eclipses the practical coincidence of range shared by process thinkers with Attfield.

¹³¹ I will consider this scale of value in the following chapter.

¹³² And also into inanimate objects, although as will be made clear in the following chapter, this does not make them morally considerable.

This experiential understanding of value, however, makes process open to the same critique as Singer and VanDe Veer. Whilst it is not harmony and intensity which they value but rather psychological complexity, sentience, preference-having, all of these have a necessary basis in experience. Process thinking, like Singer and VanDe Veer, is open to the attack that value has been assigned to a quality which humans supremely possess. Indeed, the very structure of process thinking is open to such a criticism. Whitehead openly takes human experience as his starting point, using it as a model of the way in which the Universe works.¹³³ In fact it provides not only a model of the way the Universe works, but also a standard by which to judge it.¹³⁴ Human experience is 'an extreme instance',¹³⁵ of the experience which occurs throughout the Universe - extreme because it generates the most harmonious and intense, and hence the most valuable experience known to exist anywhere (except, of course, for the experience of God).

Like VanDe Veer, process thinkers can escape the accusation of speciesism, since their value criterion is not species membership but harmony and intensity of experience. Although for process thinkers most humans, most of the time, generate more value than any nonhuman, some humans - babies, those in comas and those with mental handicaps - generate less valuable experience, perhaps even than some other adult mammals, and hence the other mammals could be preferred when taking ethical decisions. Again here, however, there is an explicit comparison of nonhuman animals with humans who in various ways lack normal human abilities. The question whether this is an appropriate way to treat individuals of other species is raised.

However, process thinking is not as vulnerable to the criticism that only states of affairs generated by individual organisms can be valuable. Since the fundamental unit in process thinking is the actual occasion, even individual organisms are societies rather than true individuals. That other kinds of value-generating societies can exist, such as,

¹³³ SMW 91.

¹³⁴ PR 112.

¹³⁵ AOI 215.

perhaps, species and ecosystems, is not ruled out by a process approach since, as we have seen, it is not only sentient animals which can experience. This possibility explains the reservation which was expressed earlier about entitling process an individual consequentialist system. Nonetheless, there is no doubt that, for all process thinkers, sentient animals produce the most intense experiences and the highest degrees of value.

This identification of value with experience within an individual consequentialist structure indicates a fundamental closeness between Singer, VanDe Veer and process thinking. This similarity is strangely passed over in recent process writing, even where it is directly concerned with value in the nonhuman world. Singer's *Animal Liberation* is mentioned by only three process writers, Jay McDaniel, Charles Birch and John Cobb;¹³⁶ none of Singer's other writings, or any work of VanDe Veer is mentioned at all. The omission of *Practical Ethics* and 'Killing Humans and Killing Animals' is a significant one, since this means that all three process theologians miss Singer's advocacy of preference utilitarianism, concentrating solely on the hedonistic utilitarianism of *Animal Liberation*. In the case of Birch and Cobb, this concentration is in the form of attack. Yet this attack conceals a remarkable resemblance between the two positions: and, oddly, an even more striking likeness between Singer's later three-tier ethical position, and that of Birch and Cobb in *The Liberation of Life*.

While McDaniel merely summarizes Singer's position in *Animal Liberation*, Birch and Cobb level several criticisms at it. First, they attack his understanding of suffering:

The recognition of degrees of analogy of animal behaviour to human behaviour is commendable, but it is unfortunate that it seems to be associated in Singer with the view that everything depends on whether there is any capacity to suffer at all. To us, it seems more plausible that there are degrees of the capacity to suffer and that it is much worse to inflict suffering on creatures with highly developed capacity to suffer

¹³⁶ Jay McDaniel *Of God and Pelicans* (Westminster/John Knox Press 1989); John Cobb, several articles, but primarily John Cobb and Charles Birch *The Liberation of Life* op.cit; Charles Birch 'Christian Obligation for the Liberation of Nature' *Liberating Life* ed. Charles Birch, William Eakin, Jay McDaniel (New York: Orbis Books 1990).

than on those where this capacity is rudimentary.¹³⁷

Even if the development of Singer's position in later articles is ignored, Birch and Cobb are here making an inaccurate statement of Singer's position. Even in *Animal Liberation*, Singer does not claim that 'everything depends' on the capacity to suffer, rather that 'the capacity for suffering and enjoyment is a prerequisite for having interests at all'.¹³⁸ Beyond this, other factors are important: he cites for instance, the ability to plan for the future, close personal ties, higher degree of self-awareness and a greater capacity for meaningful relations, among others, concluding that 'a rejection of speciesism does not imply that all lives are of equal worth'.¹³⁹ The possession of these other capabilities, for Singer, means that a human being, for example, has more interests than a nonhuman animal, and can thus have extra positive and negative experience. There is no suggestion in Singer's work of a two tier ethical system where all sentient animals are worth the same and all nonsentient beings are worthless. In fact, it is highly probable that Birch and Cobb hold an identical position to Singer here. Their interpretation hinges on their understanding of 'increased capacity to suffer'. Presumably they refer here not so much to the physical pain from damaged nerves, but instead to the very human qualities to which Singer refers: the ability to remember and anticipate pain, and the degree of self-awareness involved in the experience of pain.

While Birch and Cobb thus indicate differences between themselves and Singer which do not really exist, they generate a position strikingly close to that of Singer's hybrid act- and preference-utilitarianism. In fact, their position is so like Singer's, even to the stage of using identical examples to make the same point, that were they not seemingly ignorant of it, one would suppose them to be using unacknowledged sources.

Like Singer, their ethical schema arises from considering what is wrong about killing.

¹³⁷ LL 158.

¹³⁸ AL 38.

¹³⁹ *ibid.*

In a process system, such as Birch and Cobb's, killing any living organism results in the prevention of future rich experience from that organism. Killing humans, however, according to Birch and Cobb, is a special example of this, because 'each [human] individual is unique'.¹⁴⁰ As well as the loss of rich, and even unique, experience Birch and Cobb suggest that anticipation of death and grief in others also generate negative experience, and hence add to the wrong of killing.

An initial resemblance to Singer is not difficult to trace. Anticipation of death, and grief to others, are standard utilitarian 'side-effects' which, because of the suffering they generate, act as constraints to killing. Singer himself makes the same points; but, as he argues, these 'do not deal with the real wrong of killing'.¹⁴¹ The primary loss at death, for Singer as any hedonistic utilitarian, is pleasurable experience. If a pleasurable life is cut off, there is less pleasure in the world. This sounds very like Birch and Cobb's worry about loss of experience; if a life rich in experience is cut off, the consequent nature of God is deprived of future rich experiences. However, both of these positions then become open to the 'replaceability' hypothesis. If it is total pleasure or total experience which is important, then as long as an adequate substitute is created, killing is not wrong - new life for old. It is at this point that Singer introduces his preference utilitarianism: the category of those who, as I said earlier, have a concept of themselves as individuals who endure through time and who have desires and preferences about the future. That is to say, they are not replaceable; they are unique. The production of another happy life in their stead is not good enough.

This is precisely how Birch and Cobb view the situation. With their earlier suggestion that human life is unique, it is clear that they are building towards a position of irreplaceability for human individuals. To illustrate this, Birch and Cobb compare the loss to a chicken on being killed to the loss of a human being. 'Side-effects' are immediately dispatched. A chicken, they argue (as in Bertrand Russell's famed example), cannot anticipate its own death; neither does the chicken community grieve

¹⁴⁰ LL 159.

¹⁴¹ Singer p.145 'Killing Humans and Killing Animals' op.cit.

for its loss. With regard to the 'real wrong of killing' the loss of experience involved, Birch and Cobb comment:

First, it is true that the killing of a chicken prevents the occurrence of the additional experiences that chicken would have had. But it is not clear whether the distinction between those prevented experiences and the experiences of another chicken is of much consequence. If the death of one chicken makes room for the raising of another, the values lost are largely replaced by the values gained.¹⁴²

Thus, chickens are merely the sums of their experiences, and are therefore replaceable.

Human beings, however, are not:

The future experiences that are cut off are unique and irreplaceable. That is because they derive from a unique individual with a unique history, whose particular capacity to generate new experience is forever destroyed. In the chicken's case the element of uniqueness is trivial.¹⁴³

The closeness of Birch and Cobb's position to that of Singer in *Practical Ethics* should by now have become clear. This closeness is compounded by the curious coincidence that Singer also uses a chicken to illustrate the same point. A chicken falls into Singer's second tier, and is thus replaceable:

The replaceability argument will justify killing the birds, because depriving them of the pleasures of their existence can be offset against the pleasures of chickens who do not yet exist and will exist only if existing chickens are killed.¹⁴⁴

Humans and some other adult mammals, however, with their conception of self-identity and preference to go on living, cannot be replaced.

¹⁴² LL 159.

¹⁴³ *ibid.*

¹⁴⁴ Singer p.104-5 *Practical Ethics* op.cit.

Birch and Cobb, then, like Singer, appear to have a first and second tier of moral considerability: the first being composed from humans and perhaps extended to include adults of other species such as chimpanzees, the second being such creatures as chickens which are replaceable. The difference between Singer's criterion of preference-fulfilment and Birch and Cobb's of uniqueness-preservation are not substantial. Both have a top, irreplaceable tier, and a second, replaceable tier. The only significant difference is the process extension of the second tier to include organisms which to Singer are insentient, but which, to process thinking, experience and therefore produce value.

Can process thinking, then, withstand Lockwood's criticism both that replaceability even in the second tier leads to some conclusions which would normally be considered morally repugnant, and that the first tier of moral considerability is not exempt from replaceability?

In his essay 'Christian Obligation', Charles Birch discusses Lockwood's 'Disposapup' example, received through the filter of Attfield.¹⁴⁵ Here, he condemns the 'Disposapup' organisation as 'immoral': 'It is immoral to deliberately deprive the puppies of lives of possible pleasure and fulfilment of their canine possibilities...'.¹⁴⁶ In the light of views expressed in *The Liberation of Life* this is a confusing conclusion. We have seen that Birch and Cobb accept a replaceability argument for a chicken; why not a puppy, which is, after all, an immature member of a species only on the borderline of first-tier consideration? Birch does not here, after all, explicitly suggest that the reason the puppy cannot be replaced is that it is unique. Birch's argument in *The Liberation of Life* would suggest that, provided another canine life of possible pleasure and fulfilment, which would not have come about otherwise, is created, the Disposapup system is perfectly moral. His repugnance at 'Disposapup Ltd.', suggests that his ethical intuitions are at odds with his ethical system. He must either, as Tom Regan suggests (appropriately enough) 'bite the bullet' and accept ethical conclusions which he may find

¹⁴⁵ EEC (1st ed.) 170.

¹⁴⁶ Charles Birch p.65-66 'Christian Obligation' op.cit.

distasteful, or fundamentally revise his ethical system. Where process thinking is concerned, this would require a fundamental metaphysical, as well as ethical, revision.

What, then, of the first tier? Can Birch and Cobb maintain a 'unique' and 'irreplaceable' first tier of moral considerability? Such a position is unsustainable, for two reasons. The first, and most significant, is that uniqueness is not intrinsically valuable in a process system. It is, as we have seen, harmony and intensity of experience which are intrinsically valuable. It does not add to the value of a human being that their experience differs from all other experiences; what matters is whether it is more harmoniously intense than all other experiences. This point will be discussed further in the next chapter, so will not be further developed here.

Secondly, even if, temporarily, Birch and Cobb's use of uniqueness were to be accepted, it would not be possible for them to maintain that uniqueness conferred inviolability. Within a consequentialist system, nothing can be guaranteed to be inviolable, a fact which Birch and Cobb themselves acknowledge when attacking the idea of the infinite value of a human life. Just as Singer's preference to go on living could be outweighed by contrary preferences, so Birch and Cobb's unique individuals could be outweighed by other unique individuals. It is not, after all, the individuals themselves which are valuable, but the experiences which they generate. The repeated statement of process thinkers that the aim of process thinking is at maximum richness of experience for the consequent nature of God means that a 'unique individual' may still be sacrificed, if by doing so greater richness of experience is generated. Thus, like Singer, the first and second category of moral considerability do not fall into watertight compartments of replaceability and nonreplaceability. While the occasions when adult humans and the highest mammals may be treated as replaceable are rare they cannot be ruled out.

Birch and Cobb, then, in *The Liberation of Life*, put forward a process position which closely resembles that of Peter Singer in *Practical Ethics* and 'Killing Humans and Killing Animals'. While, structurally, Birch and Cobb describe a classic process system, their conclusions are not the only possible ones to which a process methodology might

lead, any more than Singer's is the only possibility for hedonistic utilitarianism. As with utilitarianism, process thinking has a wide scope for subjective decisions where relative judgments are concerned. We have already seen that Birch seems to consider a chicken to be replaceable, but a puppy not to be. Different process thinkers may make other judgments. Like hedonistic utilitarianism, the process system provides a structure by which ethical decisions can be guided. It indicates which kinds of experience are most valuable. But the way in which the scale of value is weighted is largely left open. Is a rich human cultural experience worth more than the life of an adult mammal, if the two should come into conflict? Is a puppy worth more than an adult chicken? Or, to return to the earlier question, is the human richness of experience generated by eating meat greater than the loss of rich experience caused to nonhuman animals? Is a small amount of high quality human experience more valuable than a large amount of low quality insect experience? Who is to decide?

An interesting example of the way in which, even within process ethical structures, value judgments can differ, is given by comparing passages on whaling by two different process thinkers:

A recent instance occurred when the United States government agreed to much larger quotas of whale kills for other countries in order to allow an Eskimo tribe to maintain its distinctive traditions. We suspect that too much was sacrificed here for too small a gain. If the Eskimos could have been allowed their hunt without raising the quotas of other nations, we would have supported the decision. There are no absolutes here.¹⁴⁷

We can deduce from this that Birch and Cobb consider whales to be highly sentient creatures (ie, that they have rich experiences). However, clearly they are not inviolable in the way that humans were argued to be earlier in their book. (This is, in itself, a strange conclusion, since they certainly include chimps in their 'first tier'.) Due to the whales' rich experience, whaling should certainly not be increased, or at least, not among nations for whom it does not have great cultural significance (although Birch and Cobb do not advocate that it should be banned, even in these nations). Whaling is,

¹⁴⁷ LL 174.

however, intrinsic to ancient Eskimo culture. If their whale hunting were restricted, it would damage their culture, a loss not only to them but to humanity as a whole. Thus, we are faced with a trade-off of richness of experience. Does the richness of experience lost to individual whales when slaughtered outweigh the richness of experience lost to Eskimos and the rest of humanity when their lifestyle is lost? Is human culture worth more or less than the lives of whales? For Birch and Cobb, human cultural experience is worth more.

In vivid contrast to this, Franklin Gamwell, another process thinker, treats whaling very differently:

If a species of whales becomes extinct while whalers become prosperous, the potential loss to human happiness is great, and only if greater human possibilities are created is the deed justified...¹⁴⁸

Gamwell clearly considers whaling in a very different light. The whale's experience does not enter the calculation; there is no trade-off between human cultural experience and whale's living experience. Instead, two different kinds of human experience are pitted against one another. If whalers exterminate whales the loss to human happiness will be great (presumably he refers to human aesthetic experience, the pleasure given to future generations by seeing whales). However, Gamwell is prepared to countenance this loss if greater human possibilities are created - perhaps whalers can afford better lives and education for their children, or international co-operation increases through continued whaling. While Gamwell admits that nonhuman animals do have experience, and hence value, he concludes: 'Since human experience is the most important, it can add most to the importance of the inherited world'.¹⁴⁹

Phrased in VanDe Veer's terms, Cobb and Birch are advocating a position similar to that

¹⁴⁸ Franklin Gamwell 'A Discussion of John Cobb Junior: The Political Implications of Whitehead's Philosophy' Cobb and Shroeder (eds.) *Process Philosophy and Social Thought* (Chicago: Centre for the Scientific Study of Religion 1981).

¹⁴⁹ Ibid.

of 'Two-Factor Egalitarianism': the serious interests of more psychologically complex animals (humans) take priority over the basic interest of less complex animals (whales). Gamwell, however, is advocating a position which VanDe Veer calls 'Extreme Speciesism', where if human and nonhuman interests conflict, human interests always trump nonhuman ones. It would be perfectly possible, however, for a process thinker to adopt a third position, closer to that of 'Species Egalitarianism', and argue that the difference of richness of experience between humans and some nonhuman animals, in this case, whales, was so slight that humans should be given very little ethical priority at all (although no process thinker has, to my knowledge, approached anything like this view).

That the structure of process thinking can support so many differing interpretations of relative values is an indication quite how vague the criterion of richness of experience can be. As with hedonistic utilitarianism, process thinking has the problem of making judgments about the relative subjectivity of other organisms. The result of this ambiguity is that judgments made by the process thinker independently are read into the system and then presented as its inevitable conclusion. Owing to the very nature of this activity - judging the subjective experience of other organisms - there can be no definitive statement of specific relative values.

Conclusion

Value, in process thinking, is located in the harmony and intensity of experience of the concreting actual occasion. Thus value is aesthetic and, in a very primitive sense, universal; and the value generated by each actual occasion is taken into the consequent nature of God.

At the human level, ethical behaviour is behaviour which maximizes the amount of value, that is, the amount of harmoniously intense experience generated in the world. This fundamental principle leads to a comparison with utilitarian ethics. Seen in this light, process ethics resembles classical hedonistic act-utilitarianism, with close similarities to Mill's qualitative understanding of pleasure and pain, and with Singer's

approach to nonhuman animals. However, this means that it is open to several key criticisms, both in a general sense, and specifically related to environmental ethics.

The emphasis on maximizing total experience leads to the twin problems of distribution and replaceability. Since total experience is what matters, who has how much is ethically irrelevant, providing that the greatest amount is generated. Uneven distribution of valuable experience, or the replacement of one organism by another may thus be ethically permissible. The association of value with experience, which characterizes all hedonistic utilitarianism and process thinking (although excludes Attfield) also means that relative values are based on inferred conclusions about the the subjectivity of other organisms. Thus a variety of different ethical conclusions, based on the same ethical structure is possible, as was indicated by contrasting attitudes towards whaling.

Both the above criticisms, together with attacks on the identification of value with experience, are made by the environmental ethicists who will be considered in the following two chapters. Both the individual deontologists considered in Chapter 2, and the collective consequentialists considered in Chapter 3 develop approaches to environmental ethics which contrast sharply with the individual consequentialists considered in this chapter.

CHAPTER 2

PROCESS THINKING AND INDIVIDUAL DEONTOLOGICAL ENVIRONMENTAL ETHICS

Introduction

This chapter will examine what I have called individual deontological approaches to environmental ethics: 'deontological' because these ethicists reject consequentialism, and 'individual' because their ethical focus is on individuals rather than collectives. This is not to say that all those I consider in this chapter are opposed to collective ethics, although all are opposed to consequentialism; Kenneth Goodpaster¹ and Tom Regan² hold the possibility of systemic value open (while putting emphasis on individual values), and Lawrence Johnson³ explicitly affirms it. However, there are reasons for including Johnson in this chapter, despite his affirmation of systemic value, which will become clear later.

One major division holds between individual deontologists in environmental ethics: are all nonhumans and humans equal in value, or is value scaled? In this chapter, I will first consider those who, ostensibly at least, affirm that all individual organisms have equal value, then those who propose some sort of value hierarchy. I will move on to consider criticisms of both positions. Both positions will then be compared with that of process thinking, to establish where process thinking may have similarities, where it may differ, and whether it escapes from or succumbs to criticisms made of individual deontological ethics.

¹ Kenneth Goodpaster 'On Being Morally Considerable' (OMC) Scherer and Attig (eds) *Ethics and the Environment* (Englewood Cliffs: Prentice Hall 1983) 31-39.

² Tom Regan 'The Nature and Possibility of an Environmental Ethic' (NPEE) *All That Dwell Within: Animal Rights and Environmental Ethics* (California: University of California Press 1982) 187-205.

³ Lawrence Johnson *A Morally Deep World* (MDW) (Cambridge: Cambridge University Press 1991).

The Problem of Value Terminology

There is significant confusion in environmental literature concerning the meaning of certain value terms frequently used by different writers with opposing interpretations. A failure to clarify can lead to vital misunderstanding. The primary expressions involved are: instrumental value, intrinsic value, inherent value and inherent worth. I shall largely be following Paul Taylor's categorization in *Respect for Nature*.⁴ This differs from others, most markedly J.Baird Callicott;⁵ these differences will be indicated where necessary.

Instrumental value is the easiest to define, since there is no dispute about its meaning. Some object or state of affairs has instrumental value, when it is valuable not as an end in itself, but as assisting towards another end: an instrument used to achieve a different purpose. Thus instrumental value concerns the usefulness of an object or a state of affairs.

Intrinsic value, in contrast, following Taylor, is defined here as 'an event or condition...directly experience(d) to be enjoyable in and of itself'.⁶ This includes consciously sought goals and experiences judged by an organism to be good. Intrinsic value thus excludes those who are not conscious valuers, experiencers or goal seekers, such as rocks or, in this sense, plants. This definition of intrinsic value cuts across its use by Callicott, who defines intrinsic value as inherent value is defined here.⁷

Inherent value, again following Taylor is the value given by a human valuer to something

⁴ RN 72-3.

⁵ J.Baird Callicott 'The Conceptual Foundations of the Land Ethic' *Companion to a Sand County Almanac (CSCA)* ed. J.Baird Callicott (Madison: University of Wisconsin Press 1987).

⁶ RN 73.

⁷ Bryan Norton notices this discrepancy: p.261 Review of Paul Taylor *Respect for Nature Environmental Ethics* 9 no.3 Fall 1987.

which she or he considers to be valuable in itself. It is therefore a subjective value, projected by the valuer onto the object or state of affairs being valued. It is not identical with instrumental value, since the item valued may not be useful, but rather valued because it is what it is, it is the kind of thing it is in itself. The Grand Canyon, the Mona Lisa, or Chartres Cathedral may fall into this category. Inherent value is not confined to inanimate objects; indeed, for Callicott it is the major form of value, the kind which parents, for instance, have for their children. The important characteristic here is that inherent values are anthropogenic. This does not mean, as both Callicott and Rolston point out, that they are anthropocentric. They are human generated, but other-focused values.

Finally, to *inherent worth*, defined by Paul Taylor as attributable to something that has a good of its own - whether or not it is a conscious experiencer, and independent of its intrinsic, instrumental or inherent value. It can be affected by things which happen to it for better or for worse. That is to say, a plant, which is incapable of having conscious good experiences or of consciously exhibiting goal-directed behaviour, still has its own end or *telos*, and hence has inherent worth.⁸

It is clear from these definitions that possessing one kind of value does not preclude the possession of others. A pet cat, for instance, may have instrumental value for her owner by keeping mice out of the cellar. She may also have inherent value to the owner, who values her for what she is in herself, apart from any function she might perform, and would in fact continue to care for her, even if, through disability, she was no longer able to catch mice. The cat, being an experiencing adult mammal, may also have intrinsic value: she defends her life against threats; she practises goal-directed strategies to obtain food or petting.⁹ In addition, as an organism with her own good - things can be

⁸ Taylor (RN footnote 7 75) comments that his concept of *inherent worth* is 'essentially identical' to Regan's definition of *inherent value* in CAR 241 and NPEE 199. In fact, Taylor fails to notice that Regan's definition has changed materially between the two publications, and that his concept is identical with neither.

⁹ The anti-Cartesian case will not be argued here. However, it is not certain whether R.G. Frey would unquestioningly accept this analysis (Frey: *Rights, Killing and*

better or worse for her, she has a wellbeing, whether she is conscious of it or not - she has inherent worth. Thus all four concepts can apply to any one organism.

INDIVIDUAL DEONTOLOGICAL POSITIONS

The Will-to-Live: Albert Schweitzer

The essential nature of the will-to-live is determination to live itself to the full. It carries within it the impulse to realize itself in the highest possible perfection. In the flowering tree, in the strange forms of the medusa, in the blade of grass, in the crystal; everywhere it strives to reach the perfection with which it is endowed.¹⁰

Albert Schweitzer's comments on the will-to-live, while hardly systematic, provide interesting access to this kind of environmental ethic. Thus, Schweitzer will be considered rather less summarily than is customary in environmental ethics, where his position is generally briefly cited and dismissed.¹¹

The above quotation introduces several of Schweitzer's key concepts, some of which seem to be developed (although without any acknowledgement to Schweitzer) by Paul Taylor. The concept of the will-to-live, derived largely from Schopenhauer, by whom Schweitzer was deeply influenced, forms the basis of Schweitzer's ethical philosophy. It is, for Schweitzer, almost a religious concept. Following Spinoza's *Deus sive Natura*, in his later writing Schweitzer emptied God into the will-to-live of individuals within the natural world. 'Therefore in philosophy' he wrote to Oscar Kraus 'I will never speak

Suffering Oxford: Basil Blackwell 1983). Regan's case, contra Frey, for animal awareness (if not for animal rights) in CAR is sufficiently convincing not to repeat it here. Regan CAR chs. 1 & 2.

¹⁰ Albert Schweitzer p.282 *The Philosophy of Civilization: Civilization and Ethics* (PC) (Buffalo, New York: Prometheus Books 1987).

¹¹ For example CAR 241-243; MDW 134-138; Frey (who talks about the reverence for life principle without even mentioning Schweitzer), and Singer 199-200 'The Place of Non-Humans' in Goodpaster and Sayre op.cit.

of God any more, but of the universal "will-to-live".¹² The will-to-live is a force fragmented in nature into individual lives, which each struggle to express and to realize the will-to-live in their own ways. Within the nonhuman world, the will-to-live expresses itself in the cruel struggle for existence between competing life forms which survive by destroying one another. Schweitzer's view of nature is negative in the extreme (perhaps again demonstrating the influence of Schopenhauer). Nature 'destroys life thousandfold in the most meaningless way';¹³ there is 'no compassion'; it is 'horrible and senseless'; 'a ghastly drama of will-to-live divided against itself'.¹⁴ Only humans 'can escape and catch a glimpse of the light'¹⁵ by ethical behaviour which Schweitzer describes as 'reverence for life'. It involves the fundamental recognition that 'I am life that wills to live, in the midst of life that wills to live'.¹⁶ Recognition of will-to-live parallel to our own in other lives should engender reverence, and the desire that they too should reach realization, as we wish it for ourselves:

At the same time, the man who has become a thinking being feels a compulsion to give to every will-to-live the same reverence for life that he gives to his own. He experiences other life as his own.¹⁷

Since, ultimately, the will-to-live is a single force, Schweitzer can suggest a strong degree of identity with other living beings: their will-to-live is not only similar to, it is identical with our own. By allowing other beings to realize the will-to-live in their

¹² Albert Schweitzer 'Letter to Oscar Kraus' quoted p.47 Gabriel Langfeldt *Albert Schweitzer: A Study of his Philosophy of Life*(London: Allen and Unwin 1960).

¹³ Albert Schweitzer p.120 'Ethics of Compassion' *Reverence for Life: Sermons* trans. Reginald Fuller (London: SPCK 1970) Schweitzer here uses the classic 19th century illustration of the senseless cruelty of nature: the insect which allows its eggs to hatch inside a host and its caterpillars to eat it alive. For further detail on this, see: Stephen J.Gould: 'Nonmoral Nature' in *Hen's Teeth and Horses Toes: Further Reflections in Natural History* (Harmondsworth, Middlesex: Penguin 1988).

¹⁴ PC 312.

¹⁵ Schweitzer p.121 'Ethics of Compassion', op.cit.

¹⁶ PC 309.

¹⁷ Schweitzer p.131 *My Life and Thought* op.cit.

own individual ways - most prominently by assisting them to continue to live - humans can achieve the reunification of the divided will-to-live:

If I save an insect from a puddle, life has devoted itself to life, and the division of life against itself is ended. Whenever my life devotes itself in any way to life, my finite will-to-live experiences union with the infinite will in which all life is one.¹⁸

The depth of Schweitzer's mystical and religious interpretation of the will-to-live is clear here; this fragmentation and reunification of the scattered expressions of will-to-live resembles the categories of Hegel's *Geist*, but is perhaps closer to the 'divine sparks' of Stoic philosophy, with which Schweitzer comments that he has some sympathy.

Much more could be said about the metaphysical superstructure in which Schweitzer's ethics are located. However, the focus here is on the more practical outworking of his ethics.

Schweitzer's concept of the will-to-live is clearly individualist. He never discusses the possibility of ecological systems or species having a good, value or collective will.¹⁹ While Nature 'does sometimes act purposefully in a magnificent way' she never seems 'intent on uniting these instances of purposiveness which are directed to single objects into a collective purpose'.²⁰ It is only humans who can unify the fragmented and conflicting wills within nature by acting ethically.

¹⁸ PC 313.

¹⁹ Schweitzer appears to have had some sympathy with the concept of a collective good in human society, but still preferred individual ethics: 'Individual ethics without social ethics are imperfect, but they can be very profound and full of vitality. Social ethics without individual ethics are like a limb with a tourniquet around it into which life no longer flows. They become so impoverished that they really cease to be ethics at all'. PC 229.

²⁰ PC 273.

Alongside the individualist emphasis of Schweitzer's ethic is a deontological one. Schweitzer refuses to accept that any kind of calculus or 'trade-off' can resolve situations of ethical conflict. 'Having the will-to-action, it can leave to one side all problems regarding the success of its work'.²¹ Whereas a utilitarian, for instance, may consider that an ethical deed is one which produces the greatest happiness, for Schweitzer any loss of life, irrespective of the fact that it may produce the 'best consequences' is unethical. 'All life is sacred'. 'All killing is a 'sacrifice''.²² The taking of any life, however necessary, even to survive oneself or to protect one organism against another, generates a burden of guilt and responsibility; even killing bacteria, as was routine for Schweitzer as a doctor.²³ This rejection of consequentialism is bolstered by Schweitzer's pessimism that any individual can ever do more than a little to reduce the suffering in the world, and that if one were to concentrate solely on the insignificant consequences of one's actions, however ethical, one would feel permanently disheartened.

Closely associated with this nonconsequentialism is an emphasis on the ethical disposition of the individual human. Reverence for life is a human state of mind which is, in its very existence, of great significance:

The fact in itself that in the ethically developed man there has made its appearance in the world a will-to-live which is filled with reverence for life and devotion to life, is full of importance to the world.²⁴

That Schweitzer's ethic is individualist and deontological seems to be without doubt. The third important characteristic to consider here is equality. Schweitzer certainly

²¹ PC 312.

²² Schweitzer p.189 *My Life and Thought* op.cit.

²³ Singer attacks Schweitzer over this - a critique which seems a little harsh, as Schweitzer was well aware of the contradiction in which he stood. If Singer is trying to suggest that Schweitzer is working with a hidden (hierarchical) agenda, there may be some substance to his point. Singer p.200 'The Place of Non-Humans' op.cit.

²⁴ PC 312.

intends us to think that all living things are of equal value: 'The ethics of reverence for life is found particularly strange because it establishes no dividing line between higher and lower, between more valuable and less valuable life'.²⁵ Since Schweitzer's ethical system is based on the will-to-live, or, in Callicott's terms, it is a conative ethical theory,²⁶ no distinction can be made between different wills-to-live. Everything which is alive wills to go on living; it is the one essential aim of all organisms, and equally important for them all. Different wills-to-live and their value cannot be distinguished. Any such attempt:

will end in judging them by the greater or lesser distance at which they seem to stand from us human beings - as we ourselves judge. But that is purely subjective interest. Who among us knows what significance any other kind of life has in itself and as a part of the universe?²⁷

Schweitzer's question here dissolves any possibility of discrimination between the value of living things. The will-to-live is vital to all organisms; we cannot know what significance they have in themselves or to the universe; any judgments we make will be based on human values and hence inappropriate. Thus we must treat all life equally. To kill a flea is as bad as to kill a cat; to tear a leaf from a tree as bad as to mutilate a whale.

Leaving aside for the present the practical problems of upholding such views, certain inconsistencies are evident in Schweitzer's position. In the passage quoted initially, puzzlingly, Schweitzer describes a crystal as having will-to-live. This is no isolated occurrence; elsewhere he describes a snowflake in similar terms.²⁸ Yet these are clearly not living in any sense that we - or, presumably, Schweitzer himself - can recognize. This inconsistency is noticed by Regan:

²⁵ Schweitzer p.189 *My Life and Thought* op.cit.

²⁶ See Callicott's discussion in 'Non-Anthropocentric Value Theory and Environmental Ethics' *American Philosophical Quarterly* (NAVT) 21 no 4 Oct.1984 299-308.

²⁷ PC 189.

²⁸ Schweitzer p.115 *My Life and Thought* op.cit.

That ice crystals may be beautiful, and that conscientious sojourners would not needlessly destroy their beauty, or the beauty of non-living nature generally is arguable...But if we are enjoined not to destroy the beauty of the natural world, even when the object of the beauty is not alive, then we are in need of a more general principle than that of 'reverence for life'.²⁹

That Schweitzer must have been well aware that crystals and snowflakes are not alive suggests that he was deliberately stretching his interpretation of 'living' to include objects which embody intricate form and structure. How far into the natural world such a criterion might extend is difficult to say. Crystals and snowflakes, both intricate and highly ordered, are the only examples given. While to speak of a snowflake 'struggling to find form' or 'developing and realizing itself' must be metaphorical, it is not an inappropriate metaphor, in the way that to say a similar thing about a stone, for example, might be. Singer seems to be adopting this interpretation when he comments that Schweitzer saw unnecessary killing as akin to vandalism, the destruction of something beautiful.³⁰

It is also possible that Schweitzer's emptying of God into the will-to-live has pantheistic consequences. If this is so, perhaps many things, or even everything, possesses will-to-live. As far as I am aware, Schweitzer never explicitly states that natural objects usually considered to be inanimate - rocks, mountains - are beyond the sphere of ethical concern.³¹ Perhaps the snowflake and the crystal are just examples of a broader phenomenon. It is unlikely that a final explanation will be found. Certainly, the practical

²⁹ CAR 242. Regan, in NPEE, allows that non-living natural entities might have inherent value (meaning by this expression value in themselves *unrelated* to human valuing, unlike my earlier definition). Even in CAR he leaves the possibility open. His objection here is not to Schweitzer's claim that a non-living natural object can have value independent of human valuers, but to this its basis on a principle of reverence for life.

³⁰ Singer p.206 footnote 19 'The Place of Non Humans' op.cit.

³¹ This suggestion undermines James Doyle's contention that Schweitzer's ethics fails to deal with reverence for non-living natural objects such as Grand Canyon. See James F.Doyle 'Schweitzer's Extension of Ethics to All Life' *Journal of Value Inquiry* X1 no.1 Spring 1977 44-50.

problems generated by attributing an equal will-to-live to 'inanimate' objects are exponentially increased.

The second inconsistency cuts more deeply at the heart of Schweitzer's egalitarian position. There is the constant suggestion in his writing that he does have at least a two-level hierarchy in operation - humanity, and everything else. In humanity (in Hegelian fashion) will-to-live has become conscious of itself; ethical behaviour is possible; reunification between divided will-to-live can be achieved. That humans are the only species capable of ethical action does not, of course, mean that they are necessarily of higher value. However higher value for humans is implied in some of Schweitzer's comments; for instance, he remarks that the aim of reverence for life is:

...to create values, and to realize progress of different kinds which shall preserve the material, spiritual and ethical development of mankind. While the unthinking modern world - and life-affirmation - stumbles about with its ideals of power won by discovery and invention, the thinking world and life-affirmation sets up the spiritual and ethical perfecting of mankind as the highest ideal, and an ideal from which alone all other ideals of progress get their true value.³²

Here Schweitzer leans towards the Kantian view that cruelty brutalizes oneself, that it is bad for the human character not to enact reverence for life. The aim of ethical behaviour thus becomes the spiritual and ethical perfecting of humanity. This point is regularly repeated, especially in Schweitzer's sermons. Only humans can 'fulfil' the will-to-live and become ethically perfect.³³ This suggests that the preservation of a human will-to-live has priority over that of other species. Ultimately humans can achieve for the world what no other kind of animal can:

The fundamental commandment of ethics, then, is that we cause no suffering to any creature, not even the lowest, unless it is to effect some necessary protection for ourselves, and that we be ready to undertake

³² Schweitzer p.132 *My Life and Thought* op.cit.

³³ For instance p.38 'Gratitude: The Secret of Life' *Reverence for Life: Sermons* op.cit.

whenever we can, positive action for the benefit of other creatures.³⁴

The only formal exception which Schweitzer gives here for his principle of reverence for life is self-protection or self-defence (also adopted by Paul Taylor). But 'self-protection' has a wide interpretation. Schweitzer insists that one may only injure life 'when it is necessary'.³⁵ But what constitutes necessity? Mowing a meadow to feed cows is acceptable. More significantly - and surprisingly - he allows animal experiments which 'bring help to mankind with the results gained'. Indeed, introducing another principle taken up by Paul Taylor, he comments:

By the very fact that animals have been subjected to experiments, and have by their pain won such valuable results for suffering humanity, a new and special relation of solidarity has been established between them and us. From that springs from each one of us a compulsion to do every animal all the good we possibly can. By helping an insect when it is in difficulties, I am only attempting to cancel out part of man's ever new debt to the animal world.³⁶

Schweitzer's use of the term 'solidarity' here has an important, as well as unfortunate, connotation. Certainly the suggestion that a relation of 'solidarity' between animals and humans as a result of experimentation may seem to be a rather one-sided.³⁷ However, the solidarity is supposed to be one of human *restitution*. To compensate for damage done to some living creatures, others must gain. The debt must be cancelled.

This theme - and criticisms of it - will be considered in the work of Paul Taylor. It suffices here to note that acknowledging the possibility of compensation to one organism for causing suffering and death to another compromises the deontological

³⁴ PC 260.

³⁵ PC 318.

³⁶ *ibid.*

³⁷ It is rather reminiscent of J. Baird Callicott's comments concerning an 'evolved and unspoken contract' between humans and domestic animals, discussed further in Chapter 3.

nature of Schweitzer's system, as the suggestion that humans are more valuable than other living beings compromises its egalitarianism. These are examples of what I call the *slippage* between positions: where one position is openly advocated, yet the writer slips into other, often conflicting, positions elsewhere, usually without noticing the discrepancy. This is particularly prevalent where upholding the original position leads to very difficult practical consequences: as is the case with affirming the equality of all living beings.

Schweitzer's work, is, as his critics repeatedly affirm, unsystematic. He offers no guidelines as to the resolution of ethical conflict and suggests, in the end, that other forms of life can be used as long as they benefit humans in some significant way. This can mean almost anything: as Lindhart comments 'Reverence for life has aroused much enthusiasm because it can mean anything and everything'.³⁸ However, it is too easy to dismiss Schweitzer. His environmental ethic combines concepts which recur time and again in the more recent, more systematic writing I will go on to consider; concepts such as conation, equality, self-realization, self-defence and restitution to name but a few.

Grounds for Considerability: Goodpaster and Regan

The question of what brings something into the sphere of moral concern is, of course, a central one in all ethics. A variety of answers have been given to this difficult and sensitive question. Within many ethical systems, including environmental ethics, a common and persistent response to this question is sentience: here defined as the ability to experience pain or pleasure. If a being can have pleasurable or painful experiences, if it can suffer, then what happens to it, it is argued, is morally relevant. While this is obviously the basis of classical utilitarianism, as we have seen, some advocates of animal 'rights', such as Tom Regan, have developed deontological positions heavily dependent on a sentience criterion.

³⁸ Lindhardt, quoted p.22 Langfeldt *Albert Schweitzer: A Study of his Philosophy of Life* op.cit.

Regan's arguments in *The Case for Animal Rights*, and indeed much of the animal rights literature will not be examined at all in this thesis. Ample work has been done on this elsewhere (although perhaps not from a process perspective). Of primary interest in this chapter are environmental ethical approaches which do not base moral 'standing' or 'considerability' on sentience.

The expression 'moral considerability' was first used in this context by Kenneth Goodpaster in his article 'On Being Morally Considerable'(op.cit.). By this expression, Goodpaster argues that he means only that something falls within the sphere of moral concern, that it is morally relevant, that it can be taken into account when moral decisions are made. He reserves the expression 'moral significance' to indicate how far it should be taken into account, its relative weighting in situations of moral conflict. Moral considerability merely indicates the baseline for inclusion: as Holmes Rolston comments: 'the point here is to get the theory clear: who counts, not how much'.³⁹

Goodpaster suggests that being alive is the criterion of moral considerability. 'As far as I can see, X's being a living thing is both necessary and sufficient for moral considerability so understood'.⁴⁰ Sentience, for Goodpaster, does not go far enough; it is 'an adaptive characteristic of living organisms which provides them with a better capacity to anticipate and so avoid threats to life - ancillary to something more important, an indicator, not a goal'.⁴¹ That a creature can suffer is not, then, a necessary criterion for moral considerability: it points towards something else, the preservation of life, which does not require sentience.

Like Singer and VanDe Veer, Goodpaster emphasizes the importance of 'interests'. Unlike them, however, he draws a distinction between 'being interested in' something

³⁹Holmes Rolston p.102 *Environmental Ethics (EE)* (Philadelphia: Temple University Press 1988).

⁴⁰ OMC 34.

⁴¹ OMC 36.

and something 'being in one's interest'.⁴² While only a sentient creature can be interested in something (one could hardly say that a venus flytrap was interested in a fly in the way that a cat was interested in a mouse) it is perfectly possible to say that something is in the interests of a nonsentient creature (that it is as much in the interests of the venus flytrap to catch a fly as it is for a (hungry!) cat to catch a mouse). Anything which is alive can be harmed or benefited and thus, according to Goodpaster, has an interest in being benefited and not being harmed. On this account, it is possible for humans to have duties and responsibilities towards nonsentient living beings.

This point is of crucial significance to individual deontological environmental ethics. That duties are posited towards nonsentient individuals means that living beings outside the ethical concerns of utilitarians such as Singer (although not Attfield) are morally considerable.

Goodpaster's criterion of moral considerability draws a firm line between the living and nonliving. Some environmental ethicists, however, have proposed a move in the other direction: assigning nonliving natural objects moral considerability. In his essay 'On the Nature and Possibility of an Environmental Ethic' (op.cit.) Regan tentatively argues that neither conscious nor sentient creatures exhaust the class of the morally considerable. This is based on a criterion of 'inherent goodness' in natural objects, a goodness unrelated either to their own ability to value or to anyone else's ability to value them. They need not be alive: Regan uses a river as his example. Plainly, Regan's definition of inherent value here does not coincide with my definition at the beginning

⁴² Many articles have been written on this distinction, some disagreeing with this interpretation: notably Steve Sapontzis 'The Moral Significance of Interests' *Environmental Ethics* 4 no.4 Winter 1982 345-358, who concludes that plants cannot have interests. Peter Miller in 'Do Animals have Interests Worthy of our Moral Interest?' *Environmental Ethics* 5 no.4 Winter 1983 319- 334 distinguishes between psychological interests which he calls 'motivated attention' (interest in) and beneficial interest, which he calls 'welfare' (having an interest). Miller's distinction here is in essence identical to mine. A similar debate is at present current concerning press freedom: something may not be 'in the public interest' (welfare) despite the fact that the public are interested in it (motivated attention).

of this chapter. It is not anthropogenic. Rather, it is closer to Taylor's criterion of 'inherent worth' (indeed, Taylor mistakenly claims it to be identical)⁴³ but there is no suggestion of it being goal-directed or having a *telos*; no-one could describe a river in such terms. 'The presence of inherent value in a natural object is a consequence of it possessing those other qualities which it happens to possess'.⁴⁴ But what such qualities are, Regan fails to suggest:

If we could establish that there is something, (X) such that, whenever any object (Y) has X it is inherently good, we could then go on to try to establish how we can know any object has X. Unfortunately, I now have very little to say about such questions, and what little I do have to say concerns how not to answer them.⁴⁵

This rather unhelpful response is followed by a rejection of Schweitzer' and Goodpaster as drawing an 'arbitrary' line between moral considerability and the lack of it. Despite this vagueness, the existence of such values in nature should, according to Regan, generate an attitude of 'admiring respect' in humans and lead them to adopt the 'preservation principle' of 'nondestruction, noninterference, and, generally, nonmeddling'.⁴⁶

The problems generated by Regan's position here are manifold, and will be considered later. Regan himself is well aware of them. In his later book, *The Case for Animal Rights*, he retreats from his earlier position. Again rejecting the Schweitzer/Goodpaster criterion of being alive, he comments that it is 'not clear why, or how, we could have direct duties to, say, individual blades of grass, potatoes or cancer cells'.⁴⁷ Instead,

⁴³ RN 75.

⁴⁴ NPEE 199.

⁴⁵ NPEE 199.

⁴⁶ NPEE 200.

⁴⁷ CAR 242. Holmes Rolston has an interesting response to the question concerning cancer cells: EE 103.

he proposes a new criterion: being a subject-of-a-life. In doing this, Regan shifts to a position where an organism must have, according to my definition, intrinsic value before it can be morally considerable: that is, it must not only have interests, but must also be able to take an interest in its own life. By taking this step, Regan removes nonmammals, all plants and all nonliving natural objects from the sphere of moral considerability. Indeed, he equates *rights* with moral considerability; an organism either has both equally, or neither. This 'animal rights' (or rather, mammal rights),⁴⁸ position is plainly individual, deontological and egalitarian, but its value base - being subject-of-a-life - is extremely narrow.

Absent from Regan's 'The Nature and Possibility of an Environmental Ethic' and Goodpaster's 'On Being Morally Considerable' are any possible principles for resolving ethical conflict, although Goodpaster hints that such conflicts might be resolved by examining moral significance rather than moral considerability. Schweitzer offers a few suggestions, but also fails to develop any rigorous principles. Paul Taylor, however, in his book *Respect for Nature*, has developed a rigorous (if not unproblematic) individual deontological egalitarian ethical system drawing together suggestive threads from all these sources.⁴⁹

Respect for Nature: Paul Taylor

The title of Paul Taylor's book 'Respect for Nature' is reminiscent in form of Schweitzer's 'reverence for life'. The choice of the word 'respect' over 'reverence' and 'nature' over 'life' however, illustrates something of the different nature of Taylor's and Schweitzer's approaches. Unlike Schweitzer, Taylor's ethics are not located within a metaphysical system where the divine is emptied into a fragmented and reunifiable

⁴⁸ As Callicott points out: p.365 'Review of Regan's Case for Animal Rights', *Environmental Ethics* 7 no.4 Winter 1985.

⁴⁹ It would be appropriate at his point to consider the ethics of the deep ecology movement. However, since deep ecologists seem to have moved away from advocating 'biocentric equality in principle', and since the metaphysics of deep ecology will be considered in Chapter 4, I have chosen to omit them here.

will-to-live: hence the term 'respect' is more appropriate than 'reverence'. Schweitzer's 'reverence' is, as Birnbacher suggests, about 'universal and unconditional love'.⁵⁰ Taylor explicitly rejects love as the basis of an environmental ethic; it is not 'emotional appeal' but 'impartial concern for wellbeing' which is significant.⁵¹ Secondly, Taylor claims that his concern is with individuals within wild nature, rather than with life in general. Despite this claim, Taylor's position, like Schweitzer's, as he admits, logically includes all living beings (although not crystals or snowflakes) whether domestic or wild.

Taylor intends his system to have three major strands: a belief system, a moral attitude and rules of duty/standards of character.⁵² It is the rules of duty which are particularly significant here, but it is impossible to consider this outside the context of the other components.

Like Schweitzer's reverence for life, respect for nature is a human attitude. A person who adopts this attitude adopts a comprehensive world view, which Taylor describes as 'the fundamental kind of moral commitment one can make'.⁵³ It involves the recognition that humans are part of an interconnected and interdependent ecosystem to which they are not inherently superior; and that all organisms, as well as humans, are 'teleological centres of life, in the sense that each is a unique individual pursuing its own good in its own way'.⁵⁴

⁵⁰ Dieter Birnbacher p.9 'A Priority Rule for Environmental Ethics' *Environmental Ethics* 4 no.1 Spring 1982.

⁵¹ RN 90-91. For a powerful defence of love as a basis for environmental ethics, see Marti Kheel 'The Liberation of Nature: A Circular Affair' *Environmental Ethics* 7 no.2 1985 135-151.

⁵² Paul Taylor p.205 'The Ethics of Respect for Nature' *Environmental Ethics* 3 no.3 Fall 1981.

⁵³ *ibid.*

⁵⁴ RN 100.

This claim is the bedrock on which Taylor's system is built, and around which he locates his criterion of inherent worth. Everything which is alive has its own *telos*; it 'pursues its own good in its own unique way...It is a unified system of organized activity, the constant tendency of which is to preserve its existence by protecting and promoting its wellbeing'.⁵⁵ This criterion is very close to that of Goodpaster's (as Taylor acknowledges),⁵⁶ and reminiscent of Schweitzer's - that an organism 'tends to preserve its existence', for example, is tantamount to affirming some kind of will-to-live. It must be noted, however, that Taylor draws a very distinct boundary between the living and nonliving; the latter must be sharply separated from the former. He dismisses, for instance the idea of having 'duties to a river' (suggested by Regan) - one can only have duties towards living organisms with a good of their own.

The concept of inherent worth, defined earlier, 'is the fundamental value presupposition of the attitude of respect'.⁵⁷ That all living beings have inherent worth, according to Taylor, is the only coherent attitude possible for someone who has adopted 'respect for nature'. All organisms are perceived to be part of an interdependent community to which humans are not superior, and all have a *telos* and a good of their own. Humans who respect nature, and who consider their own lives to have inherent worth as people with their own good, cannot but endorse the view that this is true of all living organisms. While their good is not the same as a human good - different species have different goods to fulfil - their good is as vital for them as a human good is for a human. By locating his concept of 'inherent worth' and the duties which follow from recognition of this, in a complete belief system, Taylor is attempting to avoid the accusation that he is deriving an 'ought' from an 'is'. There is no *logical* entailment between accepting that an organism has its own good and that it has inherent worth which imposes duties of respect on us.⁵⁸ Recognition of the inherent worth of all

⁵⁵ RN 45.

⁵⁶ RN Fn.3, 13.

⁵⁷ RN 71.

⁵⁸ RN 71.

living organisms and acknowledgement of corresponding duties is, rather, part of an ecologically informed coherent ethical system of respect, rather than a simple derivation from biological fact.

If Taylor's 'belief system' in *Respect for Nature* is examined more closely, we can see that his ethics is individual, deontological, and egalitarian. This shows a significant development from his views in 1981, where he both accepts that species and communities have a *telos* and also that his system is open to deontological or consequentialist approaches.⁵⁹ By 1986, Taylor is firm in his conviction that one can only speak of species and ecological communities as having a 'statistical good',⁶⁰ where the 'good of its individual members [is furthered] in such a way that the median level of their good-realization is raised'.⁶¹ The good of the community or the species is the good of the individuals who compose it; it can be found nowhere but in the life of individual organisms. The primacy of the biotic community or the biosphere is rejected. It is the individual living organism which has primacy.

Similarly, Taylor has sharpened the deontological nature of his system. Like Schweitzer, he stresses the *attitude* with and *motivation* by which actions are carried out, rather than their *consequences*. Even if, for instance, conservation of wildlife and wilderness for hunting has good consequences for living organisms, Taylor considers it to be unethical behaviour, since it is not motivated by the attitude of respect for nature, but ultimately for its exploitation.⁶²

That Taylor is egalitarian - in intention at least - is also clear from his criterion of inherent worth. Everything which is living has inherent worth; and everything which has inherent worth has it equally. It is the organism as a whole, as a structure working

⁵⁹ Taylor 'The Ethics of Respect for Nature' op.cit.

⁶⁰ RN 69.

⁶¹ *ibid.*

⁶² RN 185.

together to preserve itself, which is valuable, rather than any particular capacities that it might have, or, in contrast with Attfield, states that it might be in. Since the goal, the aim at self-preservation, is of equal significance to each organism, inherent worth is the same. This leads Taylor to the strictly egalitarian principle of *species impartiality*.

From within this belief system Taylor puts forward four basic principles of duty to the wild nonhuman world: nonmaleficence, noninterference, fidelity and restitutive justice. In summary, nonmaleficence is the duty not to harm any individual organism (a negative duty) and noninterference is the duty to refrain from constraining organisms and to allow them to seek self-realization unhindered; also to avoid disturbing natural ecosystems (both negative duties). Fidelity is the duty not to break a trust placed by a wild animal in a human; restitutive justice is the duty to make good wrongs done to individual organisms through human action - that is to say, when one of the other three rules have been broken. Application and elaboration of these four principles should govern human moral behaviour towards other living organisms. Taylor acknowledges that there are occasions when these duties clash with one another, and develops a general priority structure with nonmaleficence at the top, fidelity and restitutive justice with priority over noninterference, providing that no creature is permanently harmed, and restitutive justice over fidelity, if great good is produced without serious harm.⁶³

These duties are accompanied by a series of five priority principles which aim to direct conflict resolution between human and nonhuman organisms. Obviously, for an individual deontological egalitarian ethical system, conflict resolution must be a key issue. Since this is a problem presented by Schweitzer, Goodpaster and Regan, these principles will be considered in some detail.

The first principle listed by Taylor is that of *self-defense*. It is, Taylor states, 'permissible for moral agents to protect themselves against dangerous or harmful

⁶³ RN 218. He follows this with a series of corresponding human virtues, which I unfortunately do not have the space to consider here.

organisms by destroying them'.⁶⁴ This condition only applies where the agent could not avoid the danger, where the danger threatens 'life or basic health' and minimum effective force must be used. It is compatible with the equal inherent worth of all organisms since without resistance, the human's inherent worth will be lost, and with it the aggressor's inherent worth will be lost. Only if the aggressor's inherent worth were greater, Taylor comments, would one have a duty not to resist.

The second and third principles, Taylor calls *proportionality* and *minimum wrong*. To explain these, he introduces a distinction between *basic* and *nonbasic* interests. He begins by explaining his understanding of 'interests' defining 'advances in the interests of organisms' as events or conditions in their lives which are conducive to the realization of their good; while detrimental events or conditions are 'against their interests'.⁶⁵ But different interests are of different significance to organisms; they may contribute more to the realization of their good, or they may be vital to their survival. An interest of the second sort is basic; an interest of the first sort is nonbasic.

It is here that we see the first signs of 'slippage'. Taylor comments that different organisms have different 'basic interests'. For humans, basic interests not only include prevention of physical and mental damage, but also 'what people need if they are going to be able to pursue those goals and purposes that make life meaningful and worthwhile'.⁶⁶ These include subsistence, autonomy, security and liberty. (How these are to be interpreted, of course, could make for a substantial difference in the way humans may, morally, treat nonhumans.) Nonbasic interests, however, for humans, are individual aims which differ between people (while basic interests are the same). It is, of course, obvious that in situations of conflict, basic interests, initially at least, have priority over nonbasic ones.

Both proportionality and minimum wrong concern situations of conflict between

⁶⁴ RN 265.

⁶⁵ RN 170.

⁶⁶ RN 272.

nonbasic human interests and *basic nonhuman interests*. Taylor divides such conflicts into two categories. Into the first category, governed by the principle of proportionality, fall actions which are, according to Taylor 'intrinsically incompatible' with the attitude of respect for nature. Recreational or fur hunting provide examples of this:⁶⁷ a nonbasic human interest which does not respect nature is in conflict with a basic nonhuman interest. Since greater weight should always be given to basic over nonbasic interests, and the nonbasic interest is incompatible with respect for nature, the basic interests of nonhumans must win.⁶⁸ Into the second category, governed by the principle of minimum wrong, fall actions which are not directly incompatible with respect for nature but which threaten basic nonhuman interests, such as construction projects in wild plant and animal habitat. Here, Taylor's attitude is ambiguous. Some such projects may be rejected by those who have respect for nature; but others may be valued too highly to forgo, even though the human interest is nonbasic. Such projects include those of cultural significance, such as a concert hall, or legal and political centres which allow 'civilized life' to continue.⁶⁹ If such projects are carried out, they must involve minimum wrong: the 'lowest number of violations of the rule of maleficence in the ethical system of respect for nature'.⁷⁰ New construction, if possible, should be built on old sites; appropriate, nonpolluting technology should be used, to minimize wrongs. Such actions are still violations of duty, still wrongs; no utilitarian calculus is acceptable; 'It is not the aggregate amount of disvalue or harm which is relevant here, but the number of cases in which one fails to carry out one's duty to another being'.⁷¹

⁶⁷ RN 174.

⁶⁸ In Rolston's terms, this is an occasion where humans ostensibly lose in environmental ethics; but on a more subtle reading of 'lose' ultimate benefits, to human character, for example, may mean that humans win. Rolston cites as an example of ostensible 'losing' but ultimate 'winning' as the South losing the American Civil War and the subsequent abolition of slavery. See his unpublished paper 'Can and Ought Humans to Lose in Environmental Ethics?' (1992).

⁶⁹ RN 281.

⁷⁰ RN 283.

⁷¹ RN 284,

Taylor's fourth principle is *distributive justice*, where *basic human* and *basic nonhuman* interests are in conflict (the basic nonhuman interests being harmless ones). All interests in such circumstances have the same 'moral weight'. The need here, Taylor argues, is to 'transform situations of confrontation into situations of mutual accommodation, wherever it is possible to do so' by, for instance, setting land aside permanently for wildlife habitat; sharing resources between humans and nonhumans alike; using land in rotation by humans and nonhumans, and integrating human buildings into the natural environment. However, this fails to solve conflicts over food. Humans must eat nonhumans to survive; there is no alternative. As with self defence, humans would have only have duties to sacrifice their lives if they were of less inherent worth than other living organisms.

All nonhumans, in Taylor's system, have equal inherent worth. Thus, eating plants and animals is equally wrong. However, Taylor comments, causing suffering to animals when killing them is worse than killing plants because 'any form of suffering is an intrinsically bad occurrence in the life of a sentient creature'.⁷² Thus Taylor suggests a preference for killing plants over killing animals. However, his main argument here for vegetarianism is that more food can be produced on less land by growing plants, and hence fewer organisms need die. It is, on the principle of minimal wrong, far less destructive of life.

Taylor's final principle is that of *restitutive justice*. It involves recompense being made when, for instance, through minimum wrong, damage has been done to organisms. Taylor first comments that 'the greater the harm done, the greater the compensation required'; and suggests that a comparative amount of good should be generated to compensate.⁷³ Secondly, he suggests that restitution should be concentrated on ecosystems, where the 'good of the greatest number of organisms can be furthered'. Setting aside wilderness in one area, for instance, could be an act of compensation for damage in a similar area.

Thus Taylor's five priority principles allow him to argue that an individual deontological

⁷² RN 295.

⁷³ RN 305.

egalitarian environmental ethic can be put into practice, albeit not without a serious change in human attitudes. Some individual deontologists (although surprisingly few, and mostly in some kind of response to Taylor) have rejected the egalitarian nature of his system and proposed their own graded deontological approach. Lombardi and Johnson will be considered in this context, before I move on to consider a critique of both approaches.

A Scale of Value: Lombardi and Johnson

Where defences of graded individual deontological approaches to environmental ethics appear, their usual aim is to distinguish human value from nonhuman value, rather than to consider the grading of values amongst different nonhumans. Where graded individual value is advocated, appeal is frequently made to process thought. Frederick Ferre, for instance, claims support from Whitehead:

...following Whitehead, I acknowledge that all living things have some degree of inherent value⁷⁴ (even vegetable species without nervous systems qualify, though to a significantly less degree) but different organisms call for different forms of respect.⁷⁵

However, despite the seemingly deontological nature of this statement, as we saw in Chapter 1, along with Singer, Attfield and Van de Veer, the process position is consequentialist, not deontological. This resort to process thinking indicates the paucity of material published in graded deontological environmental ethics. It would surely be possible to construct this kind of position with some combination of the approaches considered above. One might, for instance, combine the concept of 'inherent worth' from Taylor with Regan's animal rights and argue for a baseline of considerability where all organisms have their own good and inherent worth; and then a higher grade, to which rights are assigned, for 'subjects-of-a-life'. A basic/non-basic priority principle could

⁷⁴ By inherent value here Ferre means, on my definition, intrinsic value, that is, value to itself.

⁷⁵ Frederick Ferre p.398 'Moderation, Morals and Meat' *Inquiry* 29 1984.

be incorporated to prevent rights from always trumping inherent worth. However, such a system has not been constructed, and it is not my brief to do so here. Consequently, the positions of Lombardi and Johnson will be considered although Lombardi's argument is in the form of a short article response to Taylor's 'In Defence of Biocentrism' (op.cit). and Johnson is concerned with ecosystems and species as well as individual organisms.

In his article 'Inherent Worth, Respect and Rights',⁷⁶ Lombardi, in direct response to Taylor, argues for a graded individual deontological ethic based on the different capacities of individuals. A *telos* is, according to Lombardi, having a capacity, a capacity possessed by a living thing and not by a nonliving thing. It is on the basis of this capacity that inherent worth is assigned. Interpreting a *telos* as a capacity allows Lombardi to make the claim that, in distinguishing degrees of inherent worth, he is merely extending Taylor's methodology: 'The same structure used to distinguish living from nonliving beings can justify differences in levels of inherent worth'.⁷⁷ Having differing capacities can thus bestow differing degrees of inherent worth, depending on the kind of being concerned. Lombardi states this as a basic principle 'P' where:

a type of being that (1) has the capacities of other beings and (2) has additional capacities which differ in kind from the capacities of other beings, ought to have more inherent worth.⁷⁸

Thus, a plant, which has 'vegetative capacities' has some inherent worth, but not much; animals also have vegetative capacities; but on top of this, they have the capacity to feel pleasure and pain, and demonstrate some self-directedness. These additional capacities give them additional inherent worth. Humans have both vegetative and sentient capacities, but also have other capacities, such as reflectiveness, which gives them greater inherent worth again. This difference in inherent worth only extends to

⁷⁶ Lombardi 'Inherent Worth, Respect and Rights' *Environmental Ethics* 5 no.3 Fall 1983 257-270

⁷⁷ Lombardi p.270 op.cit.

⁷⁸ Lombardi p.263 op.cit.

differences between species - members of the same species have the same capacities and hence the same inherent worth.⁷⁹

The higher level of inherent worth among humans gives them, uniquely, rights. Taylor also considers that only humans have rights, but for Taylor, this is because rights are only operative in human interactions; for Lombardi, they give humans higher moral significance than nonhuman species and are an expression of their greater inherent worth.

Thus, Lombardi sets up a value hierarchy which solves many of the practical difficulties generated by a strictly egalitarian position: 'killing crops for food, killing trees for paper and killing animals to cure significant human infirmities can be justified if there are differences in inherent worth between animals, plants and human beings'⁸⁰ This graded individual deontological environmental ethic is built on *difference of capacities between different species*.

This contrasts with Lawrence Johnson's *A Morally Deep World*, where a value hierarchy is built on the basis of differing *interests*. Johnson ascribes similar interests to species and ecosystems as he does to individual living organisms. In this sense, Johnson is not an individualist philosopher. In another sense, his focus of concern is still individual; it is because species and ecosystems are treated as individuals that he ascribes value to them. Johnson begins with a quality derived from an individual and argues that it can also apply to a group, because the group is, in relevant ways, itself an individual. This is a widely held position in environmental ethics, lying behind the description of ecosystems or even the Earth as an organism. This will be further developed in Chapter 3. Because of this, it seems reasonable to consider Johnson in this chapter rather than the next.

⁷⁹ The raises the obvious question of humans who lack capacities such as reflectiveness, a question which Lombardi does not address.

⁸⁰ Lombardi p.267 op.cit.

Johnson focuses his ethical system around the wellbeing of organisms, arguing that 'wellbeing' is, in fact, the most fundamental kind of good an organism can have. Like Goodpaster, he considers that pain and pleasure cannot be the basis of any ethical system; they point to something else: wellbeing. Similarly, he rejects preferences and desires as the root of ethical concern: one may desire things which are contrary to one's wellbeing, or fail to desire things which are beneficial to it. Prudent desires are judged, like pleasure and pain, with reference to something else: wellbeing. Disengaging wellbeing from pains, pleasures and preferences enables Johnson to claim that one need not be sentient nor have preferences in order to have a wellbeing. Johnson understands wellbeing primarily as health, possessed by all living things. While some organisms, primarily humans, may have psychological as well as physical health, lack of sophisticated psychology does not mean that one cannot have a wellbeing.

Johnson, like Goodpaster, links wellbeing with interests. The most basic interest is the 'wellbeing interest in life', possessed by all organisms. Here, Johnson sounds very like Taylor:

A living thing, unlike a tractor or a rock, is an ongoing, coherent, organic whole, a thing-process, with past, present, and orientation and drive towards the future. Our being killed frustrates the life processes that we are, and therefore frustrates us. In general, what I take to be in our interests are those things which contribute to the overall effective functioning of our life process as a whole. This is so whether or not we are humans, and whether or not we are language users, or even sentient.⁸¹

All organisms have the basic interest to go on living - a 'will-to-live' in Schweitzer's terms. But here Johnson diverges from Schweitzer and Taylor and moves towards a graded theory of value. Differing values are based on differing interests; different organisms are worth differing amounts:

It may be that a plant's need for the necessities of life are morally significant on some level, while not so morally important as a human's

⁸¹ MDW 133.

need for the necessities of life. I see no reason to assume that interests are atoms that all have the same moral weight.⁸²

While all organisms have a life-wellbeing, beyond this point different kinds of organisms have different wellbeings and different interests. Mammals, for instance, have a wellbeing which involves avoiding pain and increasing pleasure, and hence have an interest in not being hurt which plants do not. Humans have psychological wellbeing which few nonhumans have; it is in their interests not to have this damaged. Thus the same interests, eg an avoidance of pain interest, have the same weight, but extra interests give extra weight according to the importance of the interest to the individual involved. Thus Johnson proposes, as his fundamental discriminatory principle: 'Give due respect to the interests of all beings that have interests in proportion to their interests'. Lives should be valued 'in proportion to the interests that are inherent in them'.⁸³

Johnson does not commit himself on many more practical issues. It seems likely that he would support vegetarianism, because plants have fewer interests than animals, and are thus of lesser worth. It not clear, however, how he would handle Taylor's concert hall construction on wild land. Would the life-wellbeing of the plants win over the human psychological/cultural interest? Johnson lacks the clarity of Taylor, and his account loses thereby.

A CRITICAL RESPONSE TO INDIVIDUAL DEONTOLOGICAL ENVIRONMENTAL ETHICS

Numerous problems are generated by the ethical approaches considered in this chapter, clustering around the key words individual, deontological (or nonconsequentialist) and egalitarian or nonegalitarian. Correspondingly, this critique falls into three sections.

⁸² MDW 80.

⁸³ MDW 118.

The Problem of Nonconsequentialism

The problems of a nonconsequentialist approach to ethics in general are well known and will not be dwelt on here. However, specific problems are generated within environmental ethics, particularly within the systems considered earlier, by such an approach.

The first, and perhaps most obvious, difficulty is that, just by living, one is constantly forced to destroy inherent worth. There is no escape from the guilt involved in this; in eating, walking, washing, lives with inherent worth are being lost. While this may be morally permissible behaviour, it can hardly be described as morally good. One could not, for instance, in Taylor's system, eat a morally good diet. At best, it is less bad than any other option. Unlike consequentialist ethics, even by doing the best thing that one can do, one is violating a duty. Schweitzer gloomily summarizes this position 'The good conscience is an invention of the devil'.⁸⁴ Such a comprehensively depressing position where all actions to survive are bad (although some are worse than others, especially for Lombardi and Johnson) hardly adheres to the principle of 'ought implies can'. If one does not act at all, one dies oneself; and this is also bad. As Callicott comments, a position such as Taylor's 'implies a quietism which is almost suicidal'.⁸⁵

A second problem centres around the concept of restitution, which was hinted at by Schweitzer and developed by Taylor. Despite the fact that Taylor is one of the very few environmental ethicists to put forward this concept and to argue for it with rigour and conviction, his is one of the systems which cannot support the principle. No nonconsequentialist is able to accept restitution, which, in many ways, resembles Singer's concept of 'replaceability' or 'substitution'. As Schweitzer presents it, our debt to the nonhuman world can, in part at least, be paid off by protecting the will-to-live of all the individual organisms which cross our path (literally and metaphorically!) if they are not organisms which it is, for some reason, necessary for us to kill. However, these are different individuals from the ones which have been harmed - or killed - by

⁸⁴ PC 318.

⁸⁵ NAVT 301.

ourselves or others. Thus it is not restitution to the damaged or destroyed individuals, but to other organisms. This resembles Taylor's more developed concept of restitution: where harm has been done, compensation should be made: the more harm, the more compensation. Setting aside of one wild area, to compensate for damage done elsewhere, is an example of this. Again, compensation is not to the actual organisms that have been damaged, displaced or killed, but to other, albeit similar, organisms elsewhere.

However, *such compensation is not possible for an individual, deontological environmental ethic*. A duty has been violated, whether or not compensation is paid, especially if it is paid to something else. No compensatory calculus exists; the organisms are not shells, which can be discarded, containing their experiences, which can be separated from their shells and totalled. It is the organisms themselves which have inherent worth and will-to-live; creating or assisting a different organism does not change this.⁸⁶ One cannot compensate a dead organism. As Peter Wenz points out, in his interesting examination of this concept in Taylor, Taylor's individual, deontological system cannot reasonably support a criterion of restitution.⁸⁷

Yet, as Wenz also indicates, restitution is an important idea for environmental ethics. As a practical suggestion, it provides grounds for resolution in situations of conflict (such as the building of Taylor's concert hall). Taylor's acknowledgement of this, despite the ensuing 'slippage' is a sign of the importance with which he credits it. His system cannot support all that he wishes to say about environmental ethics; a fact which will be revealed even more prominently when considering his egalitarianism.

⁸⁶ Schweitzer's system is perhaps more amenable to restitution than Taylor, since the 'will-to-live' could be regarded as a universal force with particular manifestations. This would lead, however to a consequentialist ethic, which Schweitzer explicitly rejects elsewhere.

⁸⁷ Peter Wenz p.290 *Environmental Justice* (Albany, New York: State University of New York Press 1988).

The Problem of Moral Considerability and Significance

The egalitarian (or ostensibly egalitarian) nature of Schweitzer's and Taylor's systems have evoked much criticism and restatement: hence the scaled approaches of Johnson and Lombardi. To adopt Goodpaster's distinction, however, it is impossible to examine the moral *significance* of individual natural objects and organisms without first turning to the question of moral *considerability*.

This is, of course, a central concern of environmental ethics - indeed, of ethics in general. It is impossible to give more than a cursory consideration of the complex issues involved here and to summarize the main arguments in the debate about individual 'considerability' in environmental ethics.

Regan's position in 'The Nature and Possibility of an Environmental Ethic' puts forward the broadest value base in individualist environmental ethics, suggesting that nonliving natural objects have 'inherent goodness' and should be treated with an attitude of 'admiring respect'.⁸⁸ This view inevitably raises a storm of philosophical protest, for two fundamental reasons.

The first is that nonliving natural objects have no good of their own. Nothing matters to them; nothing is bad for them or harms them. They have no wellbeing and no interests. Johnson's position here is typical:

If we could convert Ayers Rock to road gravel, doing so without injuring the biotic community, then I would not have grounds for condemning such a project on the basis of respect for interests, unless it could be condemned on the grounds of human interests.⁸⁹

How can nonliving natural objects be morally considerable, when the set of actions

⁸⁸ NPEE 200.

⁸⁹ MDW 200.

which corresponds to 'treating them wrongly' is empty?

Several responses might be made to this. Richard Sylvan suggests that to say something has inherent goodness, or some kind of value, does not necessarily entail that it is morally considerable.⁹⁰ (Indeed, Regan does not use the language of moral considerability but rather of 'admiring respect' and 'noninterference'.) Sylvan criticizes Goodpaster for conflating 'having value' with 'being morally considerable'. Axiology and ethics, he argues, are not necessarily the same thing. While moral considerability implies, according to Sylvan, having 'at least a wellbeing or such like (a *telos*) that an agent can be considerable towards', expressions such as 'respect' and 'value-in-itself' do not require moral considerability.

Although Sylvan's distinctions are interesting (and some of them useful) it is difficult to accept his argument. What would it mean to affirm value but not moral considerability? Does it make sense to say 'this is valuable, but you may do what you like with it?' This is where the use of 'respect' seems so significant. Surely respect, in this sense, is a word with ethical connotations: Taylor certainly seems to think so in entitling his book *Respect for Nature*. Sylvan's response here generates more problems than it solves.

Another more common support for affirming value in 'nonliving' natural objects, or Regan's 'inherent goodness', would be to argue for some kind of pantheism or panentheism, or a metaphysical system which attributed living qualities to the 'nonliving'. This is, of course, the route taken by process thinking, although, in the case of nonliving natural objects, in a very weak sense, as we shall see. However, it is not a view confined to process thinkers. T.L.S. Sprigge espouses something of the sort in saying 'What presents itself as an external physical object is always either itself something which has a feeling of its own being, or is composed of what does so, or both

⁹⁰ Richard Sylvan p.8 'Moral Matters Matter - Environmentally?' op.cit.

has its own overall feeling of its own being and is composed of individuals which are so'.⁹¹ Even with this view, Sprigge does not affirm great value in individual 'nonliving' natural objects. Appeal, he comments 'must be mainly to aesthetic value'. It would require a very strong kind of pantheism or panpsychism to give moral considerability to 'nonliving' natural objects.

There is yet another possible response, but one not available to individualist environmental ethicists - the affirming of the value of nonliving natural objects as part of an ecological system (as, for instance, Andrew Brennan in *Thinking about Nature*).⁹² However, this approach must be laid aside until the next chapter, since it requires a collective, or systemic, approach to environmental ethics.

The second fundamental philosophical criticism of an approach such as Regan's in 'The Nature and Possibility of an Environmental Ethic' is found most clearly in Ernest Partridge's article 'Values in Nature: Is Anyone There?'⁹³ He argues that Regan's concept of good is unbounded: 'If the concept lacks bounds, then everything is 'inherently good', and 'goodness' fails to qualify anything at all. That which denotes everything, connotes nothing'.⁹⁴ While Regan does say that not everything in nature is inherently valuable, he fails to give any idea of what the 'nonvaluable' things might be. Frankena, who makes a similar kind of criticism to Partridge here, concedes that clearly Regan does not intend everything to be morally considerable: 'not junk, useless

⁹¹ T.L.S.Sprigge p.124 'Some Recent Positions in Environmental Ethics Examined' *Inquiry* 34 no.1 1977. In fact, this position is not notably different from a process one, and Sprigge explicitly mentions Whitehead and Hartshorne in his article 'Are There Intrinsic Values in Nature?' *Journal of Applied Philosophy* 4 no.1 1987 21-28.

⁹² Andrew Brennan *Thinking about Nature: An Investigation of Nature, Value and Ecology* (London:Routledge 1988). He considers, for instance, the problem of finding rivers morally worthless (p.148).

⁹³ Ernest Partridge 'Values in Nature: Is Anyone There?' *Philosophical Inquiry* 8 no 1-2 1986 96-110.

⁹⁴ Partridge p.101 op.cit.

cars and artifacts generally'.⁹⁵ Thus Regan could refute Partridge's criticism by arguing that it is nonliving *natural* objects, (using natural to mean 'of nonhuman origin') which have inherent goodness. Such a position would be, however, tendentious in the extreme, and would require significant supportive argumentation. Again, a theistic or pantheistic approach might be adopted to affirm, contra Partridge, the inherent goodness of all nonliving (as well as living) things. To recognize nonliving natural objects as having inherent goodness because God made them, or is in them, is to give them moral considerability of a sort (although based on God as valuer, rather than value independent of all valuers). However, some affirm that what is, is good, independently of all theistic positions. Kristin Shrader-Frechette quotes Aldous Huxley's comment approvingly: 'Nothing, short of everything, will really do'.⁹⁶

Some sort of defence then, can be mounted to defend the moral considerability of nonliving natural objects. However, without some kind of religious or metaphysical undergirding, these arguments convince very few environmental ethicists. Human cultural and aesthetic values, as Johnson concludes, seem to be the most convincing reasons, within an individualist framework, for the preservation of nonliving natural objects.

The inclusion of all *living* things within the sphere of the morally considerable is a different question. It is a fact, as Taylor states, that all living things have their own good, a *telos*, and attempt to preserve their own life: including plants and bacteria. Things can be bad for them; they have a wellbeing. The question, however, remains, whether having a 'wellbeing' in this sense qualifies them for moral considerability. Here, views among individualist ethicists are divided. Peter Singer is scathing about the possibility of individuals without subjective experience having interests or value:

All we mean when we say that it is in the interests of a tree to be watered is that the tree needs water if it is to continue to live and grow

⁹⁵ Frankena Fn.19 p.20 Sayre and Goodpaster, op.cit.

⁹⁶ Shrader-Frechette p.23 'Environmental Responsibility and Classical Ethical Theories' *Environmental Ethics* (Pacific Grove, California: Boxwood Press 1981).

normally; if we regard this as evidence that the tree has interests, we may as well say that it is in the interests of a car to be lubricated regularly, because the car needs lubrication, if it is to run properly.⁹⁷

Frankena expresses a similar view:

I can see no reason why we should respect something which is alive but which has no conscious sentiency...Why, if leaves and trees have no capacity to suffer should I tear no leaf from a tree? Why should I respect its location any more than that of a stone in my driveway, if no benefit or harm comes to any sentient person or animal by my moving it?⁹⁸

Similar views are put forward by Regan in *The Case for Animal Rights* and by R.G.Frey in *Rights, Killing and Suffering*. However, Schweitzer, Taylor, Goodpaster, Lombardi and Johnson, as we have seen, consider that being alive, having a will-to-live, a wellbeing or a good, is enough to qualify for moral considerability.

It would be impossible even to attempt to resolve this issue here, if, indeed, such an issue is resolvable. In actuality, the practical problem here seems to be not moral considerability, but rather moral significance. Where to have moral considerability entails a high degree of moral significance, it is unsurprising that there is great reluctance to admit plants to moral considerability. This is particularly true of ethical positions which conflate moral considerability with moral rights, and even more so with equal moral rights. Regan adopts this position in *The Case for Animal Rights* and so does Joel Feinberg in his important essay 'The Rights of Animals and Unborn Generations'.⁹⁹ Indeed, any individual egalitarian deontological ethical system faces the problem that admission to moral considerability means equal considerability for all - plant, animal, human. To avoid this, many ethicists consider it better not to admit plants and many animals at all. For those with scaled systems, the problem is far less

⁹⁷ Peter Singer p.194 'The Place of Nonhumans' Sayre and Goodpaster op.cit.

⁹⁸ Frankena p.11 Goodpaster and Sayre op.cit.

⁹⁹ Joel Feinberg 'The Rights of Animals and Unborn Generations' in Blackstone (ed.) *Philosophy and Environmental Crisis* (Athens: University of Georgia Press 1974) 43-68.

acute: plants can be acknowledged to have some moral significance, but this need be little more than negligible. However, scaled systems face different problems avoided by egalitarian ones. The dilemma is pithily summarized by Dooley: 'Biocentric views' he comments, must either 'rank life integrities assigning relative standing against a standard' or 'refuse to discriminate amongst life, and hence to rank it'. But the former option is 'homocentric' while the later is 'morally absurd'.¹⁰⁰ Johnson and Lombardi adopt the first option and rank life by 'interests' and 'capacities'. Not to do so, in their view, leads to the kind of moral absurdity where washing one's hands and hence destroying microorganisms 'might be just as bad as Hitler's extermination programmes'.¹⁰¹

Alongside the practical difficulties of an egalitarian position (in particular one which includes plants) lies the broader question whether 'egalitarian' theories are appropriate at all in such a context. Richard Sylvan, for instance, questions whether the politically necessary rhetoric of human equality is an inappropriate paradigm for extension into the nonhuman world. It is, he argues, insensitive to ethically relevant differences between different species within the nonhuman natural world.¹⁰²

The seeds of destruction for egalitarian positions such as Taylor's and Schweitzer's (or, indeed, of Regan's in *The Case for Animal Rights*) are found within their own writing, in the form of 'slippage' into other positions. We have already seen that Schweitzer is subject to such slippage. That Regan also slips positions is frequently noted.¹⁰³ Even Paul Taylor's seemingly rigorous approach is not exempt.

¹⁰⁰ Dooley p.52 'Environmental Ethics: Duty or Heroism' *Philosophy Today* 30 no.1/4 Spring 1986.

¹⁰¹ MDW 136.

¹⁰² Richard Sylvan 'Moral Matters Matter - Environmentally?' op.cit.

¹⁰³ In CAR 351, Regan comments that in a lifeboat situation, he would save a human over a dog. This prompted a typical response from Sylvan: 'Despite his disclaimers, Regan's egalitarian principles ring hollow when it comes to the crunch, for then humans always outrank animals': Fn. 11/4 p.30 'Moral Matters Matter - Environmentally?' op.cit.

This can be seen by considering Taylor's principle of 'self-defence' where moral agents may destroy harmful organisms (since their own inherent worth, and that of the aggressor is equal). The situation, however, frequently arises where the aggressor is not a single organism, but organisms in the plural - disease bacteria for instance. Surely, if thousands of disease bacteria are dependent on me to survive, I have a duty to sacrifice myself to them?¹⁰⁴ Although one cannot 'tot up' worths, as one might in a consequentialist system, the loss of my life or health is surely a lesser loss than that of many bacteria, who each have equal inherent worth to me? This certainly follows from Taylor's principle of minimum wrong, where ethical behaviour minimizes violations of duty.¹⁰⁵ That Taylor does, however, accept the medical profession suggests that, in actuality, he does consider one human to be worth many bacteria.

A second example of slippage is found in Taylor's attitude to vegetarianism. As we have seen, Taylor comments that 'Where there is a choice between killing plants and killing sentient animals, it will be less wrong to kill plants if animals are made to suffer when they are killed for food'.¹⁰⁶ Killing an animal painlessly, then, is equally as bad as killing a plant; killing an animal and inflicting pain on it is worse. By introducing the 'painless killing' clause, Taylor is attempting to hang on to his egalitarianism. But a new value has been added on top of that of inherent worth: that of painful experiences. When a decision must be made between killing two beings of equal inherent worth, sentience has now become a deciding factor. Here, surely, Taylor is moving close to espousing a 'capacity' view, similar to that of Lombardi, although without apparently changing his position on inherent worth.

The most outstanding example of slippage in Taylor's work is incorporated into his

¹⁰⁴ Peter Wenz has generated a similar example: Wenz p.284 *Environmental Justice* op.cit.

¹⁰⁵ It thus resembles Regan's important 'Miniride' principle, coherently explained in CAR 305.

¹⁰⁶ RN 295.

principle of minimum wrong, and picked up very effectively by Peter Wenz.¹⁰⁷ This principle allows humans to undertake projects important to 'civilized' society, even at the expense of killing or displacing thousands of organisms. Such actions, he argues, may still cohere with the attitude of respect for nature. Leaving to one side the cultural snobbery implicit in Taylor's work (why a concert hall, rather than a motor-racing track?) this principle of minimum wrong is plainly inconsistent with Taylor's fundamental position of biocentric equality. Human nonbasic interests are explicitly given preference over nonhuman basic interests. This cannot be consistent with a position which affirms equal inherent worth. All organisms are equal, but some are more equal than others?

These examples make it quite clear that egalitarian positions of the sort championed by Taylor and Schweitzer cannot be sustained - not even by their advocates, who slip, sometimes unconsciously, into inegalitarian positions where humans are concerned, and frequently also with sentient animals. It seems impossible to escape some kind of hierarchy or scaled value system in an individual deontological environmental ethic.

Yet, as Dooley suggested, scaled systems have problems of their own. Existing forms of ranking have meant that other organisms are being judged by their similarity to humans - their possession of sentience, intelligence or interests for example. Humans always remain the paradigmatic possessors of such qualities, and always possess them in the most perfect form. (Such a criticism can, in fact, be extended to individualism in environmental ethics in itself, as was suggested in Chapter 1.) John Rodman, as we have already seen, is the most powerful critic of such ranking approaches, describing 'scales of value' as 'introducing a pecking order to the moral barnyard' which reflects human interests and judgment.¹⁰⁸

So, returning to Dooley's comments, individual deontological environmental ethics is torn between a graded homocentrism, and an egalitarian moral absurdity which is, in

¹⁰⁷ Wenz p.286 *Environmental Justice* op.cit.

¹⁰⁸ John Rodman p.94 'The Liberation of Nature?' *Inquiry* 1977 vol.20.

reality, unsustainable. Neither seems a very satisfactory basis on which to build an environmental ethic. The philosophers I consider in the next chapter attempt to evade this dilemma. How successful they are remains to be seen.

The Problem of Individualism in Environmental Ethics

The individualist focus of these ethical approaches makes them vulnerable to several criticisms, many of which are elaborations of those considered in Chapter 1. These criticisms are often levelled by Callicott and other collective ethicists, on whom I will focus in Chapter 3. Their critique is, however, relevant here.

The first and most obvious criticism is the inability of individualist environmental ethics to come to terms with ecological groupings such as species or ecosystems, which individualist ethicists perceive to be collections of individuals, rather than a whole. The good of an ecosystem is purely the good of the individuals who compose it.

Thus, an individual member of an endangered species can be of no more value than an individual of a common or prolific species. A domestic cat, a Scottish wildcat and a leopard are each of identical worth. What gives them value is their lives, their own capacities or interests, their own wellbeing. Rarity is not a quality which can be experienced or which forms part of their wellbeing. It might be possible to argue that humans project inherent value onto members of endangered species, hence adding value to that which they already have in themselves. But the difficulties with this are demonstrated by the example above: it is more than likely that a domestic cat would be ascribed more inherent value than a Scottish wildcat.

With such an individualist approach, the preservation of species becomes no more than the preservation of individuals within species. This is a position which some individualist philosophers seem happy to accept. Tom Regan, for instance, in *The Case for Animal Rights*, comments:

That an individual is among the last remaining members of a species confers no further right upon that animal, and its right not to be harmed must be weighed equitably with the right of any others who have this right.¹⁰⁹

Indeed, in this instance, since Regan in *The Case for Animal Rights* only accepts that 'subjects-of-a-life' (adult mammals) have a right at all, and he here conflates value with possession of rights, plants and nonmammalian species of whatever scarcity have no value whatsoever, except inasmuch as they are of instrumental value to those who are subjects-of-a-life.

Individualist environmental ethics is unable to cope with diversity as well as scarcity. Diversity cannot be experienced or contribute to the wellbeing of an individual organism (other than instrumentally). Thus it is impossible for individualist ethicists to prefer complex flora and fauna to monoculture, except by projection of inherent value. A wildflower meadow cannot have more value than a field of wheat; each individual plant has its own wellbeing, and in Taylor's terms inherent worth; this is equally true of a wildflower and an ear of corn.

This inability to take account of diversity or scarcity extends to the inability to differentiate between domestic and wild animals. This problem is particularly acute with Paul Taylor, who wishes to distinguish his ethics from the 'ethics of bioculture'.¹¹⁰ However, he is forced to agree that since his ethical system concerns those having a 'good of their own' (and inherent worth) and since domestic animals and plants have a good of their own, his ethics equally include domestic and wild animals. Domestic pigs and wild boar, domestic cows and wild buffalo, domestic chickens and wild grouse all have identical moral standing. Even in a scaled ethical system where pigs might rate above cows and cows above birds, no distinction between wild and domestic status can be maintained. Yet many environmental ethicists do wish to make a distinction here. Midgley, Callicott and Shrader-Frechette, for instance, all differenti-

¹⁰⁹ CAR 359.

¹¹⁰ RN 53.

ate between 'mixed' and 'wild' communities, to which humans have different ethical obligations, as we shall see in Chapter 3. If one accepts the existence of domestic animals at all, humans have duties of protection and provision for them, which one may not apply to wild organisms. While there may be no obligation for humans to feed wild animals in the winter (indeed, some environmental ethicists would argue that there is in fact an obligation not to); to not feed hungry domestic animals in the winter is to fail in duty. Individualist environmental ethics are unable to make such a distinction between communities (although, with his principle of noninterference, Paul Taylor attempts to) and consider that the same duties apply to all animals whether domestic or wild.

That individualist environmental ethics may entail life or wellbeing duties towards individual wild organisms, generates a significant number of problems for environmental ethics. The question of 'interference' becomes a pressing one: should human ever intervene in wild nature to protect individual organisms?

We have already seen that Paul Taylor includes noninterference as a primary duty towards wild nature, even if by interfering one improves wellbeing, *if interference involves the removal of the organism from wild nature*. To remove an organism from wild nature, he argues, is to restrict its freedom. This claim seems reasonable with regard to wild animals - they would, almost inevitably, have to be confined outside the wild. But it is a difficult argument to uphold for wild plants. Transplanting wild plants into gardens is, Taylor claims, 'an absolute negation of their natural freedom'. This is a very strange assertion. What location freedom do plants have in the wild? Is wildness a value in itself, which remains unaccounted for in Taylor's system? Since Taylor focuses on 'taking the standpoint' of individual organisms, and a wild plant (unlike a wild animal) has no mobility and cannot change its location, being moved into a cultivated garden, especially if its wellbeing is thereby improved, can surely be of no hardship to the plant. Like diversity, rarity or domesticity, wildness cannot feature in the inherent worth of a plant. Its *telos* can be pursued perfectly well in a garden, providing its wellbeing needs are met. Taylor's real, if unacknowledged, concern here seems to be the integrity of the ecological system to which he can attribute no value as a whole. The

duty of noninterference does not cohere well with the individualist emphasis on inherent worth in his system.

Indeed, the whole force of individualist environmental ethics would suggest otherwise. Rolston describes an incident where a wild bison fell through an icesheet into Yellowstone River in Yellowstone National Park, where it struggled for many hours in the freezing water.¹¹¹ Park officials, following a policy of 'noninterference' refused to allow the bison to be rescued or mercy-killed; 'nature' should be allowed to take its course; this was part of the procedure of natural selection. Four snowmobilers, following a different ethical prescription and defying park officials tried (unsuccessfully) to rescue the bison. On which side of this dispute would individualist environmental ethicists fall?

Taylor's position here is slightly ambiguous. As we have seen, he rejects any suggestion that animals be removed from the wild, however this may improve their wellbeing (although one still has to ask if 'from the standpoint' of the animal or plant this is always preferable). In this instance, there is no question of removing the bison from the wild, merely of rescuing it from an inanimate threat to its life. Taylor also advises against human intervention in damaged ecosystems after natural disasters such as fire or earthquake presumably because this would endanger their status as 'wild'.¹¹² However, this is again not the same as rescuing the bison from the river. It seems likely that Taylor would assent to this kind of interference. There is certainly no question that Schweitzer would consider it to be a duty. Lombardi would do the same, and so also Johnson, (insofar as one considers only the individualist side of his ethics). It seems clear that, for individualist deontological environmental ethicists, human 'interference' to protect wild animals from inanimate threats would be justified, if not a moral

¹¹¹ Holmes Rolston III p.242 'Biology and Philosophy in Yellowstone' *Biology and Philosophy* 5:1990.

¹¹² RN 176.

duty.¹¹³ Yet this is problematic for collective environmental ethics, and could be considered to disturb 'natural' evolutionary processes, preventing nature from taking its course as Yellowstone Park regulations suggest.¹¹⁴

Behind this whole issue there seems to hang a greater, more difficult question about how nonhuman nature is regarded. Schweitzer, as we have seen, considered the nonhuman natural world to be a distasteful battleground. Fortunately, humans can rise above it and can unite the struggling will-to-live. Richard Sylvan argues that such deprecation of the nonhuman natural world (of which he specifically accuses Regan in *The Case for Animal Rights*) springs from an inappropriately atomistic view of environmental value.¹¹⁵ If value or worth is located in individuals, then their killing is a loss of value, however essential or good it may be for the system. Predation is thus seen as an evil, if a necessary one.

Should predation then be interfered with? It is rare for any environmental ethicist to suggest so explicitly.¹¹⁶ Regan's 'rights' position in *The Case for Animal Rights* is the most frequently accused of this. For Schweitzer, the destructiveness of nature is inevitable; he only suggests rescuing organisms from human or inanimate threats. For

¹¹³ This would not, however, be the case with a deontological individualist environmental ethical system based on rights, like that of Tom Regan, as is made clear in Dale Jamieson's paper 'Rights, Justice and Duties to provide Assistance: A Critique of Regan's Theory of Rights' *Ethics* 100 Jan 1990 349-362. While, on Taylor's account, inherent worth is always lost at death, for a rights position, only a moral agent can violate rights. While this excuses Regan from objecting to predation (since there is no rights violation) it means that no duty of assistance is required morally when any subject-of-a-life is threatened by any nonmoral agent. In other words, since the Yellowstone River was not a moral agent, the rights of the bison were not being violated, and hence no duty of assistance ensued.

¹¹⁴ For a broader debate on 'management' of Yellowstone Park, and the problems which this raises see A Chase *Playing God in Yellowstone: The Destruction of America's First National Park* (New York: Harcourt Brace Jovanovich 1986) and Rolston's response 'Yellowstone: We Must Allow It To Change' *High Country News* June 3 1991 1-13.

¹¹⁵ Sylvan p.23 'Moral Matters Matter - Environmentally?' op.cit.

¹¹⁶ The exception being Steve Sapontzis: *Ethics and Animals* 5 June 1984 27-36.

Taylor, predation is essential for survival. 'The equal inherent worth of all organisms implies that humans should stand aside impartially when they struggle with one another'.¹¹⁷ But even for Taylor, it seems to be the case that predation is perceived to be a necessary evil, rather than a good.

It is for such reasons that J.Baird Callicott accuses 'bioconativists' such as Schweitzer and Taylor, of being 'fundamentally life-denying'. They fail to accept the suffering and death which is crucial to natural biotic processes and which is, in fact, essential for evolutionary and ecological processes to continue:

Nature notoriously appears indifferent to individual life and/or individual suffering. Struggle and death lie at the very heart of natural biotic processes, both ecological and evolutionary. An adequate biocentric axiology could hardly condemn the very processes which it is intended to foster and protect.¹¹⁸

At the heart of this critique is the conviction that, within the nonhuman world, concentration on the individual organism is an inappropriate focus. This critique finds its expression in various ways within environmental ethics. Goodpaster, for example, in 'From Egoism to Environmentalism' comments that individualist environmental ethics are 'formed from the rib of egoism',¹¹⁹ and that 'the last thing we need is simply another 'liberation movement' for animals, trees, flora, fauna, rivers...'. It is, he suggests the 'larger whole' to which we should attribute value (thus developing the possibilities which he left open in 'On Being Morally Considerable').

This association of individualism with egoism, and the desire to attribute (or, indeed, recognize) value in the larger whole, is made with particular coherence by Kent Baldner in his article 'In Search of the Center'. Individualist environmental ethics, he contends:

¹¹⁷ T.L.S.Sprigge p.117 'Some Recent Positions in Environmental Ethics Examined' *Inquiry* 34 no.1 1991.

¹¹⁸ NAVT 301.

¹¹⁹ Goodpaster p.25 'From Egoism to Environmentalism' Sayre and Goodpaster, op.cit.

appeal to an argument from analogy: I begin with the apparently unproblematic assumption that I have some kind of moral value. I then recognize that there are other beings who are, in significant respects 'like me'.¹²⁰

Moral value is extended outwards from humans, but humans remain at the centre. Curiously, Baldner uses Taylor to support his argument, approving of Taylor's contention that when 'grading' value in organisms, humans choose traits which they themselves have and value, such as reason and sentience. Yet Taylor also falls a victim to Baldner's argument, a point which Baldner does not explicitly make, but which he cannot fail to recognize. For Taylor, an individual life, or 'having a good' are the qualities which he has isolated as being at the root of inherent value. Humans, of course, possess these qualities; but inanimate objects and ecological collectives - species, ecosystems, the biosphere - thereby are disqualified from value status. They are not sufficiently like humans. For many environmental ethicists, generalising from egoism produces an ethics 'made in man's likeness'. What is required is a different way of looking at ethics, a way examined in Chapter 3.

THE RESPONSE OF PROCESS THINKING

The comparison between process thinking and the ethical positions considered earlier in this chapter is a complex and interesting one, with some significant similarities as well as some notable differences. This comparison will be approached first by elaborating the process concept of 'society'. With this structure in mind, I will consider how process thinking regards the natural objects and organisms which have been discussed in the first half of this chapter and what their value status might be. This will enable a consideration of process responses to the problems raised by the ethical positions which were put forward in the previous section.

¹²⁰ Kent Baldner p.202 'In Search of the Centre' *Between the Species* 7 no.4 Fall 1991.

The Concept of Society in Whitehead's System

The concept of the 'society' is of central importance for Whitehead's metaphysics. It is one of his fundamental categories for understanding the natural world, and links together his concepts of 'nexus' and 'actual occasion'.

Actual occasions are never isolated in Whitehead's system: in their own actualization, they positively or negativelyprehend the multiplicity of actual occasions which temporally precede them; and they are all members of at least one society - the Universe. However, apart from this inevitable membership in the Universe, actual occasions can belong to a variety of different nexus and societies. The term *nexus* is understood by Whitehead to mean that its members share a certain *mutual immanence*.¹²¹ That is to say, the actual occasions which compose it empty themselves into, or positivelyprehend, one another. This may happen in two ways. A later occasion may positivelyprehend a preceding occasion and hence incorporate its content, making a temporal nexus. Alternatively, two contemporary occasions may positivelyprehend the same preceding occasion thus making them part of a contemporary nexus.¹²² Whitehead does not intend the nexus to be a strong form of connection: it does not presuppose any particular kind of order.¹²³ A society, then, is a specially ordered nexus or collection of nexus:

A society is a nexus with social order...a nexus enjoys social order where i) there is a common element of form in the definiteness in each of its included actual entities and ii) this common element of form arises in each member of the nexus by reason of the conditions imposed on it by its prehensions of some other members of the nexus, and iii) these prehensions impose that condition of reproduction by reason of their inclusion of positive feelings of that common form. Such a nexus is called a society, and a common form is the defining characteristic of the

¹²¹ AOI 234.

¹²² This presupposes Whitehead's doctrine of asymmetrical internal relations: the significance of this will be discussed in chapter 4.

¹²³ AOI 234.

society.¹²⁴

Whitehead moves on to explain that the 'common element of form' is simply a 'complex eternal object exemplified in each member of the nexus' and the reproduction of this form is due to the genetic relations between the members of the nexus and the inclusion in the genetic relations of the feelings of the common form.

This complex explanation of the constitution of a society must, first, be understood within its temporal framework. The cohesion of a society depends on what it inherits from its predecessors. In order to be part of a society, each actual occasion must inherit something common from its predecessors, possessed by all who form part of that society, ie: a complex eternal object. This inheritance is assured by the positive feelings about that complex eternal object which pass on to each successive actual occasion. The positive feelings mean that each successive occasion in the society will positively prehend the same complex eternal object. This sameness holds the society together and, constitutes a 'defining characteristic'.

The cohesive strength of different societies depends on the centrality of the element held in common by all its members. It may be the defining characteristic of the society, but it need not be the most important element in the occasion. The membership of an occasion in any particular society may be peripheral, or it may be definitive. Any one occasion can belong to several overlapping societies at once. An occasion actualizing in a human body, for instance, may be part of the individual organ of the body and the whole human being; or perhaps of three societies, being in the societies of blood, the organ and the body. The body itself may be a member of a larger society; or the actual occasion may be in undigested food and part of the food society by which it entered the body. In other words, although the criteria for being a member of a society sound quite complex, they are, in fact quite vague.

Much more can be said about Whitehead's understanding of the society, and I will

¹²⁴ PR 34.

develop further arguments about it in Chapter 3. Here I wish to concentrate on Whitehead's perception of 'individuals'¹²⁵ within the natural world: nonliving natural objects, plants, nonhuman animals, and human beings.

The simplest kind of society is that which Whitehead calls an 'enduring object', such as a molecule, or a crystal, which exhibits what Whitehead calls 'personal order'. This is a particularly important term for Whitehead, while being, unfortunately, misleading. A 'personal society' is one which displays the characteristic of 'serial ordering' - one occasion positively prehends another, which positively prehends another, and so on - creating a single sequence, an enduring connective thread through time. Whitehead defines this as 'forming a single line of inheritance of its defining characteristic'.¹²⁶ 'Personal' has no other sense: no suggestion of personality, life, or of consciousness. It merely refers to the persisting sequence. In the case of an enduring object, its persistence is due to repetition. Each of the succeeding actual occasions which compose it 'exhibit a massive and complete sameness'.¹²⁷ This is a sign of a very 'low-grade' society. There is little aim at novelty or at increase in the harmony and intensity of experience.

However, these enduring objects form the 'building blocks' of everything that is around us. At the simplest level, they combine to form what we perceive to be inanimate objects, such as rocks, or tables and chairs. Whitehead names these 'corpuscular societies' or 'nonliving aggregations'. They appear to us to be 'inert and passive'.¹²⁸ Like the enduring objects of which they are made, they have personal order; and, like them too, this is because of their repetitious nature.

¹²⁵ 'Individuals' is placed in quotation marks here, because only actual occasions (including God) are true individuals in Whitehead's system. To call rocks, plants or animals 'individuals' is to speak, as Whitehead says, abstractly and unclearly: they are, in fact, societies.

¹²⁶ PR 34.

¹²⁷ SMW 233.

¹²⁸ ACNT 45.

Enduring objects and corpuscular societies both exhibit what Whitehead calls 'structure'. Structured societies contain smaller societies and nexus within them, which Whitehead calls 'sub-societies' and 'sub-nexus'. A table, for instance, contains a structure of 'sub-societies' in the form of molecules. A table, however, is a very simple kind of structured society. The repetitious nature of the actual occasions which compose it mean that it persists through time, and through changing environments, by failing to absorb any of the changes which go on around it. This repetition in the face of change may enable the corpuscular society to persist, but it prevents it from generating novel and deeper experience. 'Its parts merely transmit average expression, and hence the structure survives. For the average is always there, stifling individuality'.¹²⁹

Much more complex are living societies, which are also composed from enduring objects but which produce a higher degree of novel experience. These societies respond to changes in their environment by receiving:

...the novel elements of the environment into explicit feelings with such subjective forms as conciliate them with the complex experiences proper to the members of the structured society. Thus in each concrescent occasion its subjective aim originates novelty to match the novelty of the environment.¹³⁰

Thus, Whitehead presents a picture of two kinds of society. One remains obtuse to all changes outside itself, in its environment, and persists unaltered through different circumstances. Johnson's example of Ayer's Rock would fall into this category; it would persist in the face of enormous external upheaval, such as climatic change. Ayer's Rock is what Whitehead describes as an 'unspecialized society'. It does not need specialized conditions to persist.

The second kind of society, however, the living society, responds to a changing environment, and attempts to absorb it into itself. Living societies are flexible, and can

¹²⁹ MT 38.

¹³⁰ PR 102.

generate novel and enriched experiences, by positively prehending new data from outside themselves. This responsiveness to environmental change allows them to persist, in a different way from the unchangingness of a society such as Ayers Rock. Living organisms, for instance, might respond to climatic change by colonizing new locations, building different kinds of shelters and ultimately evolving, adapted to new conditions. Despite this, as Whitehead does not make entirely clear, living organisms are still more vulnerable than nonliving structured societies. They are more specialized societies than rocks and need more specialized conditions in which to survive, although their ability to adapt makes them reasonably resilient.

The vital difference between living and nonliving societies, then, is that a living society produces greater 'conceptual novelty' or 'novelty of appetition'. 'In some measure, its reactions are inexplicable by any tradition of pure physical inheritance'.¹³¹ This is not a clear-cut differentiation, but provides for a broad distinction with a number of borderline cases.

Living societies are by no means uniform; Whitehead makes a number of distinctions within them. Lower organisms, he comments, do not think. They 'thoughtlessly adjust aesthetic emphasis in obedience to an ideal of harmony'. It is an automatic, rather than a reflective, response to a change in external circumstances. In higher organisms, thinking is introduced and determines the flexible response to changing circumstances. For both kinds of living organism, those which think and those which act automatically, the response to external variation is 'self-preservative'.¹³² Living organisms adapt themselves to changing circumstances in order to survive. Failure to adapt ultimately means failure to survive. Successful adaptation means both survival and the generation of novel experience by the prehension and incorporation of new actual occasions.

The simplest kind of living society is the living cell, whether within a plant or an animal. It is a structured whole, with personal order, and is composed from smaller sub-

¹³¹ PR 104.

¹³² PR 102.

societies and sub-nexus of molecules and electrons, which are not in themselves living. (Indeed, it is a characteristic of living societies that they incorporate a degree of nonliving material, as I shall consider further in Chapter 3). However, the nonliving molecules, or enduring objects, within the living society behave differently from those outside it. The society operates a kind of 'field' within which the molecules behave according to the pattern of the society:

An electron within a living body is different from an electron outside it, by reason of the plan of the body. The electron blindly runs, whether within or without the body; but it runs within the body in accordance with the general plan of the body, and this plan includes the mental state.¹³³

This control is most developed in the society of the human body; but Whitehead points out that it is found throughout nature, not just within living societies. The 'plan' of the society creates a kind of boundary, differentiating those occasions which are part of the society and those which are not. Nonliving enduring objects within a living cell follow a pattern governed by the cell as a whole.

Since a cell is a *living* society, it cannot only be composed from nonliving actual occasions. Life, according to Whitehead, is found in the 'interstices of each living cell, rather than space occupied by any corpuscular society'.¹³⁴ Cobb explains this more clearly:

Now there is far more life in the cell than in the molecules found within it. Therefore, this life must be found in the space not occupied by those molecules and specifically in the occasions located there. These occasions must be characterized by much more novelty and much less continuity than the molecular occasions. The cell as a whole, then, combines the stability of the enduring objects and the life of the primarily mental and therefore not physically detectable occasions within it.¹³⁵

¹³³ SMW 98.

¹³⁴ PR 105.

¹³⁵ ACNT 43.

This passage highlights an important feature of Whitehead's understanding of the natural world. Life, for Whitehead, is characterized by novel responses generated by actual occasions. Occasions which are capable of such responses are, primarily, *mental*.

All actual occasions, while in the process of becoming, are subjective; they are tiny flickers of experience or feeling. Subjectivity is a complete description of them; it is not merely an attribute or a quality which they possess.¹³⁶ Thus it is not possible to grade their subjectivity; all actual occasions are equally subjective. All occasions also, as we have seen, have a physical and a mental pole, of varying strengths. Those with strong physical poles largely repeat the actualization of the perished occasions which theyprehend. Those with a strong mental pole can generate novel experience. Even here, Whitehead does not identify 'mentality' and 'consciousness', a point which Lewis Ford makes with great cogency:

In his later theory, Whitehead carefully distinguishes between subjectivity, (ascribed equally to all actual occasions in the immediacy of their own becoming), mentality (ascribed to them by degrees, according to their complexity and capacity for originating novelty) and consciousness (ascribed only to a very specific class of highly mental actual entities, capable of enjoying intellectual feelings).¹³⁷

While a living actual occasion within a cell may have some mental capacity, it is not conscious mental activity, but rather the 'thoughtless adjustment' of a living cell to changing external situations, brought about by mental poles of the living actual occasions in the cell's interstices.

After the individual cell, the least complex living societies are plants. Whitehead describes these as 'low grade' organisms. This means that the degree of novel experience which they produce, while greater than a corpuscular society, is minimal.

¹³⁶ Pols points out that each actual occasion objectifies and prehends preceding actual occasions, and that consequently it is not entirely composed from feelings. Pols: p.9 op.cit.

¹³⁷ Ford p.38 *The Emergence of Whitehead's Metaphysics* op.cit.

The conformation of present fact to immediate past is more apparent, both in apparent behaviour and in consciousness, when the organism is low-grade. A flower turns to the light with much greater certainty than a human being, and a stone conforms to the conditions set by its external environment with much greater certainty than a flower.¹³⁸

Here Whitehead sets up the hierarchy which dominates his view of the natural world. Plants fall between the utter unresponsiveness of a stone and the profound and unpredictable sensitivity of a human being; they demonstrate some response to their surroundings, but much of this response is predictable - one can be sure that a plant will turn to the light, but one cannot be sure that a human being would not, in fact, turn the light off.

Whitehead expresses the low-grade nature of plants by his statement that a plant is a *democracy*, composed from numerous actual occasions which are all of equal status. No occasion is in a powerful or controlling position; no occasion is more essential to the plant than any other. There is no 'one centre of experience' which is dominant.¹³⁹ Again, in this, the plant falls between the categories of a rock and an animal. A rock, in Whitehead's system, lacks any real cohesion at all; it is merely a collection of actual occasions. An animal, in contrast, has a unified centre of experience which can have a single purpose and a certain degree of control. The actual occasions which compose a plant do work together with a common purpose, but, according to Whitehead, the plant has no centralized control. It 'can be subdivided into minor democracies which easily survive, without much apparent loss of functional expression'.¹⁴⁰ That cuttings can be taken from a plant, then, in a way impossible with higher organisms demonstrates its

¹³⁸ Whitehead p.49 *Symbolism: Its Meaning and Effect* (Cambridge: Cambridge University Press 1928).

¹³⁹ MT 33.

¹⁴⁰ MT 34.

lack of centralization.¹⁴¹ No particular part of the plant is essential for its survival. Loosed from their parent stem, many plants can survive, where severed parts of animals, cut off from their central control, would die.

It is thus plant cells which are of particular significance, rather than the complete plant. The cells have greater unity in themselves than the plant as a whole (a point which Hartshorne develops as we shall see). This lack of inner unity in a plant means that it does not have 'personal order'; there is no single inherited sequence which persists through the plant as a whole. The cells which compose it do have personal order; but the plant as a whole does not. Plants nonetheless, 'exhibit modes of behaviour directed towards self preservation'.¹⁴² They grow, absorb food, resist disease, and ultimately evolve methods of defence against attack. They demonstrate some 'coordinated organic individuality'.¹⁴³ But the coordination is secondary to the plurality. Plants are first and foremost societies, lacking even the personal order of the cells which compose them.

Nonhuman animals, and humans themselves, form more complex and unified societies beyond those of plants. Unlike plants, however, distinctions in levels can be made here. While all plants are democracies and produce similar experience, different animals have significantly differing levels of complexity. At the lowest end are the jellyfish and worms, which, as we have seen, are like plants in that they can be divided and still survive. However, higher animals have one single centre of experience, the 'presiding actual occasion'.¹⁴⁴ This means that 'an animal body, in its highest examples is more

¹⁴¹ It is possible to divide some non-plants which will survive - worms, starfish and jellyfish for example. Whitehead comments on these organisms himself, describing them as 'merely harmonized cells': PR 108. Thus, he regards such low-grade organisms as plant-like democracies.

¹⁴² PR 176.

¹⁴³ MT 38.

¹⁴⁴ PR 109.

analogous to a feudal society, with its overlord'.¹⁴⁵ Some animals fall between democracies and dominance, behaving most of the time like democracies, and failing to produce novel experience, but on some occasions behaving in a coordinated or unpredictable way. This suggests that they have a discontinuous dominant actual occasion.

Of what does the dominant actual occasion consist? Whitehead describes it as a 'living person'. Again, it is important to be careful about his use of 'person' here; he means by this a persisting series of high-grade actual occasions, that is to say, occasions with a dominant mental pole. Their persistence gives them a recognizable form, and can be called 'personality'. The higher the mental grade - and more particularly, when it reaches consciousness or self-consciousness in humans and other 'high' animals, the closer it is to our usual use of the term 'personality' with its implications of original traits and individual idiosyncrasies. 'The enduring personality', Whitehead remarks 'is the historic route of living occasions which are severally dominant in the body at successive instants'.¹⁴⁶ The enduring nature of the personality means that an animal or a human being can be accurately described as an 'enduring object'. Unlike the molecules and crystals which were described as enduring objects before, this is not because of its repetitious nature, but rather because of the way in which the societies which comprise the enduring object are bound into a whole by their dominant actual occasion.

The dominant occasion is, in fact, more accurately called a 'series of dominant occasions' since it is a constantly changing thread of high-grade actual occasions positively prehending those which preceded them. It is thus a linear society. Indeed, the presence of a dominant occasion is not intended in any way to deny the nature of the animal body as a society. It is, of course, composed from sub-societies and sub-nexus, which are constantly changing. The dominant actual occasion is an agent of a 'complex

¹⁴⁵ MT 35.

¹⁴⁶ PR 119.

process of massive simplification',¹⁴⁷ allowing the multitude of different changes going on in the body to be filtered into a single perceived experience. The astonishing thing about the animal body, for Whitehead, is its unification. 'What needs to be explained is not dissociation of personality, but unifying control, by reason of which we not only have unified behaviour, which can be observed by others, but also consciousness of a unified experience'.¹⁴⁸ Indeed, even with the strongest dominant occasion, much which occurs within the animal body, such as breathing and digestion still remains uncontrolled by it.

Most nonhuman animals, then, have dominant actual occasions, are 'regnant' societies, which Hartshorne calls 'monarchies'. However, they lack certain human qualities:

In animals, we can see emotional feeling dominantly derived from bodily functions and yet tinged with purposes, hopes and expression derived from conceptual functioning. The distinction between men and animals is, in one sense, only a difference of degree. But the extent of the degree makes all the difference. The Rubicon has been crossed.¹⁴⁹

Nonhuman animals thus have some conceptual ability; they entertain 'notions, hopes and fears'.¹⁵⁰ They may have 'flashes of aesthetic insight, of technological attainment, of sociological organization, of affectionate feeling'.¹⁵¹ But they lack the developed conceptual ability of an adult human. Their 'mental functionings' are deficient.¹⁵² They may have some semblance of morality, but they lack religion¹⁵³ and they lack civilization. Humans have a much greater capacity to introduce novelty, and they have

¹⁴⁷ PR 314.

¹⁴⁸ PR 108.

¹⁴⁹ MT 37.

¹⁵⁰ MT 4.

¹⁵¹ AOI 166.

¹⁵² MT 4.

¹⁵³ MT 38.

a much higher emphasis on abstraction.¹⁵⁴

Although this difference is seemingly only a difference of degree, language such as 'crossing the Rubicon' and nature 'bursting through another of its boundaries',¹⁵⁵ suggests that Whitehead believes human capacities to be immensely greater than those of nonhuman animals. It is the possession of the capacities, and the corresponding ability to generate rich experience which is significant, rather than being a member of the human species. Babies, and adult humans without the conceptual abilities of which Whitehead speaks, are thus like more like nonhuman animals than adult human beings.

Whitehead's understanding, then, produces a series of nested societies from the smallest, such as electrons and other enduring objects, through the corpuscular societies, such as Ayers Rock, to the living societies: the cell, plants, nonhuman and human animals. Indeed, societies do not stop with the single human being, as will become clear in Chapter 3:

An army is a society of regiments, and regiments are societies of men, and men are societies of cells, of blood and of bones, together with the dominant society of personal human experience, and cells are societies of smaller physical entities such as protons, and so on.¹⁵⁶

Whitehead's understanding of all that exists as composed from graded societies of actual occasions forms the basic insight of all process thinking in the Whiteheadian tradition. However, different process thinkers, in particular Charles Hartshorne, have adopted slightly different interpretations of the status of societies; which are worth considering, since they have some important implications both here and in Chapter 3.

¹⁵⁴ MT 148.

¹⁵⁵ MT 36.

¹⁵⁶ AOI 239.

The Concept of Society in Hartshorne and Other Process Thinkers

Hartshorne accepts Whitehead's fundamental premise that everything is composed from graded societies of actual occasions, from the electron to the Universe (although he prefers to use the language of organisms rather than that of societies). In his essay 'A World of Organisms',¹⁵⁷ Hartshorne introduces a distinction significantly absent from Whitehead's categories and which lends a different emphasis to his ethical concerns. Whitehead's societies exhibit differing degrees of closeness; but he introduces no clear-cut distinction between different types of society. Hartshorne, however, using his preferred organismic language, discriminates between what he calls the organism and the quasi-organism (although both are societies). He explains this distinction: 'My suggestion is that any whole which has less unity than its most unified parts is not an organism in the pregnant sense here in question'.¹⁵⁸ Thus an electron, or a human being, which are both more unified than their most unified parts, are true organisms, while a plant, which is less unified than its most unified parts, its cells, is a quasi-organism.

This intensifies the individuality which Hartshorne attributes to true organisms, and the plurality which he attributes to quasi-organisms. His comments on the individuality of some nonliving organisms can verge on the bizarre. He remarks of an electron: 'How bored an electron would become if it had only one orbit, or if it had to alter its orbit gradually. Instead, it alters its positions in jumps and thus gets vivid contrast'.¹⁵⁹ An electron is a true organism, an individual. Thus it is easier for us to identify with it than for us to identify with a plant, which is a plurality, a quasi-organism.¹⁶⁰ A plant, in contrast, is compared by Hartshorne with the population of a city. It has no

¹⁵⁷ Hartshorne 'A World of Organisms' in *The Logic of Perfection and Other Essays in Near Classical Metaphysics* (LP) (Lasalle: Open Court 1962).

¹⁵⁸ LP 192.

¹⁵⁹ Hartshorne 190-191 'Mind and Matter' *Beyond Humanism: Essays in the Philosophy of Nature* op.cit.

¹⁶⁰ Hartshorne p.176 'Mind and Matter' op.cit.

feelings as a whole; it is a collocation of cells, which Hartshorne lists alongside tables and crystals.¹⁶¹ It is like a flock of birds or a swarm of bees.¹⁶² Indeed, Hartshorne goes so far as to say that to 'ask how a plant feels' is rather like 'asking how America feels, except that America is in some ways much more unified'.¹⁶³

Two other process thinkers have contributed detailed descriptions of their understanding of the 'grades of being': Jay McDaniel, most prominently in his book *Of God and Pelicans*¹⁶⁴ and John Cobb with Charles Birch in *The Liberation of Life*. While these contribute few startling developments, their value conclusions are interesting, and for this reason, their perspectives will be briefly considered.

McDaniel puts forward, essentially, a simplified Hartshornian position.

There are, he suggests, 'at least two basic organizational types':¹⁶⁵ monarchies and democracies. The monarchy, McDaniel says, has a 'psyche' and this is 'the organism's spirit, its soul'. He identifies this with the dominant actual occasion. In organisms with 'complex nervous systems' it is found in the brain. Different kinds of organisms have different degrees of 'soul':

Strength of soul is a measure of (1) the extent to which a given occasion of experience in a psychic stream is able to learn from previous experiences, thereby contributing to an ongoing identity over time and (2) the extent to which, as it occurs, the subjective unity of a presiding experience has greater richness of experience than those of its component parts.¹⁶⁶

¹⁶¹ Hartshorne p.10 *Wisdom as Moderation* (Albany, New York:State University of New York Press 1987).

¹⁶² CSPM 142.

¹⁶³ Hartshorne p.215 'The Compound Individual' *Philosophical Essays for A.N.Whitehead* (London: Longmans, Green & Co 1936).

¹⁶⁴ Jay McDaniel *Of God and Pelicans: Towards a Theology of Reverence for Life* (GP) (Westminster/John Knox Press 1989).

¹⁶⁵ GP 77.

¹⁶⁶ GP 79.

Here McDaniel is clearly influenced by Hartshorne, appropriating Hartshorne's basic theme that, in a true organism, the whole is more unified than its most unified parts, and shifting the emphasis from greater unity to greater richness of experience. This emphasis on richness of experience is also a subtle change from the Whiteheadian position where the production of novel, rather than rich experience is emphasized. There are of course strong links between unity, novelty and richness of experience in process thought, although it is by no means obvious that a novel experience need be richer than a repeated one.¹⁶⁷

The democracy, however, McDaniel argues, lacks a psyche; it is 'an aggregate of energy events'. Building (unacknowledged) on Hartshorne's metaphor of the city, he comments 'While this city may be more than the sum of its individual constituencies, it is not a "more" with experiences and interests of its own. A democracy is the totality of its parts in relation'.¹⁶⁸ The explicit denial that a democracy (such as a plant) has interests of its own, other than the interests of its parts (such as its cells) is a significant one, maintained implicitly by Hartshorne.

Cobb and Birch, in the *Liberation of Life* approach the description of the 'grades of being' from a more biological perspective.¹⁶⁹ In addition, they largely eschew technical Whiteheadian language, rarely speaking of societies or actual occasions, but predominantly of 'organisms' and 'experience'. Unlike Hartshorne, no distinction is made between true and quasi-organisms as the full title of their book bears out: *The Liberation of Life: from the cell to the community*. This suggests that they understand the human community to be the same kind of thing as a cell; for Hartshorne, of course,

¹⁶⁷ Several critics of Whitehead accuse him of arguing that novelty is necessarily good in itself: for example Henry Clark p.136 'Process Thought and Justice' Cobb and Schroeder op.cit. This, in fact, is not Whitehead's opinion. as I will go on to demonstrate in the next section. McDaniel's stress on richness of experience here is an indication of the value context in which he is locating his description.

¹⁶⁸ GP 78.

¹⁶⁹ Although how far many biologists would accept this perspective is, perhaps, a moot question.

the human community would be a quasi-organism, rather than a true organism, like the cell.

In accordance with all process thinking, Cobb and Birch stress the 'internality' of an atom; it has subjective, if unconscious, experience. However, their real concern is with living organisms. As with all process thinkers, plants are described as societies of cells. However, Cobb and Birch are slightly more positive about the cohesion of such a society. They do not adopt Hartshorne's 'city' imagery. 'Plants are not mere aggregates of cells. They perform numerous functions which the cells outside of these societies cannot perform. Nevertheless, we do not attribute to plants the sort of unity we think we discern in the cell'.¹⁷⁰ It is not clear from their description whether Birch and Cobb think that plants as a whole have interests. The most likely interpretation of their position is that the survival of the plant is instrumental for the survival of its constituent cells: after all, 'the life of the plant is the life of the cells which compose it'.¹⁷¹

The consideration which Birch and Cobb give to other organisms does not differ significantly from that of Whitehead. Rather than using the language of 'dominant occasions' or 'monarchies' they refer to 'centralized co-ordination' and the 'emergence of conscious experience' as the characteristics of such organisms. However, their value position is very thoroughly developed.

Value in Individual Natural Objects and Organisms

The question of value in individual natural objects and organisms in process thinking is a complex one, and will be approached in the following way. After a brief general comparison of value between process thinking and the environmental ethicists examined in the first half of this chapter, this consideration will be divided into three parts. As with the earlier critique, these three sections will address the issues of *moral*

¹⁷⁰ LL 153.

¹⁷¹ *ibid.*

considerability and significance, nonconsequentialism and restitution and, finally, *individualism*. In contrast to my previous critique, however, I shall be examining moral considerability and significance first, since this is essential as an approach to the other two questions.

Value: A General Consideration

The actual occasion is the most basic unit in Whitehead's system. It is the ultimate and final individual, the self-creating creature. While actualizing itself, it is subjective, and this subjectivity is its own self-valuation. Value in the universe is the value which the actual occasion has in itself and for itself.

This value is usually described in process writing as intrinsic value, and it does, in fact, fit the definition of intrinsic value I proposed earlier: 'an event or condition directly experience(d) to be enjoyable in and of itself'. However, it is significantly different from earlier usage, since intrinsic value was there confined to conscious valuers. But within process thinking, as I explained in Chapter 1, the enjoyment of an occasion on becoming actual need not be conscious. To restrict intrinsic value to the conscious is, to process thinkers, an unwarranted conflation of 'subjectivity' 'self-valuation' and 'consciousness'. Birch and Cobb, for instance, claim that they 'can speak comfortably of "non-conscious experience"'.¹⁷² Valuable experience is not confined to sentient organisms, or indeed, to living organisms at all; it is found everywhere. It is, also, genuine intrinsic value, in that, despite the fact that Whitehead's system is a theological one, the value generated by actual occasions is their own value, created by their own individual choice. It is not value assigned to the occasions by God from outside.

Value is generated within the process, within events, located within states of affairs rather than substances or objects, and is inescapably actual. Abstractions such as qualities are not valuable in the process system. Value is found in actual occasions.

¹⁷² LL 123.

This interpretation of value immediately highlights several contrasts between process thinking and individual deontological environmental ethics. The presence of intrinsic value throughout the universe, rather than solely confined to conscious or sentient¹⁷³ animals points to one of the most important differences: the different way in which value is constituted.

Within process thinking, intrinsic value is the most fundamental and basic kind of value. Although instrumental and inherent value, in the senses defined at the beginning of this chapter, can exist in a process system, what really matters about them is the difference which they make to the experiencing actual occasions. The cat owner may instrumentally value the cat for killing mice; but what is significant (laying aside, of course, the experiences of the cat and the mouse) is the added richness of intrinsic experience generated in the cat owner when the dead mouse appears on the doorstep in the morning. Although not all value is intrinsic, all other values are instrumental to the production of intrinsic value. Ultimately, intrinsic value is solely significant, because it alone can add to the consequent nature of God.

This is not, however, the case with the approaches to value considered earlier in this chapter. Paul Taylor, for instance, affirmed that all living organisms, including plants and bacteria, have inherent worth, and it is this which is of primary significance. But inherent worth is *not* dependent on the ability to experience. Having a good of one's own, a *telos*, is necessary and sufficient for the possession of inherent worth. Thus, a rock, with no good of its own, and with no *telos*, has no value; a plant, which has both a *telos* and a good of its own, does have value.

This raises again the question of the link between experience and value. Holmes Rolston, for instance, argues:

¹⁷³ In fact, process thinkers, in particular Hartshorne, sometimes describe actual occasions as sentient. In the sense that they are feelings, this is not an inaccurate term; but it is certainly far removed from the usual meaning of sentient as able to feel pleasure and pain.

The existence of unexperienced value is not a contradiction in terms, unless one builds into the meaning of value that it must be experienced...But it would be fatal to understanding the objective values carried by natural systems to conclude that since humans experientially own these values, values are found only in felt existence, nothing more.¹⁷⁴

I do not wish to consider systemic value in general, or Rolston's position in particular here. My intention is to again emphasize the widespread uncoupling of value and experience in environmental ethics. The breaking of this link - or, rather, the affirmation of the significance of unexperienced value - is, of course, essential for the environmental philosophers earlier in this chapter. Since they do not accept that experience extends into the nonhuman world further than animals, were they to affirm a necessary link between experience and value, they would be unable to value such living organisms as plants and bacteria. This is the route taken by Singer, and by Regan in *The Case for Animal Rights* (despite the other differences between their approaches). By severing the necessary link between experience and value, and suggesting criteria such as (unexperienced) 'wellbeing' 'capacities' 'having a good' 'interests', philosophers such as Taylor have been able to affirm the moral considerability of a variety of individual living organisms - and even nonliving natural objects. How then does process respond to such claims for moral consideration?

Moral Consideration and Significance in Process Thinking about the Individual

Since the locus of value in process thinking is the actual occasion, and actual occasions make up the Universe, it might seem as if the entire universe has, or could have moral considerability. All occasions, after all, contribute to the consequent nature of God.

It is for this reason that it is impossible to disentangle moral considerability and moral significance in process thinking. In contrast with Regan's position in *The Case for*

¹⁷⁴Holmes Rolston p.282 'Human Values and Natural Systems' *Society and Natural Resources* Vol 1 1988. Regan makes a similar point: p.147 'Honey Dribbles Down Your Fur: Remarks on Environmental Ethics' *Social Theory and Conflict Resolution* Bowling Green Studies in Applied Philosophy VI 1984.

Animal Rights, and Feinberg's in 'The Rights of Animals and Unborn Generations' this is not because the threshold of moral considerability gives very high moral significance. In fact the reverse is the case. The threshold of moral considerability in process thinking is so low that even though something may be morally considerable, its moral significance is negligible. Thus, although, technically, all actual occasions could be morally considerable, in actuality their significance is so slight, so trivial, that they are not worth consideration. The best approach is to look for the boundary of practical, rather than theoretical, moral considerability; that is to say, where moral considerability becomes moral significance and thus makes a difference in moral decisions.

How, then, would process thinking respond to Regan's suggestion in 'The Nature and Possibility of an Environmental Ethic' that nonliving natural objects should be treated with 'admiring respect'?

It is not self-evident that process thinking would dismiss value claims for the nonliving. Indeed, it would be quite possible for process thinking to push Goodpaster's argument further. Goodpaster claims that sentience is not necessary for moral considerability, because it is only an indicator, a protection for something else - life. Life, in a process system, like sentience for Goodpaster, is merely an indicator of something beyond itself - the experiencing actual occasion.¹⁷⁵ Life is a particularly specialized form of a universal phenomenon. Undoubtedly, then, process thinkers would agree with Regan in 'The Nature and Possibility of an Environmental Ethic' that to draw a line of moral considerability at life is arbitrary.

In addition, process thinking would want to affirm the general goodness of 'what is'. To exist is good (however much better it could have been) in that every occasion contributes something to the consequent nature of God. Thus it would not be inaccurate for process thinkers to speak, as Regan does, about 'the inherent goodness of things' -

¹⁷⁵ A similar attempt to push Goodpaster further is made by W. Murray Hunt in his article 'Are Mere Things Morally Considerable?' *Environmental Ethics* 2 no.1 Spring 1980 59-65.

or rather, the inherent good of the actual occasions which compose them.

However, beyond this point, despite the metaphysical structure offered by a process system, no further support is given to Regan's suggestion. 'Natural objects' so-called, such as the Colorado River or Grand Canyon, are, firstly, in process perspective, societies lacking cohesion; they are collocations of atoms, or, in Hartshorne's terms, quasi-societies, since the whole is less unified than the most unified parts. Hartshorne, for instance, is prepared to accept that, rather than a mountain itself, it is the atoms and molecules which make up a mountain which 'contribute value to the cosmos'.¹⁷⁶ Thus it would be impossible for process thinking to value nonliving natural objects as 'wholes'.

Another problem (one which will recur in various guises when considering environmental value in process thinking) is the inability of process thinking to distinguish between 'natural' and 'artificial' nonliving objects, without the intrusion of human valuers. Frankena's distinction between 'natural objects' and 'junk, old cars, and artifacts generally' could not be something of which the concreting actual occasions which compose them could be aware. An iron atom within Grand Canyon or a wrecked car, both members of nonliving societies, would not be able to generate value for themselves of a different kind because one is a member of a 'natural' society, and one an 'artifactual' one.

Most importantly, these difficulties aside, the value generated by atoms and molecules in nonliving societies is negligible in any case. Having a very strong physical pole, and a weak mental pole, they generate little novel or rich experience. Thus, although they may generate value, it is not worth practical moral consideration:

The intrinsic value that can be attributed to the subjective experience of events at the sub-atomic, atomic and molecular levels, is so slight that for practical, and therefore ethical purposes, it can be safely ignored. The same is true of mere aggregates of events such as rocks...the effects of

¹⁷⁶ LP 192.

most human activities upon such events is trivial. Entities of these types may reasonably be treated as means, or in terms of their instrumental values only.¹⁷⁷

This is not, however, to suggest that a nonliving object cannot be responsible for generating extremely intense and harmonious experience in higher-grade organisms. Regan's river, for instance, may generate intrinsic value for the fish which swim in it, and for the humans who look at it. In this respect, the process attitude to nonliving natural organisms is rather like its attitude to artistic masterpieces. One does not judge a great painting by the inconsequential amount of intrinsic value generated by the atoms and molecules which compose the paint and canvas. (In this respect, in any case, all paintings are of virtually identical intrinsic value, whatever their artistic merit.) It is the intrinsic value generated in those who view it which is significant. To destroy the painting is immoral, not because of the value lost to the actual occasions which compose the painting, but because of the potential richness of experience lost through its no longer being viewed and producing value which would have contributed to the consequent nature of God. Thus, inanimate objects, natural or otherwise, are primarily instrumentally valuable for the intrinsic value which they generate in human and nonhuman high-grade valuers.¹⁷⁸

Despite the initial presumption that process thinking would give some support to Regan's view in 'The Nature and Possibility of An Environmental Ethic', in practice inanimate objects are, in themselves, morally insignificant. Process thinking thus demonstrates a practical, if not a theoretical, concurrence of views with those of the majority of individualist environmental ethicists. This harmony is, however, a fragile one, and the consensus is shattered when plants and other 'low-grade' living organisms are considered.

Plants in process thinking, as has been explained, are primarily societies, or, in

¹⁷⁷ LL 152.

¹⁷⁸ This idea is explored further in one of the few comments in process writing about visual art by Cobb ACNT 101.

Hartshorne's terms quasi-organisms. 'The life of the plant is the life of the cells which compose it...its intrinsic value is the sum of the cells'.¹⁷⁹

The degree of coherence thought to be exhibited by plants varies between process thinkers, McDaniel and Hartshorne suggesting less unity than Cobb and Whitehead. Cobb seems to accept, unlike Hartshorne and McDaniel, that a plant, as a whole, has a *telos*. The situation is less clear in Whitehead, who might argue that since a plant can have cuttings taken to make new plants, it can have no *telos* other than that of its individual cells. However, even if process thinkers were to concede a unified *telos* to a plant, this would not necessarily affect its value status, since it is not having a *telos* or being alive which bestows value, but rather the quality of experience generated. According to all process thinkers, plant cells are responsible for value generation. Of course, practically, it would be very difficult to separate the value of the plant from that of its cells, or to protect the cells without protecting the plant. Without the environment of the plant, the cells could not survive. This is, however, assigning the plant instrumental value for its cells, rather than intrinsic value in itself.

The value generated by plant cells gives them practical moral considerability in a process system:

If a choice were to be made between a completely inorganic universe and a universe in which there was cellular life, there is no question that the latter should be chosen. The value of such a universe would be incomparably the greater of the two. The intrinsic value of cells is not entirely negligible from an ethical point of view.¹⁸⁰

In any situation, other than that of a comparison with nonliving material, the moral

¹⁷⁹ LL 153.

¹⁸⁰ LL 152-153. Although Birch and Cobb make no cross-reference here, this comparison between a barren and a plant-laden world is strongly reminiscent of the 'last man' and 'last people' examples used by Richard and Val Routley in 'Human Chauvinism and Environmental Ethics' op.cit. The methodology seems ultimately to spring from G.E.Moore.

significance of plants, even plant cells, is extremely low. Indeed, Birch and Cobb conclude that one would not be behaving immorally if one were to ascribe plants purely instrumental value. They produce little rich experience, largely repeating that of preceding occasions; one also cannot distinguish between experiences of cells in different kinds of plant. Thus, their moral significance is trifling.

In assigning moral considerability to the plant world, process thinking is in harmony with the individual deontological environmental ethicists considered earlier. In ascribing life and value to the cells, rather than to the whole plant, however, process thinking is in serious disagreement with them; and in the degree of value ascribed to them is at odds with Schweitzer and Taylor at least. Indeed, the process position here, in particular its conception of the plant as a society, is vehemently rejected by these environmental ethicists.

That this should be so is unsurprising, since their arguments for the moral considerability of plants depend, at root, on the conception of a plant as an individual pursuing its own end, with a good, a 'will-to-live', and interests of its own, however unconscious they may be. The integrity of the plant is vital to sustain such a view; and thus the plant as a whole is valuable for these ethicists, rather than the experiences of its cells. If a plant is conceived to be a society, this teleological understanding of the whole plant is weakened. Thus, a number of attacks have been made on process thinking in this respect. Karen Davis argues in a letter concerning a positive review of Daniel Dombrowski's book *Hartshorne and the Metaphysics of Animal Rights* (to which I shall return):

Not only do cells and other microscopic entities show signs of sensitivity to the environment; so do whole plants as any lay observer can note...I don't understand how Hartshorne can logically ascribe sentience to cells based on the argument that they show signs of sensitivity to the environment, even though they do not indicate the presence of a nervous system, yet deny sentience to whole plants using the nervous system criterion, while ignoring the fact that they too can be seen responding to the

environment as individuals.¹⁸¹

A similar view is expressed by Jay Kantor, citing the self-regulatory and homeostatic functions of plants as evidence of their integrity.¹⁸² Holmes Rolston develops this concept still further in a review of Ian Barbour's process-oriented Gifford Lectures. Like Davis, he thinks it strange that cells are considered to be more integrated than plants, and that their atoms experience more than the whole plant. He argues that plants are 'unified entities of the biological kind'. They have DNA coding; they 'repair injuries', they 'move water, nutrients and photosynthates from cell to cell'. On this basis, they are 'integrated enough to defend intrinsic value, a good of their own kind'.¹⁸³

For egalitarian ethicists, the minimal value ascribed to plants in process thinking is an indication of deep ethical inadequacy. Treating a plant as a collection, rather than a whole, and judging its value by its experiences rather than its interests, its aim or its 'will-to-live', is a sign of insufficient respect or reverence for life. Even Lombardi and Johnson would argue that to judge a plant by its richness of experience, despite process being a panexperiential metaphysical system, is to use an inappropriate value standard. This difference in attitude towards plant life between process thinking and other ethicists of this chapter illustrates the central difference between the duty-oriented, individual organism basis for ethics in systems such as Taylor's, and the consequence-oriented, experience-generating approach of process ethics. This differentiation is even clearer when we consider the value of nonhuman animal and human life.

Some implications of the process understanding of humans and nonhumans have been considered in the preceding chapter, and will not be repeated here. It will already be

¹⁸¹ Karen Davis p.242 Letter to the Editor *Between the Species* 5 Fall 1989.

¹⁸² Jay Kantor p.169 'The "Interests" of Natural Objects' *Environmental Ethics* 2 no.2 Summer 1980.

¹⁸³ Holmes Rolston III p.79 'Religion in an Age of Science; Metaphysics in an Era of History' Review Article *Zygon* 27 no.1 March 1992.

clear that with nonhuman animals and human beings there is no longer a question of moral considerability, but purely of moral significance. No process thinker disputes that animals are morally considerable; what matters is how morally significant they are.

To recap, all animals, human and nonhuman, are societies composed from sub-societies and sub-nexus, and ultimately from experiencing actual occasions. Value is generated by the harmony and intensity of the experiencing actual occasions. Animals, human and nonhuman, have a 'dominant actual occasion', which allows the perception of unified experience. In addition, the mental pole of the dominant actual occasion is very strong - in humans and perhaps some nonhuman animals it is conscious - which generates considerable complex and novel experience. A large number of contrasting (but compatible) eternal objects generating harmony and intensity of experience can be incorporated into the actual occasion, which contributes to the consequent nature of God.

The generation of such intense and harmonious experience among nonhuman and human animals gives them high value in the process system; significantly greater than plants, whose experience is largely repetitious. The degree of value, however, varies considerably between different species of nonhuman animals, and different human individuals, according to the strength of the mental pole of the dominant actual occasion and the harmony and intensity of experience produced.

This immediately emphasizes the obvious conclusion that process theory is far from an egalitarian system of environmental ethics, value being based on quality and quantity of rich experience. Here, then, process parts company with the ostensible egalitarianism of Schweitzer and Taylor. Indeed, John Cobb is strikingly sceptical of Schweitzer for precisely these egalitarian reasons in both *The Liberation of Life* and *Process Theology: An Introductory Exposition*. He argues that Schweitzer has failed to think through the ethical implications of his environmental system, and in practice makes 'ad hoc' decisions without justifiable theoretical grounds for his behaviour. Cobb comments, like Singer, that Schweitzer 'refused to work out a theoretical justification for choosing the life of human beings over the lives of the lower organisms which as a doctor, he sought

to destroy'.¹⁸⁴

An attack on Schweitzer for his lack of system could not, however, be sustained against Paul Taylor, who has, as we have seen, attempted (albeit unsuccessfully) to develop a systematic approach to egalitarian ecological ethics, including provision against disease. However, Cobb would have little more time for Taylor's egalitarianism than Schweitzer's, since this was the real root of his objection to Schweitzer. In this respect, at least, process thinking is closer to that of Lombardi or Johnson than Taylor.

How, then, do process thinkers 'grade' the value of animal life? We have already established that nonliving natural objects are not practically morally considerable, that whole plants are not morally considerable, but that plant cells are practically morally considerable, but have very little significance. Where do nonhuman animals and human beings fit on this value spectrum?

Broadly speaking, value is dependent on the strength of the mental pole of the dominant actual occasion. Whitehead himself says little about the relative values of different animals and humans, although he does clearly perceive there to be a gulf between humans and other animals. The human ability to have religious experiences, for instance, means that their harmony and intensity of experience can be substantially greater than that of any other animal.

Hartshorne is more detailed concerning relative human and nonhuman values. In humans 'the positive characteristics of animals generally, and for all we know, of creatures at large, are present in highest degree and therefore in most unmistakable form'.¹⁸⁵ Among these characteristics are mental and conceptual capacity, sentience, morality and religion, which Hartshorne considers to be abilities allowing humans to generate substantially richer experiences than those available to nonhuman animals.

¹⁸⁴ Cobb and Griffin p.79 *Process Theology: an Introductory Exposition* op.cit.

¹⁸⁵ Hartshorne p.50 'The Rights of the Subhuman World' op.cit.

A second interesting observation made by Hartshorne is that while we recognize the individuality of other humans, we see nonhuman animals as representatives of their species, rather than as individuals with their own personalities.¹⁸⁶ This reaction is, in Hartshorne's view, justified. The added complexity and novelty of human experience, generated by our intellectual, moral and religious capacities, means that each human has recognizably different experience. Birds and animals, however, lack these human capacities; they have, according to Hartshorne 'no concept of self', they make no plans for the future, they do not fear death. Their experience is correspondingly less complex, less intense and less valuable.

Hartshorne, rather surprisingly, entitles his paper 'The Rights of the Subhuman World'. The use of the concept of 'rights' would be, one might think, uncharacteristic of a process consequentialist position. However, McDaniel, Dombrowski and Cobb all adopt the same 'rights' terminology in their expositions of the relative values of humans and animals in process thinking. In addition, all three develop structurally similar accounts of the value of nonhuman animals, although this is far from saying that they in fact adopt the same conclusion.

McDaniel's account is the least sophisticated of the three. As we have seen, he distinguishes between democracies and monarchies, and between more and less sophisticated monarchies, with more or less complex nervous systems. As an example of this, McDaniel comments 'The first assumption implies that a dog has a greater intrinsic value than a fungus, the second that a dog has greater intrinsic value than a tick'.¹⁸⁷ Which of these organisms, then, has rights for McDaniel? The dog, the fungus or the

¹⁸⁶ This is both questionable as an observation (since pets, for instance, are often seen as individuals) and as fact (since the fact that animals are often not seen as individuals may be a human mistake).

¹⁸⁷ GP 84. McDaniel does note that from the point of view of the creature being ranked, its life is as important as a higher ranked creature. This is the only time I have read such a comment (with which, of course, Taylor and Schweitzer would wholeheartedly concur) in process writing. Since it makes no actual difference to McDaniel's system, and reappears nowhere else in process thinking, however, I shall not dwell on it here.

tick?

It must first be commented that McDaniel's use of the term 'rights' is very loose. This is illustrated by McDaniel's inclusion of Peter Singer as an 'animal rights advocate'. Although Singer himself carelessly used the term 'rights' in *Animal Liberation*, he has since dissociated himself from it. However, since, as a process thinker, McDaniel's position is close to that of Singer, and Singer is perceived to be advocating rights, it is not surprising to see McDaniel accepting the terminology too. However, its meaning for McDaniel, as for any process thinker, is truncated; the possession of a right guarantees nothing absolutely, not even a right to life. Indeed, having a right seems to mean little more for McDaniel than 'deserving of respect'. As one would expect, all rights in McDaniel's system are overridden if greater richness of experience may be generated by doing so. Due to the ease with which a right can be overridden in his approach, it would, perhaps, be better if he had avoided using the term at all.¹⁸⁸

None the less, McDaniel certainly employs the language with the intention of securing greater respect towards those to whom it is applicable. What animals then do have rights? Those who '1) have discernible interests in living with some degree of satisfaction'; and '2) whose interests can be respected or violated by human moral agents'.¹⁸⁹ These criteria, although sufficiently vague to include all living organisms (since he is talking about 'having interests' rather than 'being interested in') is presumably meant only to refer to those animals with more complex nervous systems. It is cows, sheep, chickens and fish to which he later refers, and we know that rabbits are also included. For McDaniel, these higher, sentient organisms are of greatest value and deserving of greatest respect - next, of course, to human beings who have highest value of all because of the greater richness of experience which they generate.

¹⁸⁸ It is hard to avoid the suspicion that McDaniel only adopted the word 'rights' as part of his crusade to suggest that process thinking is able to reconcile and uphold all the respective parties in environmental ethics - from Leopold's land ethic to animal rights. That process theology does not, in fact, perform such a function is, I hope illustrated in this thesis; appropriating inapplicable vocabulary from other approaches fails to strengthen McDaniel's case.

¹⁸⁹ GP 67.

McDaniel's conclusions are very similar to those of Birch and Cobb in *The Liberation of Life*. Since the values of Birch and Cobb were considered extensively in Chapter 1, I shall not dwell on them here, other than to comment that they do have a slightly more sophisticated understanding of rights:

we would be prepared to consider the question of rights to be a terminological one if those who denied rights to animals were nevertheless willing to speak in some other way of their ethical claim upon us and our duties towards them. But this is very rare. On the whole the denial is taken as also entailing that we have no obligations towards them, that we are free to exploit them to our private pleasure or advantage without limit.¹⁹⁰

This view of rights need not guarantee the rights-holder very much - as, indeed, it does not. For Birch and Cobb, rights may be overridden, as one would expect in a consequentialist system, wherever the consequences, judged by maximizing total richness of experience, demand it. The concept that not only may rights be overridden, but that organisms (understood as clusters of experience) may be replaced, providing that equivalent experience is produced, weakens their understanding of rights still further.

The weakness of this understanding of rights, and the ease with which they may be overridden, for both McDaniel, and Birch and Cobb, contrasts sharply with Dombrowski. Dombrowski intends rights to be understood in a much stronger sense. His book *Hartshorne and the Metaphysics of Animal Rights*, is less an exposition of Hartshorne (who, like McDaniel and Cobb, understands rights in a very weak sense) than a suggestion of how Hartshorne might be interpreted to support a strong rights position.

Dombrowski identifies two kinds of 'sentiency' in the process system. The first is the experience of the actual occasions and singulars such as molecules and cells, which do not feel pain. These he labels S1. The second is that of whole organisms that can suffer pain: S2. Plants, Dombrowski argues are only S1, and consequently 'can be eaten with

¹⁹⁰ LL 154.

equanimity'.¹⁹¹ They have intrinsic value, but this is much less than the value of S2, because of their inability to feel pain. Animals, including humans, are S2 - although, Dombrowski comments, when animals or humans 'lapse into dreamless sleep' they become as S1: a 'mere colony of cells'. S2 have high moral value, because of their ability to feel pleasure and pain and hence to generate rich experience. As with all process systems, humans must act, in their behaviour towards nonhuman animals, and other humans, in ways which generate maximal experience. Causing pain to sentient animals (S2) is to 'contribute to vicarious divine suffering';¹⁹² generating rich experience is to contribute to divine pleasure.

Animals which are S2 have rights; and Dombrowski intends these rights to have a much higher degree of inviolability than Cobb or McDaniel. He rejects Cobb's replaceability hypothesis outright:

Cobb's utilitarian reasoning whereby one quantity of value can be sacrificed if another replaces it is precisely the sort of reasoning that Cobb himself (as well as Hartshorne) has spent a good deal of time criticizing.¹⁹³

Certainly, Cobb has criticized utilitarianism; and certainly, his position is utilitarian in form. Dombrowski here seems to be suggesting that the experiences of all animals which are S2 is unique and irreplaceable (as Cobb argues for humans). He supports this idea by arguing firstly that in Cobb's version of the replaceability argument it 'is really only the (supposedly Platonic form) of chickenness which is revered, not the particular chicken killed', and secondly that 'the negative experiences of slaughter end up contributing to the divine life', and do not add to the richness of God's experience.

Dombrowski is here putting forward a confused cocktail of views, which may, when

¹⁹¹ Dombrowski p.43 *Hartshorne and the Metaphysics of Animal Rights (HMR)* (Albany, New York: State University of New York Press 1988).

¹⁹² HMR 69.

¹⁹³ HMR 82.

distilled, be considerably less potent than they originally appear. His arguments can be categorized thus.

Dombrowski is objecting to the painful experiences generated by the slaughter of animals (his particular aim is to justify vegetarianism on process grounds). Such negative experiences hurt God as well as the sentient animal, and consequently should not be continued. This argument from painful experience is, of course, a standard utilitarian one; the effect which such experiences have on God, a standard process one. By arguing this case, Dombrowski is hardly opposing Cobb's replaceability argument. It is not painful experiences which are in question here. Killing can be done without inflicting painful experience, and a new organism generated; how does Dombrowski respond to this?

Dombrowski's own position here is highly ambiguous, partly due to his categories S1 and S2. By his own admission, organisms that are S1 are not morally considerable, and can be eaten with impunity. Similarly, organisms which are S2 when awake are S1 when in dreamless sleep. Does this mean that if they are killed when they are asleep, that is, in an S1 state, their killing is morally acceptable?¹⁹⁴ Killing an organism in an S1 state would avoid inflicting the negative experiences on the organisms and God. If one were to generate a similar amount of S2 experience which would not otherwise have existed, and no negative S2 experience had resulted from the killing, would this not be acceptable? (this approximates the position of Birch and Cobb).

Dombrowski wants to say no to this by arguing that each S2 organism has unique and irreplaceable experience - and, as a corollary, that their rights are generally inviolable. To support this point, Dombrowski would have to contest that uniqueness is in itself valuable, a question which was touched on in Chapter 1.

Uniqueness for an actual occasion is coincident with novelty. It is certainly true that

¹⁹⁴ Thus, presumably, providing a defence for the killing of Sisera by Jael while he was asleep: Judges 4 v.21.

the more novelty there is in a new actual occasion, the more likely it is to be valuable: because of the incorporation of new, contrasting eternal objects. But it is not the novelty itself which is of value. Value is a product of harmony and intensity, not of novelty. While an important indirect factor in value-generation, uniqueness is a quality, (rather like rarity as I shall proceed to indicate); it is not directly valuable. In a crucial remark on this subject, Whitehead says:

In the foundations of his being, God is indifferent alike to preservation and to novelty. He cares not whether an immediate occasion be old or new, so far as concerns derivation from its ancestry. His aim for it is depth of satisfaction as an intermediate step towards the fulfilment of his own being.¹⁹⁵

If uniqueness does not directly contribute to value, Dombrowski's argument is undermined. The uniqueness of the experience of S2 animals does not, in itself, make them more or less valuable. It is their harmony and intensity which is to be valued, and this is not, unlike uniqueness, 'incommensurable'. Thus, the replaceability position championed by Cobb is, in fact, the logical process position. If equal or greater harmonious and intense experiences are produced to replace ones which are lost, value remains the same or increases. The real aim is to maximize total richness of experience. In fact, Dombrowski himself seems to concede this point:

A process approach would condemn the destruction (or maiming) of any society of actual occasions unless such a society clearly threatened the intensity or satisfaction of a higher-order society. Hence, a human being should, except in say, extreme circumstances without vegetation nearby - subsist on plants, because although they have intrinsic value in them, their value is of a lower intensity and complexity than that in animals.¹⁹⁶

Here, a lower-grade experiencing society can be destroyed if it threatens the experience of a higher-grade society. This is not self-defence; Dombrowski does not say that the

¹⁹⁵ PR 105.

¹⁹⁶ HMR 47.

lower-grade society is threatening the *existence* of the higher-grade one; merely the intensity and harmony of its experience. (Dombrowski does not only seem to have food for survival in mind.) Thus an indeterminate amount of very intense and harmonious experience is more valuable than the very existence of a lower-grade organism. Since Dombrowski considers humans to have higher grade experiences than nonhuman animals (although both are S2) presumably any S2 animal that threatened the experience of a human could be destroyed. Dombrowski's comment here seems to undercut his own position, since it would be perfectly possible to put the argument (as Regan does against Singer in *The Case for Animal Rights*) that mass adoption of vegetarianism would threaten human richness of experience, and therefore should not be undertaken. Dombrowski clearly would not wish to adopt this conclusion. Nonetheless, it is still the case that, explicitly, even in Dombrowski's system, the much-feted uniqueness of an organism is laid aside if richness of experience is at stake.

In fact, Dombrowski's argument for vegetarianism here is perfectly in keeping with his general views. In choosing between sacrificing two organisms, in this case plants or animals for food, one should choose the lower grade organism (the plant), in preference to the higher grade organism (the animal). This would, of course maximize rich experience. But despite his denials, it is also the case that, on this argument alone, rich experience could be kept at the same level by replacing animals with other animals of equal value. This would, for process thinking, be an equally viable alternative position.

This demonstrates that the rights language of process thinkers in general, and Dombrowski in particular, is largely redundant. Whereas many animals are of high value and have S2 status, they do not have inviolable rights, since it is not they, but their experiences, which are of value.

Having now established a broad value grading within process thinking, it is interesting to consider how it responds to particular situations where such grading is effected. One way of doing so is to examine possible process responses to Taylor's duty and priority principles. While process thinking would, for instance, broadly adhere to Taylor's principles of nonmaleficence and fidelity, this is not because they are, in themselves,

binding duties, but because they generally produce the best consequences. Maleficent and untrustworthy behaviour are, broadly speaking, unlikely to promote rich experience.

Having said this, one of Taylor's main examples of infidelity is hunting or trapping, where an animal can be lured by deceit into a fatal situation. The process attitude to both hunting and trapping is ambiguous, and very much context-dependent. Theodore Vitali, in 'Sport Hunting: Moral or Immoral' attacks Taylor vigorously over his use of fidelity as a duty principle with which to oppose hunting 'If ever there was an example of imposing a human value on nature, Taylor takes the cake here'.¹⁹⁷ However, to support his own position, in favour of sport hunting, Vitali cites Whitehead and Hartshorne as providing a metaphysical foundation for environmental ethics.¹⁹⁸ This suggests that he considers process thinking to support sport hunting.

For process thinkers to support sport hunters, the richness of human experience generated by hunting would have to outweigh both the negative experiences of the hunt and the loss of the future experiences of the animal. This kind of calculus is, of course, very difficult to make. Certainly, as was clear in the preceding chapter, where the human value of preserving an ancient culture is concerned, hunting, even of very high-grade experiencers such as whales may be justified.

This again raises the problem of the 'gap' between human and nonhuman experience. To use Taylor's terminology, within process thinking, nonbasic human interests (which generate rich human experience) can win over basic nonhuman interests (where experience is not as rich). Thus it is, at least, possible that a nonbasic human interest, such as the pleasurable experiences generated by hunting, could outweigh the suffering and death of an animal for sport. Gamwell, for instance, would certainly think so. In what he considers to be a defence of the ecological awareness of process thinking, he comments:

¹⁹⁷ Theodore Vitali p.74 'Sport Hunting: Moral or Immoral' *Environmental Ethics* Spring 1990 12 no.1.

¹⁹⁸ Vitali p.72 op.cit.

Far from condoning every destruction that is executed upon nature in the name of human purposes, the maximal happiness principle prescribes such sacrifice only when human possibilities are thereby greater than they would otherwise be.¹⁹⁹

One is tempted to ask whether in fact this criterion would prevent any destructive action at all, since virtually any human act towards the nonhuman world could be said in some way to further human possibilities. For Gamwell, if any kind of increase in the harmony and intensity of human experience can result, then destroying a living organism is acceptable. Other process thinkers, such as Dombrowski, narrow the human/nonhuman gap considerably and would argue that only an extremely significant human gain could outweigh a high-grade nonhuman loss.

Thus the process response to the duty principles of fidelity and nonmaleficence is that neither can be an ultimate moral aim, although they may be instrumentally useful. How, then, does process thinking respond to Taylor's priority principles?

Self-defence against attack by one or many nonhumans would be perfectly acceptable in a process system; in fact it would be a moral requirement. In addition, one would also have a moral obligation to rescue other humans from similar situations of threat. No individual nonhuman could outweigh the life of a human being (unless the human were a so-called marginal human: a foetus or baby, in a coma or with a mental handicap, and the attacker was a high-grade experiencer attacking for survival). The individual human being would also produce substantially richer experience than millions of disease bacteria, since the occasions of which they are composed lack strong mental poles. Thus process thinking has no problems of the sort created by Taylor, by maintaining each bacterium to be of equal inherent worth to a human being. (Indeed, since Hartshorne only just accepts the suggestion that a single human could sacrifice themselves to save a whole species of high-grade experiencers for a thousand years, he is hardly likely to

¹⁹⁹ Gamwell, p.48 Cobb and Schroeder op.cit.

consider there to be any ethical merit in sacrificing oneself for a colony of bacteria.)²⁰⁰

Taylor's principles of proportionality and minimal wrong would meet with a mixed response from process thinkers. It is most unlikely that they would support the practices listed by Taylor as directly incompatible with the attitude of respect for nature (such as ivory tuskling and fur trapping). The traumatic nature of the experience to the animals, and the loss of total experience from their deaths, would outweigh the relatively trivial human pleasures to be gained. It is just possible that Gamwell might advocate such practices on a process platform; but most would find it unacceptable.

Taylor's principle of minimum wrong, however, is a far more interesting comparison. Taylor himself, as we have seen, cannot logically sustain such a position, because violation of basic nonhuman interests for human cultural and political ones is involved. However, the 'maximum right' position of process thinking *can* produce the ethical response sought by Taylor. The building of a concert hall, say, on a wild area, would generate significant richness of human experience, far beyond that of the native flora and fauna. Of course, process thinking, like Taylor, would prefer the concert hall to be built on derelict land, rather than a wild site, so that both the human experience and the experiences of the flora and fauna could be created. Indeed, given the amount of derelict land available, in practice, such a development on wild land should not be necessary. However, if this were the only available site, both Taylor and process thinkers would build the concert hall, but only process could rationalize it.

Taylor's principle of distributive justice - where human and nonhuman basic interests conflict - raises a number of questions, most particularly that of vegetarianism. This is a key question, partly because of its immediate applicability, and partly because of the way it crystallizes differing philosophical attitudes. For the egalitarians, killing

²⁰⁰ 'I could perhaps seriously consider giving up the remainder of my life if it would definitely save a threatened species for a millennia'. p.57 'The Rights of the Subhuman World' op.cit. This remark is rendered more curious when one considers that Hartshorne was 82 at the time.

animals and plants for food is, at first sight, equally a violation of duty. One may as well eat animals (or indeed humans) if all have equal worth. For Schweitzer, this problem remains unresolved. Taylor, as I indicated, first (illegitimately) adds the criterion of pain, and secondly comments that less land is used and hence fewer lives are lost by the use of plant food rather than animal food. Thus, by his principle of minimum wrong, vegetarianism should be adopted. For Johnson and Lombardi, vegetarianism should also be obligatory; animals have greater capacities, or more interests, than plants to be taken into moral consideration; hence they are worth more. Process thinkers, as we have seen, consider animals to be of more value than plants, and thus one might think that they would advocate vegetarianism. However, as we have also seen, their focus on experience means that animals, if killed painlessly, are replaceable. The replaceability argument destroys any case for vegetarianism on this basis. Could a process thinker, such as Dombrowski, who wishes to endorse vegetarianism have recourse to Taylor's land use argument? It would at first sight seem possible to argue, on a process basis, that if less land overall is used by adoption of a vegetarian diet, maximum value would be produced. This argument is, however, not sustainable in a process system. Since food animals, such as pigs, cattle, sheep, are high-grade experiencers, their presence makes land more, rather than less valuable, unless it was previously settled by humans or a particularly dense ecosystem such as a rainforest with a high primate population. Rather than Taylor's principle of minimum wrong, the process principle of maximum rich experience comes into play, and prevents the maintenance of any argument for vegetarianism in process thinking. Here, then, there is a sharp divergence between process thinking and that of individualist environmental ethicists. This divergence is continued into the next section, that concerning deontology and restitution in process environmental ethics.

Deontology and Restitution in Process Thinking.

Since process thinking, as described in the last chapter, is clearly consequentialist in form, one would expect it to avoid difficulties associated specifically with the deontological nature of the ethicists considered in this chapter. This is, however, only partially the case.

The ethical act for a process thinker is that which produces the best consequences, measured in terms of richness of experience. This conflicts with the nonconsequentialist approach, where the best act in situations of conflict is that which violates the fewest duties. Thus, process, as a consequentialist system, escapes the accusation that every alternative act is wrong, and that some guilt attaches to all behaviour. In addition, the deontological focus on the character and motivation of the moral agent is de-emphasized. As Hartshorne comments: 'The morally good individual is one who wills to optimize the harmony and intensity of living for all those lives he or she is in a position to affect'.²⁰¹ Of course, even in a nonconsequentialist system, judgments of character require reference to the goodness of the expected consequences. But in process thinking, it is consequences which really matter (because they add to God's experience) rather than the intention with which acts are performed.

Although process thinking lacks the guilt encountered in the nonconsequentialist systems considered here, acts which involve the destruction of life, however necessary, do result in a loss of some value even if, overall, value is increased. The experiences lost when an organism is killed, after all, can no longer contribute to God's being.

Unlike Taylor, and the other philosophers considered earlier in this chapter, however, process thinking, as a consequentialist system, would seem to be able to affirm restitution for value lost. It can, after all, accept the substitution of one organism for another which would not otherwise have lived. Where substitution suggests temporal replacement (one animal bred to replace another), restitution suggests spatial replacement (often, though not exclusively, one place to replace another). The possibility of affirming restitution on a larger scale in a process system is interesting but rather complex. The overall principle must be to replace the rich experience lost by the destruction of an organism or a group of organisms. Either new organisms generating equal or greater experience must be brought into being or already existing organisms which are threatened should be protected.

²⁰¹ Hartshorne p.55 'The Rights of the Subhuman World' op.cit.

At first sight, this would seem entirely possible within a process system. After all, it is not the organism itself which is valuable in process thinking; it is its experiences. However, if we consider an actual example, the problems involved become clear.

A wildflower meadow is ploughed up in order to plant a field of wheat. The meadow is lost forever. What would count as restitution for such an act in a process system? The immediate answer - the planting of a wildflower meadow elsewhere, or the protection of one which is endangered - is however inadequate in the process situation. Here process thinking falls victim to a similar weakness as the deontological ethicists such as Taylor: its inability to distinguish between the inherent worth of a wildflower and an ear of wheat. Unless it were possible to argue - which it plainly is not - that a wildflower (or rather the actual occasions composing it) had more intense and harmonious experiences than an ear of wheat their 'experience contribution' to God is identical. Restitution, in terms of richness of experience generated, would in fact be complete by *the planting of wheat* in what had been the wildflower meadow. In other words, no further restitution would be necessary, providing that some field of plants replaced the wild flowers.

A process thinker might argue, in rejoinder, that a wildflower meadow does generate more rich experience than a field of wheat, because it is capable of supporting more life - insects and small mammals for example, whereas a wheatfield is a monoculture which supports very little life. This may be true, but it fails to solve the more profound questions raised. If, instead of a field of wheat, the farmer were to import a herd of dairy cattle - high-grade experiencers - then the argument from experience to perform an act of restitution for the lost wildflowers would fail.

There are two possible ways in which process thinking might attempt to resist this conclusion. The first is inadmissible within the process system; the second is certainly admissible, but it is of doubtful ecological merit.

The first suggestion concerns the role which God plays within the process system. Is it possible, within the system, that God could value experiences of the same harmony and

intensity differently, because God prefers one kind of experience to the other? Could God prefer a 'rare' experience to a 'common' one? An answer to this question requires a brief reexamination of value in process thinking.

Value is inherent in actuality itself. To be an actual entity is to have a self interest...It is the ultimate enjoyment of being actual.²⁰²

This seems to exhaust the location of value in process thinking. Value is inescapably actual. It is not conceptual. Everything that is actual has some value; nothing that is not actual has value at all. Everything that is actual is either an actual occasion or a society of actual occasions. Value for an actual occasion is its own self enjoyment. All value generated by actual occasions adds to the value within the consequent nature of God. All the value within the consequent nature of God is the experience of past actual occasions. God does not stand outside the universe making value judgments about the kind of experience being actualized; God is within the universe, feeling the feelings of the actualizing occasions. What ultimately matters is that each occasion generates the maximum experience possible for it, which does not constrain the actualization of future occasions. Values in subjective actuality are what count. 'Rarity' is a quality, not an actuality. It cannot be felt within the subjectivity of an actual occasion, which can, of course, have no conception of its own rarity, or otherwise.²⁰³ Thus it seems unlikely that process thinking as currently constituted can provide an adequate response in this way to the problem of rarity. I will return, however, to this question in the Conclusion.

At this point, process thinking may adopt the second of the two possible positions. While God may not stand outside and judge different kinds of value - rarity being among them - human beings may. The experiences which human beings create include their responses to, for instance, wildflower meadows. The intense, harmonious experience of a human being may be greatly enhanced by admiring a wildflower meadow - far more so than by

²⁰² RIM 100.

²⁰³ Except, perhaps for the actual occasions constituting the dominant actual occasion in human beings.

surveying a wheatfield. Since this rich human experience is incorporated into the consequent nature of God, it would seem that a wildflower meadow may well generate richer experience for God than a wheatfield.²⁰⁴

The argument from human experience - relevant in environmental ethics in a much larger sphere, of course, than just restitution - is vulnerable on several counts.

With specific reference to restitution, it is possible that, as far as human feelings are concerned, the planting of a substitute wildflower meadow elsewhere could not recompense for the loss. The destruction of a cherished wild place to agricultural expansion may cause considerable disharmonious (if intense!) experiences to a large number of people. Part of what people cherish about wild places is, first that they are where they are, and secondly that they were not planted by human beings. It would hardly harmonize the feelings of local people to know that a wildflower meadow of similar aesthetic quality had been planted twenty miles away. However, a new audience of human admirers in the new locality might gain rich experience from it; so this objection carries some weight.

On a more theoretical level, many environmental philosophers would consider this approach to environmental ethics to be profoundly anthropocentric. Although wildflower meadows may give human beings aesthetically rewarding experiences, is it only this which gives them more value than a wheatfield or a field with a dairy herd in it? Rolston comments, about a similar example:

What is "right" about the biological world is not just the production of pleasures and positive experiences. What is "right" includes ecosystemic patterns: organisms in their generating, sustaining environments.²⁰⁵

I do not wish to discuss the details of Rolston's position here, but merely to point out

²⁰⁴ I am assuming here that human lives do not depend on consuming the products of this particular wheatfield.

²⁰⁵ EE 191.

the unsatisfactory nature of process thinking in this respect. It could certainly be argued that a philosophical position claiming to be ecological must consider a wilderness to be more valuable than a wheatfield on firmer ecological grounds than human aesthetic experience.

Indeed, humans may not actually derive richer experience from a wildflower meadow than a wheatfield. A farmer, for instance, would probably derive richer experience from a healthy wheatfield than a field of wildflowers. However, more important and, perhaps, more subtle arguments come into play here, exemplified perfectly by a story told by the environmental ethicist and economist Mark Sagoff.

Sagoff, teaching a class of philosophy students, asked their view about the infamous 'Mineral King' development. (Walt Disney had applied to build a ski and leisure centre in a remote wilderness area of California called 'Mineral King'.) Sagoff asked his students if they approved of the project. None did. He then asked if any of them had visited, or had the intention to visit the Mineral King area in its present wilderness state. None had or did. He followed this by asking if they would visit it, were it transformed into a ski and leisure complex. A large number said that they would.

Clearly, Sagoff's students were not process philosophers. The students were upholding a position where, despite knowing that greater richness of experience would be generated, they still opposed development. Under such circumstances, process thinkers could only applaud Walt Disney. As wilderness, Mineral King received few visitors. Those that did visit probably gained substantial aesthetic experience; but they were very few. Otherwise the Mineral King area was populated with plants and some wild animals. Of the animals, there would be some high-grade experiencers: bears, perhaps, and other mammals. Certainly, the development would drive away wilderness-seekers and much of the native flora and fauna - a loss of experience. But this loss would be as nothing compared to the gain. Thousands of tourists would gain immensely rich experience skiing on challenging mountain slopes; other leisure activities would also generate significant experience. Local employment would increase. To replace the lost wild animals, domestic species and the semi-domestic species which follow settlement would be

introduced to the area. Overall, rich experience in the Mineral King area would be vastly increased. There would be no need for restitution elsewhere; the development itself would substitute experience and to spare for what had been lost.

The students who opposed the development were saying 'no' on grounds other than rich experience - even of their own rich experience. They had no desire to experience the aesthetic pleasures of Mineral King in its wilderness state; and strong desire to experience the pleasures of a leisure complex there. Perhaps, it might be argued, these students felt that there were sufficient skiing areas elsewhere, and they could enjoy the same experiences in other resorts while retaining Mineral King as wilderness. Or perhaps it enriched their experience just to know that Mineral King was still there as wilderness, even though they had no intention of visiting it. Thus process thinking could justify a preservationist attitude. But why would one wish a wilderness to remain, even if one was not going to see it, unless one considered it to have some value other than that encompassed by human aesthetic experience? Such counter arguments are precarious. Process thinking could not adequately justify the protection of Mineral King from development.

Here, process thinking contrasts with the positions of the philosophers in the first half of this chapter, and in the next, all of whom are in a better position to stage a defence of the wilderness at Mineral King (or, indeed, at Lurcher's Gully in the Cairngorms of Scotland). For Taylor and Schweitzer, for example, the Mineral King project would violate duties to a significant number of organisms, both flora and fauna, by destroying their lives and their habitats. This would mean a loss of an irreplaceable degree of inherent worth. The building of a ski slope and leisure centre do not fall into the serious cultural and political categories which Taylor might accept justified such a building project; and furthermore, despite his claims, he logically could not support restitution for the lost lives.

Lombardi and Johnson would be, here, in a similar position to Taylor. The loss of individual organismic life involved in the Mineral King project would make it morally unacceptable to them, even though plants and animals have fewer interests than human

beings. For Johnson, for example, the human interest in having a new ski resort - essentially a playground for the rich - would not overcome the wellbeing interests of the organisms which lived there. None of the individualist environmental ethicists I have considered in this chapter would countenance a development such as Mineral King.

All the same, the collective environmental philosophers to be considered in the next chapter would not accept that either the individualist or the process philosophers' arguments were satisfactory for the defence of Mineral King. To judge a wilderness area by the experiences it produces or by the inherent worth, capacities or interests of the individual organisms which live there is, for them, an inappropriate response. A wild ecosystem, such as Mineral King, they would argue, should be taken as in some sense a whole, rather than as a collection of individual organisms with individual worth or experience.

Individualism in Process Environmental Ethics

That process thinking should be bracketed and condemned as an individualist ethical system by the collective philosophers of the following chapter may seem odd. This is especially the case in the light of the preceding chapter, where it was argued that process thinking could not give enough coherence and hence ethical significance to individual organisms. The only real, definitive, individuals in the process system are the actual occasions and God; all other individuals are societies with differing degrees of inner coherence.

However, this does not prevent process thinking from being rejected as individualist by collective philosophers. To preempt conclusions which will be drawn in Chapter 3, it is certainly the case that individual organisms - in particular, animals and human beings - produce the richest experience in process thinking. Since the ultimate aim is to maximize such rich experience for the consequent nature of God, in more practical terms this means maximizing the richest experience for highest grade experiencers - nonhuman animals and human beings. Inasmuch as these are the loci of rich experience, these are the focus of moral concern. Essentially, all else is instrumental to this

promotion of high-grade value.

Thus, process ethical thinking can, with some justification, be called individualist, although it is not the individual, but the cluster of experiences which constitute the individual, which are of moral significance. This does, however, create problems for process thinking, as it did for deontological environmental ethics, bunching around the question of noninterference and the individual.

The main question here concerns how far a process thinker would interfere with wild nature to produce a desired end - that is to say, maximum richness of experience. Certainly, at first sight, the process criterion makes interference look inevitable. There is no obvious reason why 'wildness' and 'maximum richness of experience' should coincide. As we have already seen, a wildflower meadow is of no more value in itself than a cornfield.

Various issues of intervention are raised here; most prominently, that of predation. I shall, however, consider this in the next chapter. A second kind of interference in the state of wild organisms is also important - that of the rescuing of wild animals from inanimate threats. Does process thinking advocate such action as an ethical requirement? Would it, for example, have rescued the trapped bison which fell through the ice of Yellowstone River?

As in any ethical situation, the question to ask here is what would ultimately produce maximum richness of experience. The bison, as a mammal, is a high-grade experiencer. Its sojourn in the icy water must be producing negative experiences. Its death means the end of its own rich experiences, as well as those of its possible future offspring. These are all powerful positive reasons for rescuing the bison from the ice. But process thinking - unlike the other environmental ethicists in this chapter - would also consider the potentially negative consequences of rescuing the bison. These are all the potential longterm consequences concerning genetic stock, overpopulation, the loss of high-grade experiences in other ways. In this respect, process thinking can take into account the considerations of the ecosystemic ethicists I will be considering in the following

chapter. The consequences for the experience of the bison are not the only ones worth considering.

Unquestionably, however, the experiences of the bison are of overwhelming significance here. The suffering of the bison is generating negative experience, and it is being lost without any replacement being available, thus reducing the amount of high-grade value in the world. The loss of value to the bison and to the consequent nature of God is very definite; the longterm effects on the ecosystem are diffuse and uncertain. The bison should be rescued, or, if there are overwhelming value reasons why it should not be (perhaps there is a massive overpopulation of bisons) it should be mercy killed to prevent the continuance of its negative experiences.

This example is not untypical of a process response to the question of interference with wild organisms. Where the threat is an inanimate one - fire, flood, drought, for example, unless there are overwhelming value reasons why not (largely ones of overpopulation and subsequent starvation of high-grade valuers) there is a moral obligation among process thinkers to interfere. This seems, logically, to extend to the rather bizarre idea of medical treatment for individual injured or diseased wild animals, a concept repeatedly rejected in environmental ethics literature.²⁰⁶ Such ethical imperatives horrify the systemic environmental ethicists of the following chapter, as I shall shortly illustrate.

In Conclusion

In this chapter, both egalitarian and inegalitarian deontological approaches to individualist environmental ethics have been examined. I considered differing explanations of what was morally considerable, and how morally significant different classes of natural objects and organisms might be. To the forefront was the egalitarian system of Paul Taylor, with his attempt to create a consistent ethical system around a basic disposition of respect for nature with sets of principles of duty and of priority.

²⁰⁶ See the debate between Robert Loftin 'The Medical Treatment of Wild Animals' *Environmental Ethics* 7 no.3 Fall 1985 231-239; and Roland Clement 'Beyond the Medical Treatment of Wild Animals' *Environmental Ethics* 8 no.1 Spring 1986 95-96.

However, both the egalitarian and the inegalitarian approaches displayed problems in sustaining their own positions. The egalitarians frequently slipped into inegalitarian positions; and there was some attempt, especially by Paul Taylor, to sustain positions which his system was incapable of supporting - such as restitution.

Process thinking, in comparison, focused not on the individual organism as a whole, and its value and worth, but rather on the experiences with which, as a society of actual occasions, it is constituted. Thus value - judged on maximum richness of experience - is founded on a very different basis. This meant that process ethical positions differed substantially in theory from those of the other ethicists in this chapter. However, on occasion, there was practical concurrence, and even some occasions where process ethics were able to provide a better basis for an ethical position put forward by the individualists than they were able to themselves.

Overall, however, the process preference for high-grade experiencers - mammals and human beings - led to rather different conclusions for many ethical decisions. Process thinking could certainly countenance much greater interference with, and even destruction of, wild areas than any of the individualist environmental ethicists, a conclusion which will be reinforced in the following chapter.

CHAPTER 3

PROCESS THINKING AND COLLECTIVE ENVIRONMENTAL ETHICS

Introduction

Many environmental philosophers, in contrast with those in Chapter 2, have adopted a collective,¹ rather than an individualist approach to environmental ethics. This is not to say that the two accounts are necessarily exclusive. Several attempts have been made to reconcile them, but none seems very satisfactory. As a broad principle, there is tension, if not hostility, between 'individualist' and 'collective' environmental ethics, as both expressed in - and inflamed by - J.Baird Callicott's important article *Animal Liberation - A Triangular Affair*.²

Collective approaches to environmental ethics tend to be consequentialist, aiming at the good of the whole, although the scale of the whole and what constitutes good for such a whole is in dispute. A variety of scales and putative goods are suggested by different philosophers; these are enhanced by different uses of scientific ecology and Darwinian evolution. Similarly a variety of models are used to describe this whole - community, organism and energy field being some of the most popular - each with different nuances of interdependence and interconnectedness. Finally, there are important differences between those who claim there to be objective values in nonhuman nature and those who insist that environmental value is subjective and, at least to some extent, valuer-dependent.

¹ I have chosen to use the word 'collective' rather than systemic, since the system is not necessarily the basis of the ethic, and 'systemic value' is also the name given by Holmes Rolston to a specific kind of collective value (EE 216). Collective, however, may have the unfortunate connotation of a 'collection' of individuals; it is not intended to suggest this, but rather a whole, one mass or sum.

² J.Baird Callicott 'Animal Liberation - A Triangular Affair' *In Defence of the Land Ethic (ALATA)* (Madison: University of Wisconsin Press 1989).

This multitude of differing collective approaches to environmental ethics makes it a complex maze, impossible to explore in its entirety. In the first instance, the focus here will be on Aldo Leopold and J.Baird Callicott. The possible responses of process thinkers to their positions will be considered. In the light of these collective approaches, the possible ethical implications of James Lovelock's 'Gaia' hypothesis will be examined, and compared with process thinking.

THE LAND ETHIC AND ECOLOGICAL MODELS OF THE LAND

Leopold is claimed by Callicott to be the 'father or founding genius of recent environmental ethics',³ primarily for his 1949 collection of essays *A Sand County Almanac*.⁴ Here Leopold espouses a land ethic which 'enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively, the land'.⁵ His guiding principle is famously expressed: 'A thing is right when it tends to preserve the integrity, stability and beauty of the land community. It is wrong when it tends otherwise'.⁶

This compact expression of 'the land ethic' hints at several important features of Leopold's thought. The consequentialist nature of his ethic is immediately noticeable; particularly striking is its similarity in form to that of Mill's Greatest Happiness Principle.⁷ Mill states that 'actions are right in proportion as they tend to promote happiness, wrong if they tend to produce the reverse of happiness'.⁸ That Mill might

³ Callicott, quoted p.65 Nash *The Rights of Nature* (Madison: University of Wisconsin Press 1989).

⁴ Leopold *A Sand County Almanac (ASCA)* (1949; Oxford: Oxford University Press 1969).

⁵ ASCA 204.

⁶ ASCA 224.

⁷ Also noticed by Carolyn Merchant p.57 'Environmental Ethics and Political Conflict: a view from California' *Environmental Ethics* 12/1 Spring 1990 45-69.

⁸ Mill p 257 *Utilitarianism* op.cit.

be an influence on Leopold is hardly surprising. The utilitarian principle had been the focus of the US Forest Service (in which Leopold worked) since its foundation under Pinchot in the first decade of this century, albeit a utilitarianism purely directed towards human benefit.⁹ It is strange that Callicott, Leopold's major interpreter, never comments on the similarity between the land ethic and Mill at this point. (This may be because of Callicott's own enthusiasm to emphasize a Humean, rather than a Millian, basis for the land ethic.) Characteristically consequentialist, Leopold aims at achieving the best 'state of affairs' - it is not the individual members of the land community, not the community as a whole which is valued, but rather the state of affairs within that community: its integrity, stability, beauty.

The 'land ethic' describes the land as a 'community'. This is significant, since, for Leopold, once something has been incorporated into the community, it becomes ethically relevant. This statement of the land ethic clearly implies that human beings are a part of the 'land community' (which has been formed by extending the human community). In another important passage Leopold reinforces this view:

In short, a land ethic changes the role of homo sapiens from conqueror of the land community to plain member and citizen of it. It implies respect for his fellow-members and also respect for the community as such.¹⁰

Here, humans are firmly grounded in their ecological surroundings, and are attributed no dominant role: they are plain members and citizens.

⁹ It was this focus on the use of forest and wildland for human benefit which caused the rift between Pinchot and John Muir, culminating in the dispute over the damming of the Hetch Hetchy valley in Yosemite. Leopold's extension of the utilitarian principle into the land community suggests that he would have had more sympathy with Muir than Pinchot, although Leopold stayed within forestry management. Interestingly, as Norton points out (Bryan Norton p.8 *Towards Unity Among Environmentalists* Oxford: Oxford University Press 1991), it was Muir's appeal to public sentiment which 'led to the powerful moralism of American environmentalism', thus putting into practice, (and perhaps acting as an example to?) Leopold's belief that ethics are based on sentiment.

¹⁰ ASCA 204

This perspective, however, is misleading. Leopold's attitude towards the place of humanity in the nonhuman world is distinctly ambiguous. This ambiguity is most clearly demonstrated in Leopold's essay 'On A Monument to the Pigeon',¹¹ where he mourns the extinction of the last passenger pigeon. Here he tells us both that humans are 'fellow voyagers with other creatures in the odyssey of evolution' and that humans are now 'captain of the adventuring ship'. But the captain of the ship is surely not just a fellow voyager; he or she has some kind of navigational control. This contrast reflects the broad tension in Leopold's writing between the conviction that humans *are* in control and are deliberately and ruthlessly destroying other parts of the land community, and that humans are *not* in control, are dabbling in something which they do not understand, and should accept their much humbler place as plain citizens of the community. What status does Leopold really consider humans to have in the land community?

Again, 'Monument to a Pigeon' is enlightening:

For one species to mourn another is a new thing under the sun...Had the funeral been ours, the pigeons would hardly have mourned us. In this fact, rather than in Mr Dupont's nylons or Mr Vannevar Bush's bombs, lies objective evidence of our superiority over the beasts.¹²

Here Leopold argues that mourning over a lost species, an example, presumably, of human self-consciousness, is a differentiating factor between humanity and 'the beasts'. It makes humans superior to nonhumans; better than the rest of the land community. The evidence he cites is, of course, hardly objective. Mourning over a lost species is no more objective evidence of superiority than deliberately destroying a species would be objective evidence of inferiority. The fact that Leopold interprets it in this way reveals once again his ambiguous commitment to the implications of humanity as 'plain citizen' of the land community. Leopold simultaneously wishes to affirm and deny difference and sameness, equality and superiority, control and ignorance. This does not make for

¹¹ ASCA 110

¹² ASCA 110.

rigorous philosophy, as Robin Attfield (in a slightly different context) was not the first to point out.¹³

Peter Fritzell makes a similar point in his essay 'The Conflicts of Ecological Conscience'. He argues that Leopold sometimes speaks as if humanity were outside the biotic community altogether, 'a stranger to nature, a questing perceiver of outside processes',¹⁴ and concludes that 'Tellingly, ironically, and inevitably, man's desire to know - his needs to order, explain and understand (to the extent they are realized) set him apart from the very things he would know'.¹⁵

The persistence of this ambiguity is revealed if *community* is considered alongside two other models of the natural world which are both found in *A Sand County Almanac*, namely the land as *organism* and the land as a *fountain of energy*. These different models imply different philosophical conceptions of the ecological system. By using the 'community' model in his crucial statement of the land ethic it is clear that he ultimately preferred it to either of the others. An examination of both the organism model, and that of the energy flow may help to indicate why.

The most important characteristic of an organism is that capacity for internal self-renewal known as health. There are two organisms whose processes of self-renewal have been subjected to human interference or

¹³ 'Leopold as a philosopher is something of a disaster, and I dread the thought of the student whose concept of philosophy is modelled principally on these extracts' Robin Attfield 'Value in the Wilderness', (review of Scherer and Attig *Environmental Philosophy*) *Metaphilosophy* 15 No. 3 & 4 July/Oct 1984 289-303. This remark of Attfield's, while not without justification, caused Callicott consternation, considering Attfield to be 'going out of his way to impugn the philosophical respectability of the land ethic' 'The Conceptual Foundation of the Land Ethic' *Companion to a Sand County Almanac (CSCA)* (Madison: University of Wisconsin Press). Holmes Rolston, more reasonably, commented 'I agree that Leopold as a philosopher is something of a disaster, but how then can he be so seminal. Are there such things as prophet - philosophers?' (Rolston, unpublished, December 1983).

¹⁴ Peter Fritzell 'The Conflicts of Ecological Conscience' CSCA 147.

¹⁵ Fritzell 148 op.cit.

control. One of these is man himself (medicine and public health). The other is land (agriculture and conservation).¹⁶

This passage begins Leopold's extensive metaphor of the land and the (individual) human body. This is not a new metaphor in Leopold's work, as Callicott points out. In his much earlier essay 'Some Fundamentals of Conservation in the Southwest',¹⁷ Leopold uses this concept more extensively, claiming as a source the Russian philosopher Ouspensky (who also influenced Lovelock). He suggests that the entire Earth could be seen as an organism 'which we do not now realize because it is too big and its life processes too slow'.¹⁸ He even wonders, in Stoic vein, if there might be a 'world-soul' or consciousness.

Little of this metaphysical approach filters through into the later *A Sand County Almanac*, where the use of 'organism' is much more consciously metaphorical. In addition, Leopold has changed his emphasis from seeing the whole earth as an organism to speaking of the *land* as an organism. This reinforces the shift from metaphysics to metaphor, and also allows Leopold to differentiate smaller parts of the land from one another. Use of the term organism in comparison with the human body allows Leopold to speak of 'sick' and 'healthy' land. The loss of species in unprecedented numbers is a sign of sickness in the organism. Soil erosion and loss of fertility, pestilential levels of certain species, slowness and insubstantiality of tree growth are all examples of land sickness. In contrast, healthy land is only found in wildernesses which are the 'most perfect norm', or where humans have not disturbed the 'land physiology'. Human activity has caused the sicknesses of the land; and humans must learn, not only to 'doctor' the land, but the 'science of land health'. To extend Leopold's metaphor further, he is advocating preventative medicine for the land, in order to avoid the sicknesses in the first place.

¹⁶ ASCA 194.

¹⁷ Aldo Leopold 'Some Fundamentals of Conservation in the Southwest' *Environmental Ethics* 1 no.1 1979 131-158

¹⁸ Leopold p.139 'Some Fundamentals of Conservation' op.cit.

The model of the land as organism emphasizes the strong sense of the dependence of the parts on the whole, and their close interconnectedness to one another. This contrasts with what is conveyed by the model of community. Eric Katz makes just this point in his penetrating article 'Organism, Community and the "Substitution Problem"'.¹⁹ Katz compares *organism* with *community*, pointing up their most striking difference: the greater independence ascribed to individuals in a community than to organs in an organism. The organs of an organism cannot survive outside the organism (except in exceptional circumstances); they have no autonomy. The only aim of their existence is the wellbeing of the whole. Within a community, however, it is still appropriate to refer to the individual's autonomy, and even individual worth; individuals have their own ends, as well as the aim at the wellbeing of the whole. The wholeness of an organism is indivisible; the wholeness of a community is not.

Katz moves on to indicate a resulting problem for an environmental philosophy which accepts the image of the 'land' as organism. Both species and individuals can have only instrumental value, that is, to the extent that they fulfil their function of maintaining the whole organism:

If an entity in a system is valued for its instrumental function, and not its intrinsic value, then it can be replaced by a substitute entity, as long as the function it performs remains undisturbed.²⁰

This has important implications: allowing, for instance, humans to act in ecosystems to substitute one species for another, provided that the substitute species performed the same function for the organism as a whole. Leopold, however, would probably object to this conclusion. When discussing the loss of the last passenger pigeon, his mourning was not tempered by the knowledge that the worms and weevils would take its place in the ecosystem.²¹ Perhaps this is one of the reasons why Leopold preferred the community

¹⁹ Eric Katz 'Organism, Community and the "Substitution Problem"' *Environmental Ethics* 7 no.3 Fall 1985 241-253.

²⁰ Katz, p.251 op.cit.

²¹ ASCA 111.

model to that of organism. Perhaps he wished to affirm the 'right to continued existence' of species of plants and animals, aside from their role in the maintenance of the land.²²

Another of Leopold's reasons for moving towards community and away from organism as his chief model may be located in his already noted ambiguity towards the place of humanity. Humans are always spoken of as being within the land community: citizens of it, members of it; the land community is an extension of the human community. However, a very different picture emerges if Leopold's use of the organismic model is considered. Here, humanity seems to be outside the organism, as a doctor tending a sick patient. Humans can 'interfere' and damage; the most perfect, healthy land organism is *one where no humans are*. Why does Leopold include humans in the land community, but not in the land organism?

The reason should have already become clear. An individual human, or indeed, the human species, in the land *community* exercises a degree of autonomy and independence; can have ends other than the good of the community; can have value in itself. If humans were to be part of the land *organism*, however, the situation would be very different. Humans could have only instrumental value, and would be subordinated to the health of the organism (a possible interpretation of Lovelock, below). Leopold would probably be reluctant to draw such a conclusion, given his ambiguous attitude to the importance of humanity. This is surely one of the contributing factors in his movement towards the use of community over organism.

Callicott, in contrast, suggests that Leopold de-emphasized the concept of 'land organism' because it had been abandoned by the ecologists of Leopold's time. Leopold thus adopted their preference for the terminology of community. But, Callicott suggests, Leopold was still charmed by the organismic idea and hence emphasized 'more and more the integrity, stability, and beauty of the environment as a whole, and less and

²² ASCA 204.

less the 'biotic right' of individual plants and animals...'.²³ It is certainly likely that scientific expedience directed Leopold to change the emphasis from organism in his early work to community in his later. The argument here is that this echoed the way his thought was already going, in that he had become aware of some of the non-scientific drawbacks of the organismic model. This also explains the more metaphorical and less metaphysical use of organism in *A Sand County Almanac* compared with that in *Some Fundamentals of Conservation in the Southwest*. It may be that it suits Callicott to ascribe to Leopold a strong organismic tendency, since Callicott has some sympathy with it himself. The evidence is not conclusive either way; this is merely a suggestion that Leopold was aware, even if only dimly, of the problems which the organismic metaphor might entail. In any case, he is certainly capable of working with several models.

The third model, that of a 'fountain of energy' is Leopold's least used model, where he is concerned to describe the passage of energy from the sun through different ecological levels - the biotic pyramid:

Land, then, is not merely soil; it is a fountain of energy, flowing through a circuit of soils, plants and animals. Food chains are the living channels which conduct energy upward; death and decay return it to the soil.²⁴

As with organism, Leopold pushes his model to explore subsidiary metaphors, speaking of the 'flow' of energy through a 'circuit'. Where undisturbed by humans, the circuit is 'sustained'; human action, however, by destroying large predators and introducing exotic species, for example, can upset such circuits, damaging the sustainability of the land and ultimately its fertility and viability.

The image of the land as a flow of energy is one which has become increasingly common since Leopold's time, in particular with metaphysical interpretations of quantum

²³ ASCA 202.

²⁴ ASCA 216.

physics. Callicott has championed this approach in several articles,²⁵ and it is common among so-called deep ecologists, who will be considered in Chapter 4. Leopold himself does not, however, draw any metaphysical conclusions of this sort.

The 'land as energy' metaphor again highlights the ambiguity of Leopold's approach to humanity. He carefully places homo sapiens at an intermediate layer in the biotic pyramid 'along with bears, raccoons and squirrels'.²⁶ As with 'community' humans are included rather than excluded; and as also with community, the concept of land as energy has none of the difficult connotations of land as organism. Yet the ambiguity persists. Despite this humble place in the biotic community, humans have the power to undermine the entire pyramid by their actions. 'Evolutionary changes, however, are usually slow and local. Man's invention of tools has enabled him to make changes of unprecedented variety, rapidity and scope'.²⁷ Leopold is almost suggesting that humans can act *outside evolution*, again raising the question whether or not humans are part of the land.

Preservation of Integrity, Stability and Beauty

What does Leopold mean when he talks about preserving the integrity, stability and beauty of the land community? No direct explanation is given in *A Sand County Almanac*; but there is some guidance. The land community, without humans, is for Leopold the 'most perfect norm'. Presumably, all undisturbed wilderness exemplifies perfectly the integrity, stability and beauty which humans should aim to preserve. It would be misleading to draw from this the conclusion that all human activity is somehow seen to be bad. Leopold's land ethic states that human action which tends to preserve integrity, stability and beauty is good. He witnesses to this by his acceptance of active land management and by his own, amply described, activities of hunting and

²⁵ Most prominently, Callicott 'Intrinsic Value, Quantum Theory and Environmental Ethics' *Environmental Ethics* 7 no 3 Fall 1985 257-275.

²⁶ ASCA 215.

²⁷ ASCA 217.

forestry.²⁸ Where stability, integrity and beauty are retained or enhanced, human action is desirable; presumably this is so even in wilderness areas.

The simplest of these terms to understand seems to be stability, usually understood to mean steadiness or fixity. However, to speak of the land as a fountain of energy, then to attribute fixity to it, would seem contradictory. Stability can, however, have another sense, and it is one which we know Leopold to have in mind elsewhere: the ability to return to a state of equilibrium, or to remain at some kind of equilibrium. Thus stability would correspond very closely to Leopold's idea, from his organic model, of land health. 'Health', he tells us 'is the capacity of the land for self-renewal'.²⁹ Stable communities, despite extensive human action, have retained their ability to keep going, to 'persist'. Unstable communities, however, show signs of 'disorganization', operating 'at some reduced level of complexity and with a reduced carrying capacity for people, plants and animals'.³⁰

This reduced ability to support a variety of species illustrates the conceptual closeness of stability and integrity. In fact, the stability of the land community seems to depend on its integrity. A land community which retains integrity retains wholeness. This seems to mean, for Leopold, primarily that it retains its full quota of species. In wilderness, he contends, 'component species were rarely lost' and neither was the soil.³¹ Humans damage the integrity of an ecosystem when, for instance, they remove the top predators, such as wolves. This damage to integrity has an effect on stability, since deer (for instance) may increase in population, overgraze the land, cause soil erosion and thus damage the integrity of the land community still further. The land will become disorganized and, if it settles to a new equilibrium, ie, regains some stability, it will be at a less complex, less diverse level than before. Although complexity and diversity are

²⁸ For more detail, see Susan Flader 'Thinking Like a Mountain' op.cit.

²⁹ ASCA 221.

³⁰ ASCA 219.

³¹ ASCA 196.

not mentioned alongside stability and integrity in Leopold's statement of the land ethic, both are important, and in need of preservation.³² Complexity, stability, integrity and diversity all seem linked together in Leopold's understanding of the land community. Ethical action is action which preserves this. By preservation, Leopold does not mean fixity, unchangingness, as if without human intervention, the land community would remain exactly the same; the land is dynamic, a fountain of energy. Perhaps preservation would be best interpreted here not as unchanging, but as allowing the land community to go on interacting as it would if undisturbed: that is to say, preserving its dynamic as a fountain of energy rather than preserving any one particular state.

A remaining question is the extent to which humans may act in the land community in order to promote such principles as complexity, stability, integrity or diversity. Leopold, while, as we have seen, regarding wilderness as the most perfect norm, also thought that behaviour which acted in accordance with these principles was ethical. This position is shared by Callicott.

Leopold's understanding of beauty is the most difficult of these three principles, and leads onto the question of subjective and objective value in Leopold (and Callicott). Leopold insists that the *aesthetically* right should be considered alongside the *ethically* right. Preservation of beauty obviously corresponds to the aesthetically right. In his introduction to *A Sand County Almanac*, Leopold speaks of the 'aesthetic harvest' which the land can contribute to (human) culture, a harvest at present not being reaped, and indeed actually being destroyed with the destruction of the land. This immediately seems to divide 'beauty' from 'stability' and 'integrity'. Stability and integrity are part of the land ethic; beauty is part of the land aesthetic. The land community can be stable, and can have integrity, on Leopold's terms, with no human presence at all. (This is not to say that integrity and stability are necessarily *valuable* without human presence). Beauty is a human harvest, a cultural benefit. To act to preserve beauty is to act for the enrichment of human culture.

³² ASCA 209

What, then, is beauty for Leopold? Callicott offers some helpful directions in his essay 'The Land Aesthetic'.³³ He argues that Leopold is advocating a natural aesthetic which stands in contrast to the Western landscape-art tradition, which is 'conventionalized, not well informed by the ecological and evolutionary revolutions in natural history; it is sensational and self-referential, not genuinely oriented to nature on nature's own terms; in other words, it is trivial'.³⁴ This kind of aesthetic appreciation of 'scenery' requires huge panoramic vistas and is primarily visual and dramatic, labelled by Leopold as an 'under-aged brand of aesthetics'.³⁵ In contrast, Leopold urges aesthetic appreciation of the small, the local and the undramatic parts of the land community, which, as yet, are not widely accepted as beautiful. This negative exposition of landscape-art aesthetics contrasts vividly with the largely positive assessment of it by Eugene Hargrove in his *Foundations of Environmental Ethics*. He suggests that it is the landscape-art tradition which led to appreciation for, and preservation of, wild countryside: indeed that it, rather than the science of ecology as Callicott contends, led to the development of environmental ethics.³⁶

I do not wish to enter this historical dispute here. What is significant is that both Hargrove and Callicott - and perhaps Leopold, although less directly - suggest that aesthetic appreciation, an experience of beauty in nature, can lead to the development of ethical attitudes towards it. Callicott comments that 'conservation and preservation decisions have been motivated more by beauty than by duty' and, quoting Leopold, that to cultivate a 'refined taste in natural objects' will result in 'enlightened...landuse decisions'. This sounds as if aesthetics is being used ultimately for an ethical purpose. If people change, or rather extend, their views of what is beautiful, from the sublime and dramatic to the small and local, then it will be easier to preserve them. The integrity and stability of the land community are more likely to be preserved if there

³³ CSCA 157-171.

³⁴ CSCA 160.

³⁵ ASCA 191

³⁶ Eugene Hargrove p.109 *The Foundations of Environmental Ethics* (Englewood Cliffs: Prentice Hall 1989).

is aesthetic appreciation of them. This is particularly acceptable to Callicott, who has an explicitly Humean approach to ethics as based on feeling (at least, in the majority of his work). Leopold also urges 'love' for the land community.

Thus beauty for Leopold does not only mean that which is sublime or dramatic, but also that which is small or local. As Callicott comments, 'ecology, history, geology, biogeography' all contribute to beauty for Leopold; the sense that things are in a certain place, and that they are part of a community where they have evolved, (hence he gets no aesthetic pleasure from exotic species, however beautiful they might normally be considered). Wildness and solitude also constitute a part of this beauty, along with the qualities of complexity, diversity, stability, integrity. That which is ethically right, in other words, also provides positive aesthetic experience; and positive aesthetic experience leads to ethical behaviour.

Beauty for Leopold is a subjective human experience. This does not, however, mean that it is random or purely relative. Certain factors - history, ecology, a sense of place, complexity, as I have pointed out - act as triggers for aesthetic experience of beauty in nature. The qualities are in the natural world; the aesthetic response is human. Leopold uses the concept of the *noumenon* as a kind of link between the qualities in nature and the human aesthetic response. While Callicott points out that this is ultimately derived from Kant,³⁷ a similar term is used by Ouspensky. The noumenon of a place, while taking the form of an actual species, such as a grouse or a bluejay, is the sign of its wholeness, its health, and hence its ability to provide aesthetic experience. It is thus a bridge between the qualities of the natural world and the human appreciation of beauty.

It is one of Leopold's key points that very few people actually receive the aesthetic experience which the small, the local, the undramatic has to offer them. They all rush to the dramatic places, despoiling them, depriving themselves of solitude, and missing the aesthetic experience awaiting them, literally, in their own back yard. To change this

³⁷ CSCA 166.

situation is, for Leopold, largely a matter of education. Everyone has the capacity for his kind of aesthetic appreciation, - it is 'a fact long known but latterly often forgotten'.³⁸ It is here that, as Callicott points out, the Kantian influence on Leopold is so important:

The "world", as we drink it in through our senses, is first filtered, structured and arranged by the conceptual framework or cognitive set which we bring to it, prior, not necessarily to all experience, but to any articulate experience.³⁹

One's experience, Callicott argues, is shaped by one's thought. Changing people's thinking can change their aesthetic appreciation, and can develop sensitivity to all the triggers for aesthetic experience which Leopold upholds. Thus, beauty, for Leopold is partly in the eye of the beholder. It is also in the mind of the beholder. Awareness of beauty is a mental as well as a sensual experience, and it is a response to qualities within the natural world, in particular to the noumenon of any particular place. To preserve the beauty of the land community is to preserve within it the qualities which give rise to aesthetic experience - but also to educate humans into developing an aesthetic response.

This examination of beauty for Leopold makes for an interesting comparison with his understanding of value. Moving on to consider the question of value, I will be shifting the emphasis from Leopold to Callicott, since Callicott's explanation of value is more explicit and thorough.

³⁸ ASCA ix.

³⁹ CSCA 163.

VALUE AND ETHICS IN LEOPOLD AND CALLICOTT

Leopold is considerably clearer about his ethics than his axiology. While his ethical approach has been sensitively explained and developed by Callicott, his axiology remains opaque. By axiology, I am referring Leopold's understanding of value in the natural world. Is there objective value in the non-human world to which ethical behaviour is an appropriate response? Or is value like beauty, something projected by humans onto the natural world in response to certain qualities found there? There is no clear indication whether Leopold thinks that values in the nonhuman natural world are subjective or objective. Callicott refrains from comment. Bryan Norton describes Leopold's axiology as subjective; but Norton fails to make a distinction between axiology and ethics. Evidence for one or other interpretation in Leopold is difficult to find. He does comment that the 'land has value in the philosophical sense', but this is not a definite indication. Certainly, his land ethic could be interpreted as suggesting that he holds an objective position. Stability and integrity within the land community may ultimately have intrinsic value for Leopold, without reference to human subjectivity. However, apart from this there is little evidence to suggest whether Leopold's axiology is subjective or objective. It is far simpler to concentrate on Leopold's ethics.

There are two vital pillars to Leopold's ethical edifice: the essentially biological origin and nature of ethics and its basis in feeling, rather than in either God or reason. According to Callicott, both these concepts came from Darwin, the second reflecting Darwin's use of Hume. This background explains why Leopold's ethics are evolutionary. Indeed, they reflect a three-fold temporal pattern almost Hegelian in form. First, co-operation between organisms proved to be evolutionarily successful, and hence the land community developed. Primitive humans must have been part of such a co-operative community, unconsciously operating for the benefit of all. Secondly, ethics in human society became conscious, and separated from the rest of land community; they became part of culture, and developed with culture. Only humans, and indeed, for a long time, only some humans, were considered to be part of the ethical community. Thirdly, Leopold urges, human cultural ethics should develop still further to include the land community once more, self-consciously this time. This is an extension of existing ethics,

rather than a substantial change; as Moline points out 'To extend or enlarge is to render more capacious the structure one is extending; it is not to evict that structure's present inhabitants'.⁴⁰ Since ethical attitudes here are based on sentiment, this means developing sentiments about the land: 'We can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in'.⁴¹

There is little need to examine the foundation of Leopold's ethic further, since Callicott has adequately done so already in his essay 'The Conceptual Foundations of the Land Ethic'. It is more helpful at this point to turn to Callicott's own ethics, based to some extent on Leopold's synthesis, and to consider Callicott's position and possible criticisms of it.

Callicott, as a key interpreter of Leopold, has produced work in environmental ethics which, while more rigorous in presentation, in many respects springs from Leopold. Having said this, Callicott himself proposes two differing - and possibly irreconcilable - approaches to environmental ethics. The first, and most common approach, is found in most of his published work; the second, with rather different implications (resembling much more closely writing by deep ecologists - is found in primarily in his articles 'The Metaphysical Implications of Ecology',⁴² and 'Intrinsic Value, Quantum Theory and Environmental Ethics'(op.cit.). The second approach will be considered in more depth in Chapter 4.

Callicott's ethics has several crucial interwoven strands. The first, like Leopold, indicates a strongly Darwinian background. Our ethical sense has evolved with us, biologically; it was essential for human survival that humans learned to co-operate; altruism in the sense of co-operation was biologically selected for. Indeed, Callicott

⁴⁰ Jon Moline p.102 'Aldo Leopold and the Moral Community' *Environmental Ethics* 8 no.2 Summer 1986.

⁴¹ ASCA 214.

⁴² Callicott 'The Metaphysical Implications of Ecology' *In Defense of the Land Ethic (DLE)* (Albany, New York: State University of New York Press 1989) 101-112.

argues that ethics must have preceded reason, since humans must have learned to survive in communities, and hence to behave in some sense ethically, long before reasoning ability developed. One important implication of this biological evolution of ethics is Callicott's contention that, to some extent at least, our ethical sense is 'standardized' or 'universalized': it is based around the well-being of the community or communities with which we identify:

the human capacity for moral sentiments... is fairly uniform (because this category is a genetically fixed psychological category like sexual appetites) and roughly equally distributed throughout the human population.⁴³

This biological perspective provides not only the origin and foundation of ethics but also the limits within which they operate: their purpose is to enable the survival of the community. This survival is, according to Callicott, an ethical imperative in an ethics informed by Darwinism.

Understanding evolution, Callicott argues, also develops human awareness of their kinship with the rest of the natural world. This combines with the second strand of Callicott's ethics, again as with Leopold: the grounding of ethics in feeling, a basis which Callicott ascribes to Hume. Callicott contends that, according to Darwinian theory, when any human recognizes another being as having kinship or community membership an instinctive positive emotional response is triggered. This results in the projection of evaluative feelings. Hence the realization that we are members not only of a human community, but also of an ecological community, should extend our affectional base and hence our range of ethical awareness. Evaluative feelings, therefore, extend into the wider, ecological community:

The biotic community is the proper object of that passion actuated by the contemplation of the complexity, integrity and stability of the community

⁴³ Callicott, 'On the Intrinsic Value of Non-Human Species' DLE 151.

to which we belong.⁴⁴

Unlike Leopold, Callicott is clear about the subjective nature of his axiology as well as his ethics. All value in the natural world is a projection of human feeling. However, Callicott is anxious to insist that the subjective nature of value by no means entails that all value in the natural world is instrumental. It may also have what he calls intrinsic value. This is identical with my definition of *inherent* value in Chapter 2:⁴⁵ value which a human valuer gives to something which she or he considers to be valuable in itself. This kind of value is anthropogenic, but it is not necessarily anthropocentric.

Natural objects, then, for Callicott have no objective value, present when there is no valuer. When an appreciative human is present, to use Rolston's terminology, there is 'value ignition'. In this sense, natural value is relational. Certain triggers in the natural world generate a valuational feeling in response, much as other qualities in the natural world (or even the same ones) excite an aesthetic response in humans.⁴⁶

Alongside the ecological evolutionary influence of Darwin, and the emotive influence of Hume, Callicott cites a third illustrious strand of influence: that of Plato, and Plato's collective or communal approach to the state. In a footnote to his article 'Animal Liberation: A Triangular Affair' he notes that Plato uses the metaphors both of the

⁴⁴ Callicott 'Hume's Is/Ought Dichotomy and the Relation of Ecology to Leopold's Land Ethic' DLE 117.

⁴⁵ Hence, I will use 'inherent' rather than 'intrinsic' value here.

⁴⁶ This relational account of value is developed in Callicott's two articles: 'Intrinsic Value, Quantum Mechanics and Environmental Ethics' and 'The Metaphysical Implications of Ecology'(op.cit.). Although the former of these essays was first published in 1985 (before either *Companion to a Sand County Almanac* (1987) or *In Defense of the Land Ethic* (1989) in which it was reprinted) it suggests very clearly that Callicott is moving beyond his Humean\Darwinian position, perhaps initially as a development of Leopold's 'land as energy' model. There are tensions between this approach, based on quantum physics, and his Darwinian\Humean approach. Bryan Norton argues that the two are incompatible: Norton, p.264 'Review of Paul Taylor: Respect for Nature' *Environmental Ethics* 9 no.3 Fall 1987. This quantum physics approach to environmental philosophy will be considered in Chapter 4.

State as organism and as community. He argues that Plato, like himself, puts the wellbeing of the whole, ahead of the wellbeing of any one individual: 'He shrinks from nothing, so long as it seems to him to be in the interest of the community'.⁴⁷ This is the kind of ethical approach which Callicott suggests for the land community.

The priority of the community, combined with an affectional and biological view of ethics, provides the overall structure for Callicott's practical ethics. He envisages each human individual as being placed in the midst of a series of nested communities,⁴⁸ with diminishing emotional, and hence ethical, commitment as one moves further away from the centre. One's closest community, for instance, might be one's family; then one's neighbourhood, and so forth. The ecological community, in particular, the local ecological community, is one of the communities of which one is a part, and towards which one has affective, and therefore an ethical, responsibility.

From this basis, Callicott moves to attack the positions considered in Chapters 1 & 2. Both individual consequentialist and individual deontological ethics are unacceptable, being unable to sustain a coherent concept of 'community', (or indeed of species), other than as the sum of a group of individuals. In other words, they all have too strong a concern with the individual.

As was noted in Chapter 1, this may seem a strange criticism to make of a utilitarian position such as Singer's where an inadequate concept of the individual is more often criticized. The individual consequentialist inability to ascribe value to plants or collective wholes such as communities or species can, according to Callicott, result in serious ecological damage:

Other things being equal, it would permit the destruction of a Sequoia

⁴⁷ ALATA 66.

⁴⁸ Although Callicott does not explicitly acknowledge the Routleys as a source for this expression, it is likely that the idea of nested communities, or zones, originally springs from Richard and Val Routley's paper 'Human Chauvinism and Environmental Ethics' p.107 op.cit.

grove to provide pasture for a liberated and exponentially increasing population of feral cattle..it makes no distinction between wild and domestic organisms...it fails to articulate our considered moral intuitions respecting collective and holistic entities..since none of these collective entities is any more sentient than a plant.⁴⁹

The deontologists, or, as Callicott calls them, the conatists, such as Schweitzer and Taylor are also unable to resist this criticism: collectives, such as the land community or species only have the value of their parts. This also applies to rights theorists such as Regan in *The Case for Animal Rights*, who is frank about his inability to accept the 'holistic' position of collective consequentialist environmental ethics.⁵⁰

Such individualist views, Callicott contends as we have seen, are fundamentally 'life denying'. They fail to accept the suffering and death which is at the very heart of natural biotic processes and is, in fact, essential for evolutionary and ecological processes to continue.⁵¹

This opposition to the concerns of individual environmental ethicists, and more particularly 'animal liberationists' found expression in Callicott's notorious paper 'Animal Liberation: A Triangular Affair'. While later regretting the antagonistic expression of this paper and 'wincing at its stridency',⁵² it does, in fact, characterize the logical conclusions of his position. His attempt to remedy it in 'Animal Liberation: Back Together Again' while, perhaps, tempering his style, does not move far towards closing the chasm. (Indeed, Mark Sagoff, influenced by Callicott, entitled an ensuing article 'Animal Liberation and Environmental Ethics: Bad Marriage, Quick Divorce'.)

Our primary commitments, Callicott insists, are to the organisms or communities (he

⁴⁹ NAVT 300-301.

⁵⁰ CAR 359.

⁵¹ NAVT 301.

⁵² Callicott p.103 'The Case Against Moral Pluralism' (CMP) *Environmental Ethics* Vol 12 no.2 Summer 1990.

uses both metaphors) in which we find ourselves, not to other individuals. The organic metaphor - which is perhaps predominant in 'Animal Liberation: A Triangular Affair' - carries the suggestion, as we have seen, that the parts only function for the whole. A second suggestion, which Callicott develops, is that the parts, or some of the parts, may have to sacrifice themselves for the whole:

For the sake of the person taken as a whole, some parts may be, as it were, unfairly sacrificed. On the level of social organization, the interests of society may not always coincide with the sum of interests of its parts.⁵³

Indeed, those parts seem most significant to many of the ethicists of Chapters 1 & 2: complex and/or sentient animals, may be insignificant to the whole, and hence of very little value. Other insentient and simple organisms may be considerably more important:

Animals of those species which, like the honey bee, function in ways critically important to the economy of nature, moreover, would be granted a greater claim to moral attention than psychologically more complex and sensitive ones, say rabbits and moles.⁵⁴

For Callicott to be consistent, this condition must include humans, a point which, in 'Animal Liberation: A Triangular Affair' he is happy to accept. Since humans are, at present, the greatest destroyers of the 'economy of nature' Callicott is prepared to go so far as to say that the greater the misanthropy in an ethical system, the more environmental it is. In addition, he argues that there should be a massive reduction in human population: 'As omnivores, the population of human beings should, perhaps, be roughly twice that of bears, allowing for difference of size'.

Callicott later withdraws from some of these remarks, both in 'Animal Liberation and Environmental Ethics: Back Together Again' and in 'The Case Against Moral Pluralism', where he attempts some kind of reconciliation with his critics. Both papers stress that

⁵³ ALATA 63.

⁵⁴ ALATA 64.

the land ethic is to be seen as an extension of existing ethical concerns, rather than as a replacement for them. There must be

an expansion of moral sensibilities from narrower to wider...like the annular growth rings of a tree. In such a figure, the inner rings remain visible and present and the outer are added on, each more remote from the center, the moral heartwood.⁵⁵

Since human beings fall into a community closer to us than the wild biotic community, our ethical priorities will thus be to humans.

This 'nested community' approach gives Callicott a distinctive, if controversial, attitude to domestic animals, whom he distinguishes very firmly from the wild biotic community. He takes it as given that no environmental philosophy would wish to interfere to prevent predation in the wild. The human obligation to wild animals is, very simply, to leave them to pursue their own ends, and hence to preserve the integrity, stability and beauty of the land community in their own way. This does not, however, preclude wild hunting, provided that killing remains within the carrying capacity of the land community. Domestic animals are not part of the biotic community, but rather part of the human community. They form part of what Callicott, deriving from Mary Midgley,⁵⁶ calls a 'mixed community' of humans and nonhumans. Obligations to domestic animals are very different from obligations to wild animals; and perhaps obligations to pets are different again from those to farm animals. Each has a different degree of closeness in the nested moral communities to which we belong.

Membership of such a 'mixed' community may prove to be a mixed blessing for domestic animals. They have, according to Callicott, a kind of 'evolved and unspoken contract' with humans.⁵⁷ They 'are creations of man. They are living artifacts, but artifacts,

⁵⁵ CMP 123.

⁵⁶ Midgley p.112 *Animals and Why they Matter* (Harmondsworth, Middlesex: Pelican 1983).

⁵⁷ ALATA 67.

none the less'. To speak of their 'natural behaviour' is 'incoherent and insensitive: it would make almost as much sense to speak of the natural behaviour of tables and chairs'.⁵⁸ Bred to a life of docility and dependence, talk of liberating them makes no sense, since they could not survive on their own.⁵⁹

Callicott thus has little to say about some of the primary concerns of individual consequentialist and deontological ethical thinking about the environment. His concern about animal experimentation and agribusiness is that the animals have become 'unnatural' machines, rather than that they suffer; suffering is acceptable, provided that animals suffer no more than in the wild.⁶⁰ Callicott calls for a 'shrinkage of the domestic sphere';⁶¹ indeed, the logical conclusion to be drawn from his ethics is a return to the subsistence hunting lifestyles such as those of pre-settlement Indian cultures in North America.

One collective of particular significance in environmental ethics has not been considered here: the species. At the heart of Callicott's ethical matrix is the community - whether the human, the mixed or the biotic community. It is not immediately obvious how Callicott can give species moral significance as a whole, since they do not cohere easily with the priority of the community concept. Can one, after all, have 'feelings' towards species in the way in which one does towards a community? Callicott certainly argues for this position. Affection for other species follows from their being 'companions in the odyssey of evolution'.⁶² This sense of solidarity means that humans

⁵⁸ *ibid.*

⁵⁹ There appears to be some confirmation of this view of an 'unspoken contract' in the neotonizing theory of domestication (Stephen Budiansky: *The Beastly Truth* Antenna Programmes, 1992).

⁶⁰ In their views on domestic animals, Rolston and Callicott are in agreement EE 78 Rolston's argument, however, is more heavily based on his perceived nature/culture division.

⁶¹ ALATA 70.

⁶² Callicott 'On the Intrinsic Value of Nonhuman Species' DLE 152.

can value species inherently - not for their instrumental value, but for what they are in themselves. Species thus have value alongside, and as part of, the nested communities in which humans live.

In summary, then, Callicott's ethics is deeply influenced by Aldo Leopold. He combines a Darwinian evolutionary and ecological perspective on the origin and scope of ethics with a Humean 'sentimentalism' and a Platonic emphasis on the priority of the whole over the parts. Like Leopold, he speaks of the land in terms of both 'organism' and 'community' - but unlike Leopold, displays no ambiguity in his attitude to the place of humans in the natural world. Humans are rooted within the ecological community and are not exempted from the requirements for promoting land health. Callicott attacks individualist ethics, especially that of animal liberationists, describing them as 'effete' and 'against nature'. Humans live in a world of nested communities of value, and extend their evaluative sentiments to species as well as communities. This theory of differing communities allows for a sharp distinction between wild and domestic animals.

TOWARDS A CRITIQUE OF LEOPOLD AND CALLICOTT

Criticism of Callicott's ethics has been very diverse, but clusters around several centres. First, the biological basis of his ethical position, and its ethical implications, have been questioned. Secondly, broader criticism has been aimed at his emphasis on the integrity and priority of the whole over and against its parts. Thirdly the subjective basis of his axiology has been attacked. All of these questions are deeply entrenched problems of moral philosophy in general and are not confined to the environmental ethics debate. For the purposes of this thesis, however, I shall primarily be considering their bearing on questions of environmental ethics, rather than ethics in general.

Biological Criticisms of Callicott

A biological foundation for ethics is essential to Callicott, both in describing its origin and its manifestation in community. Biological considerations are also crucial in both his and Leopold's statements on what constitutes 'land health' and hence what behaviour

is ethical within the land community.

The question of biological origins for ethics immediately leads into sociobiology, and the dispute over E.O. Wilson's controversial book,⁶³ a dispute to which both Callicott and his critics refer surprisingly infrequently. This is perhaps both because of the complexity and the controversial nature of the debate, which I also do not wish to enter in detail here. However, several salient points can be made.

All ethical theories which claim an evolutionary origin for ethics are concerned fundamentally with inherited altruistic tendencies. They accept that some kinds of altruistic behaviour (here altruism is taken as meaning 'benefiting others at some cost to oneself')⁶⁴ are of evolutionary advantage and have been selected for. The most obvious and commonly suggested form of inherited altruism is that of kin altruism. Offspring to whom parents exhibit altruistic behaviour are more likely to survive; thus this characteristic is selected for. Other kinds of altruism which have been suggested as conferring evolutionary advantage are reciprocal altruism between members of the same species, and group altruism, where the survival of the group is put ahead of the individual. The last, for which there appears to be least evidence, is that adopted by Callicott, quoting Darwin as his sole source (who was, of course, writing before genes had been discovered).⁶⁵

By adopting this interpretation, Callicott marginalizes himself. Even Singer, who has no sociobiological axe to grind, suggests that group altruism could only have played a small part in conferring evolutionary advantage, although it may have a cultural role. If Callicott is wrong about the significance of group altruism, even if he is right about the basis of ethics in evolution and sentiment, his argument collapses. Recognition of

⁶³ E.O. Wilson *Sociobiology: The New Synthesis* (Harvard: Harvard University Press 1975).

⁶⁴ The primary definition used by Peter Singer p.5 *The Expanding Circle: Ethics and Sociobiology* (Oxford: Oxford University Press 1981).

⁶⁵ For further comment on this see J.L.Mackie 'The Law of the Jungle: Moral Alternatives and Principles of Evolution' *Philosophy* 53 no.206 Oct.1978 455-465.

community or group membership would not spark an instinctive feeling which would lead to an ethical response.

Secondly, Callicott's interpretation of Darwin himself is contestable, as is illustrated by the number of competing ethical accounts which claim to be based on Darwinism. James Rachels, for instance, in his recent book *Created from Animals: The Moral Implications of Darwinism*⁶⁶ fails to mention Callicott's interpretation of Darwin at all (or Singer's *The Expanding Circle*). Rachels, like Callicott, considers that realizing the implications of Darwinism undermines belief in the differentiation of humans from the nonhuman world, and hence ends the exclusion of animals from moral consideration. However, Rachels develops an ethical system, 'moral individualism', based on Darwin, where individual organisms and their characteristics are of primary ethical consideration. There is no trace of the community concept championed by Callicott, despite the fact that Rachels and Callicott quote the same passages to support their differing positions.

I am not intending to claim that Rachels is right and Callicott wrong; or even that kin altruism is correct and group altruism is wrong - although in the latter case the evidence is against Callicott. However, at the very least, the possibility of such plural interpretations of altruism and evolution in general, and of Darwin in particular, must raise a question mark over the foundations of Callicott's ethics. There is a constant suspicion that Darwinian evolutionary theory is being used to support a position which the author already holds (a practice which will be discussed in Chapter 4). Callicott's interpretation is surely, as Anthony Weston suggests 'context - dependent and culturally specific'. Indeed, it is difficult to escape Weston's conclusion that 'evolutionary arguments are too ideologically promiscuous to be trusted at all'.⁶⁷

⁶⁶ James Rachels *Created from Animals: The Moral Implications of Darwinism* (Oxford: Oxford University Press 1992).

⁶⁷ Anthony Weston p.286 'On Callicott's Case Against Pluralism' *Environmental Ethics* 13 no 3 Fall 1991.

A related criticism of Callicott's biological approach to ethics is made by Kristin Shrader-Frechette.⁶⁸ She argues that Callicott's use of biology undermines the normative dimension of his ethics. To avoid being accused of ethical relativism, Callicott argues that evolution has 'standardized' human ethical responses. The impact of this, as Shrader-Frechette comments, is that 'one cannot be morally bound to do something against natural selection or against his genetic make-up. And one cannot be praised for acting according to natural selection'.⁶⁹ Callicott's account of ethics thus becomes descriptive, not normative. That is to say, if our behavioural responses are genetically programmed, they cannot really be described as ethical at all.

Callicott's response to this criticism is, initially, to backtrack and deny that he holds any particular biological theory of ethics:

The moral sentiments are not blind, unerring instincts, they are open-ended feelings like sympathy, goodwill, beneficence and so on. I argue accordingly that nature (evolution) outfits us with a plastic capacity for ethics but to whom we owe what is shaped by nurture (culture).⁷⁰

However, he continues by saying that human moral sentiments are community-based, thus revoking his claim to ethical plasticity. His ethics does, he claims, have norms alongside descriptions: '98.6 degrees Fahrenheit both *describes* the usual temperature of healthy human bodies and provides a *norm* against which we measure deviations - fever and hypothermia'. As Shrader-Frechette points out,⁷¹ this is a statistical norm, rather than an ethical norm. In addition, if Callicott were really to think that human ethical capacity were plastic, there could be no statistical norms of the sort he

⁶⁸ Kristin Shrader-Frechette 'Biological Holism and the Evolution of Ethics' review of Callicott's *In Defense of the Land Ethic* in *Between the Species* Vol.6 no.4 Fall 1990 185-192.

⁶⁹ Shrader-Frechette p.189 op.cit.

⁷⁰ Callicott p.194 'Reply to Shrader-Frechette' *Between the Species*, Vol 6 no.4 Fall 1990.

⁷¹ Shrader-Frechette p.196 'Callicott Reconsidered' *Between the Species* Vol 6 no 4 Fall 1990.

describes. The only abnormality would surely be not to have ethical feelings at all, which would, according to Callicott's biological account, be evolutionarily impossible. Callicott cannot answer Shrader-Frechette's criticism with any degree of conviction.

These are by no means all the biological criticisms which could be made of Callicott. However, more directly ecological problems are also raised: in particular, what is meant ecologically by the 'land community' or the 'land organism', and by the conditions which are best for promoting 'land health'. Are Leopold and Callicott 'wishfully imposing patterns on what is chance aggregation'?⁷² Are there, ecologically, groupings either with sufficient coherence or sufficient definition to be called 'communities' or 'organisms'?

Scientific ecologists doubt both appellations: in particular that of the land organism. There is even doubt whether the term 'ecosystem' is appropriate. As early as 1952, the biologist Gleason rejected the concept of the land organism in no uncertain terms:

Far from being an organism, an association is merely the fortuitous juxtaposition of plants. What plants? Those that can live together under the physical environment and under their interlocking spheres of influence and which are already located within migrating distance.⁷³

The rejection of the concept of the land organism has been reinforced more recently by Andrew Brennan. The term 'land organism', according to Brennan, suggests that it is in some sense an 'individual' with parts co-ordinating for the whole. But, he concludes, 'current research in ecology does little to support the claim that natural systems are 'individuals in the required sense'.⁷⁴ There are also problems with the concept of the

⁷² Andrew Brennan p.48 *Thinking About Nature* (London: Routledge 1988).

⁷³ Gleason p.8 'Delving into the History of American Ecology' *Bulletin of the Ecological Society of America* 56 1952.

⁷⁴ Brennan p.79 'Ecological Theory and Value in Nature' *Philosophical Inquiry* 1986 Vol 8 no 1-2.

'land community' although Brennan remains more sympathetic to this less integrated, less systemic image. One key problem is 'the difficulty finding any structural properties that would enable us to set individuals composing some ecosystems aside from all the others'.⁷⁵ It is easier, Brennan argues, to accept some kind of coherence and definition in species - which reproduce and share much common genetic material - than the 'land community' which does neither. By 1988, Brennan seems even less sure that coherence and definition can be attributed to the 'land community':

Because of the complex nature of ecology it is hard to be sure that the proposed [ecological] laws ever apply in an explanatory way to any real situation.⁷⁶

Despite this, Brennan is still prepared to use the term 'community' in a very loose sense to describe human interaction with the nonhuman natural world. Other critics of Callicott and Leopold reject both models completely. Harlan Miller, for instance, argues that the 'land' is hardly an affectional community, as Callicott portrays it, but rather 'bound by collocation and mutual exploitation'.⁷⁷

Problems with accepting that there is sufficient ecological coherence or definition to speak of the land community are compounded by unease over Leopold's and Callicott's definitions of 'land health'. In his article 'Conservation Ethics and Fishery Management',⁷⁸ Callicott claims that 'clear objective criteria of biotic health should be specifiable in principle' and that the objective criteria are those of 'species diversity, ecological health and integrity'. 'Active invasive management of the land' can be adopted in order to achieve these ends. This certainly leads one to ask whether Callicott is, in fact, imposing his own criteria for land health onto the land.

⁷⁵ *ibid.*

⁷⁶ Brennan p.49 *Thinking about Nature* op.cit.

⁷⁷ Harlan Miller p.171 'Comment on Callicott' *Between The Species*. Exact reference unobtainable.

⁷⁸ Callicott p.27 'Conservation Ethics and Fishery Management' *Bulletin of the American Fisheries Society* Vol 16 no 2 March - April 1991.

This is a point picked up again by Shrader-Frechette. She asks 'What pattern of excellence is it which an ecosystem maximizes? From a biological point of view there is a clear notion neither of balance, integrity, stability nor of community'.⁷⁹ The constantly changing, dynamic nature of ecological processes makes it impossible to establish 'objective criteria' of land health. One example of this is the foremost position accorded to species diversity by Callicott, among others. Yet ecological studies have demonstrated that wide species diversity does not necessarily mean greater ecosystemic stability; nor is the climax state of an ecosystem necessarily its most diverse point. Thus, contrary to Callicott, species diversity is not necessarily an objective criterion of land health. Species can become extinct without human intervention; climax ecosystems may have fewer species than younger ecosystems. A particularly potent illustration of this is found in Horn's study of forest succession, quoted by Andrew Brennan.⁸⁰ Here, over time, one species becomes dominant, driving another to extinction.

Should humans intervene to preserve species which are becoming extinct through no human cause? If species diversity were an objective norm, this would be the case. However, it would be possible under such circumstances for the norm of species diversity to clash with the norm of integrity or stability. This suggests that these norms are purely human creations bearing no direct reference to what is 'good for the land community' - if there can be a universal or even a contextual good for such a thing - at all.

A further question is raised by the indistinctness of the boundaries between different communities for Callicott's ethics. Is the only really definitive community the biosphere? Or can different communities be separated from one another, and the integrity and stability of all be aimed at? What if they conflict? As Shrader-Frechette comments: 'Optimizing the wellbeing of a particular community leads neither to the optimization of another community, nor to that of the biosphere, nor to that of a

⁷⁹ Shrader-Frechette op.cit. fn.34 & p.188.

⁸⁰ Andrew Brennan p.85 1984 op.cit.

particular association'.⁸¹

Parts and Parts, Wholes and Wholes in the Land Ethic

If the welfare of the biotic community is the *sole* standard of right and wrong, then if I beat my wife, cheat on my income tax, torture kittens, ax-murder my neighbour and burn down the local schoolhouse, my actions are morally neutral so long as I do not allow the sparks to start a bushfire.⁸²

Johnson's mocking comments on Leopold's land ethic are both an acknowledged caricature and a subtly incisive critique. Leopold does not, in fact, suggest that the land ethic should stand alone as the only ethical guideline for all behaviour. If this were so, then virtually all that is now legally or ethically unacceptable would immediately become permissible, and conversely, that which is at present legally or ethically neutral, such as the introduction of exotic species into unfamiliar ecosystems, would become ethically unacceptable. Leopold and Callicott would want to say something about the latter concerns without eliminating the former. For Leopold, the land ethic should be incorporated into already existing ethical structures. A similar position is held by Callicott, whose theory of nested communities gives both human and biotic communities moral considerability.

Yet Johnson's remark raises two important issues for Leopold and Callicott: the place of the individual in such a community-based ethics, and ways of balancing the wellbeing of different wholes or communities against one another.

This issue was previously touched on by addressing the question whether ecological groupings were the kind of things which could be considered to be 'wholes',⁸³ and if so what kind of whole: is the model of 'community' more accurate than that of

⁸¹ Shrader-Frechette op.cit. p.188.

⁸² MDW 239.

⁸³ I will address the metaphysical question concerning holism in the next chapter.

'organism'? Ecological evidence suggested very strongly that the model of 'organism' posited a much greater cohesion than was in fact present in ecological groups, but that a cautious use of 'community' might be acceptable. For the purposes of this section, it will be assumed that the expression 'land community' makes some sense and is not scientifically unacceptable. The question, then, concerns the consequences of attributing moral standing to such a community: both with regard to the effect on the individual, and the balancing of communities against one another.

The relation of the individual to the community, and the problems raised by assignation of priorities are at the heart of all moral and political philosophy. The focus here will be on the implications of including the mixed and biotic communities, rather than just the human community, in ethical systems based on a community concept.

The implications of this view (Leopold's land ethic) include the clear prospect that the individual may be sacrificed for the greater biotic good, in the name of the 'integrity, stability and beauty of the land community'. It is difficult to see how the notion of the rights of the individual could find a home within a view that, emotive connotations to one side, might fairly be dubbed environmental fascism.⁸⁴

Coming from a 'rights' perspective, where moral standing is assigned to those who are 'subjects-of-a-life', Regan is understandably horrified by the seeming implication of the land ethic for the individual. As with any political system where individuals are sacrificed for the supposed good of the whole, this can be labelled a kind of fascism, here based around the environment rather than the state.

Regan suggests an example of such fascism, which will serve as a useful test case:

If, to take an extreme, fanciful, but, it is hoped, not unfair example, the situation was either to kill a rare wildflower or a (plentiful) human being, and the wildflower, as a 'team member' could contribute more to the 'integrity, stability and beauty of the land community' than the human, presumably we would not be doing wrong if we killed the human and saved

⁸⁴ CAR 361.

the wildflower.⁸⁵

The wildflower is an insentient (but alive), individual within the land community which is both rare (hence its loss would affect species diversity) and important to the functioning of the community (hence its loss would upset stability and integrity; and probably beauty as well). The human is conscious and sentient - for Regan, subject-of-a-life, unlike the wildflower; a member of a common species; and not important to the function of the land community. For Regan (at least in so far as his rights argument is concerned) the human has rights and the plant does not.

It is important to note that part of Regan's objection to Leopold's position, as he perceives it, is the standard deontological objection to the utilitarian: insufficient consideration for the individual. This objection was considered in Chapters 1 & 2. The substantial and interesting part of Regan's objection here is specifically ecological. According to the land ethic, he contends, a human being could be sacrificed for a wild flower. That a human being might be sacrificed for the best interests of humanity is one thing. That a human might be sacrificed for a flower is quite another.

Of course, as with Johnson's earlier comment, if the land ethic were the only moral guideline, Regan would be right. Indeed, if this were so, it would be perfectly reasonable to urge the destruction of the entire human species (except, perhaps, for a handful, to retain species diversity) since undoubtedly humans damage the integrity, stability and beauty of the land community far more than they contribute to it. But we have already seen that Leopold claims to be 'enlarging the boundaries of the moral community' not excluding everything but the land community from moral consideration. There is no doubt that Leopold, particularly with the ambiguity of his attitude towards humans, would choose the human over the wildflower.

Callicott, however, is a more complex case to consider (he had not published any of his significant articles in 1984 when Regan was writing). In his less temperate writing (in

⁸⁵ Regan p.362 op.cit.

particular in 'Animal Liberation: A Triangular Affair') Callicott sounds as if he is adopting the 'environmental fascist' position characterized by Regan. He abstracts the land ethic from any other ethical context, making definitive statements, such as: 'In every case, the effect upon ecological systems is the decisive factor in the determination of the ethical quality of actions'.⁸⁶ This leads Callicott to openly endorse the kind of misanthropy and environmental fascism about which Regan is concerned. If this were the whole story, one would have to conclude that Callicott's ethics is desperately inadequate.

Elsewhere, however, Callicott's ethical system is much broader and more sophisticated. Each human lives within a series of nested communities, the human community, the mixed community and the biotic or land community. Humans are bound by affectional ties to each of them, ties which diminish with distance. Callicott's ethics must be examined within this context.

As with any consequentialist ethical theory, where ethical action is aimed at achieving some kind of 'summum bonum', the individual can have no ultimate recourse to 'rights' or absolute obligations (which is in itself, objectionable to Regan). Where the summum bonum is the wellbeing of different nested communities, the situation becomes extremely complex. If the only summum bonum were to be the wellbeing of the biotic community, then Regan's human could be sacrificed for the wildflower. If the wellbeing of the human community, or the wellbeing of the mixed community are given priority, then the wildflower would be lost. Before considering what action is ethical in any given situation, one must decide what is the summum bonum. This creates a situation of conflict for Callicott, since he has set up three summa bona - the three communities - not to mention the many subcommunities within the three.

Not all ethical decisions, of course, will generate problems. There are plenty of cases where several summa bona coincide: where for instance the good of the human community coincides with the good of the biotic community. More interestingly, and

⁸⁶ ALATA 61.

perhaps more controversially, the 'nested community' model provides for a resolution of conflict within any one 'nest' of a community. Culling a population explosion, for instance, among any one species, where to leave them to multiply would damage the biotic community would be unquestionably ethically correct for Callicott. Neither the human community nor the mixed community is threatened by the cull; and it is for the wellbeing of the biotic community to act.⁸⁷ This kind of culling, especially of mammals, is anathema both to an individual consequentialist (because of the suffering inflicted, unless, ultimately more suffering would be caused by allowing continued population expansion and hence starvation) and to an individual deontologist who attributes intrinsic value or inherent worth to each individual.

The real problems begin where the good of one community clashes with another, as in Regan's wildflower example, or perhaps in a more accurate version of it, where the summum bonum of the human community is in direct conflict with the summum bonum of the biotic community. Yet Callicott seems to give a clear answer to this, contra Regan; the human community wins. The human community is the inner circle, with closer affective and hence ethical ties, and is thus of ultimate ethical significance. 'Human rights and human welfare generally come first; they are not challenged or undermined by an ecocentric ethic'.⁸⁸ As one of Callicott's critics, Varner, concludes, 'obligations to family members and human beings trump our obligations to non-human animals and ecosystems'.⁸⁹

This robs the land ethic, of any practical force. Rather than choosing the wildflower over the human in a life and death situation, such an ethic would presumably allow a child that wanted to please her parents (and hence add to the wellbeing of the family

⁸⁷ Most population explosions are due to the removal by humans of top predators. Here it is human action in the biotic community which has caused the imbalance in the first place, and it would be better to restore predators than to kill pest species.

⁸⁸ Callicott p.420 'The Search for an Environmental Ethic' Tom Regan (ed) *Matters of Life and Death* (2nd Ed.) (NY: Random House 1986).

⁸⁹ Varner p.176 'No Holism Without Pluralism' *Environmental Ethics* 13 no. 2 Summer 1991.

qua community) to pick an entire bunch of rare wild flowers in order to give them to her parents.

Thus, where one used to read 'Four legs good, two legs bad', Callicott now seems to be saying 'Four legs good, two legs better'. A bifurcation has been generated between the environmental facism of the abstracted land ethic, and the human-centredness of the land ethic within Callicott's nested communities. The problem of individual integrity, faced by all consequentialists, is compounded by the lack of suitable discriminating principles to resolve situations of conflict. That humans should always win over the biotic community because they are an 'inner circle' is unlikely to be regarded as an adequate position for any philosophy claiming to be 'environmental'.

Callicott attempts to manoeuvre around this by arguing that the 'outer orbits of our moral spheres tug on our inner ones'.⁹⁰ He seems to be seeking some kind of principle by which nonbasic improvements to the welfare of the inner community do not automatically trump basic improvements to the welfare of the outer community: something like Paul Taylor's priority principles, or VanDe Veer's Two-Factor Egalitarianism. This would enable a trivial human claim, to lose to the non-trivial claim of the land community.⁹¹ The introduction of such principles would allow Callicott to combat both the accusation of environmental fascism, and that he is robbing the land ethic of any significance.⁹²

Callicott would almost certainly be unhappy with such a suggestion. It undermines his reliance on affection as the basis of moral concern by introducing another factor, reason. This multiplication of relevant ethical factors also moves his position towards that of moral pluralism, to which he is vehemently opposed. Such principles may also

⁹⁰ BTA 58.

⁹¹ In speaking of winning and losing in environmental ethics, I am again indebted to conversation with Holmes Rolston and to his unpublished paper 'Can and Ought Humans to Lose in Environmental Ethics?'.

⁹² Wenz attempts such a system in *Environmental Justice* (op.cit.); but his approach is pluralist, and would thus be rejected by Callicott.

wreak havoc with Callicott's treatment of the 'mixed community' - in particular for farmed animals. In the three-tier community hierarchy, domestic animals neither qualify for the preferential treatment one might give to the human community, nor for the 'letting be' treatment recommended for the biotic community. Callicott suggests that this allows humans to use them, as cultural artifacts, provided that they do not inflict more suffering on them than animals in the wild (in fact Callicott suggests, highly contentiously, that domestic animals never suffer more than wild animals).

Even without new, discriminating principles, Callicott is not entirely consistent here. He should at least claim that, since domestic animals are affectionally nearer to us, they should suffer less than animals in the wild. But a discriminatory principle, adjudicating between basic and nonbasic claims, would put the basic claims of domestic animals before the nonbasic claims of humans. Such a principle would almost inevitably entail vegetarianism, at least as far as domestic animals are concerned. (This would not, of course, rule against wild hunting in the biotic community.) Callicott would, I imagine, want to reject such a conclusion. Without such a discriminating principle, however, Callicott is tossed between the Scylla of environmental fascism and the Charybdis of human-centredness.

The clash of parts with wholes, and wholes with wholes, in Callicott's ethics is partly a function of his consequentialism, and partly of his allocation of ethical status to the biotic community. Some weaknesses of his position have been pointed out, and a possible escape route suggested, albeit at the expense of his moral monism and his provocative disregard for domestic animals. However, further problems are generated by his foundation of ethics on affection.

Feeling and Subjectivity in Callicott's Ethics.

Two major elements are involved here. First, there is Callicott's subjective axiology; secondly there is the basis of ethics in feeling. While these are of course related, different problems are generated by each for Callicott's ethics.

The subjectivity or objectivity of value is, again, one of the most contentious issues in value theory. The debate cannot be entered here in anything other than the very specific sense of the problems which a subjective axiology may raise for an environmental ethicist.

Callicott's position is that all value is humanly generated, or subjective, although, as we have seen, this need not mean that it is anthropocentric. Callicott's advocacy of inherent value, as defined earlier, allows him to claim intermediate ground between subjectivists who see all nonhuman value as instrumental, and objectivists who consider that there is intrinsic value or inherent worth in nature: value with no human valuer present, indeed, with no valuer at all.

It is the latter, objectivist position which, not unsurprisingly, attracts a significant number of environmental ethicists, most notably Holmes Rolston. He argues that Callicott's position, where a human valuer ignites value which was not previously present, is like 'looking for a birthday party in the camera that photographs it'.⁹³ This kind of value, according to Rolston, is 'extrinsic', generated from outside. It is 'something like the light in a refrigerator, only on when the door is open'.⁹⁴ It is insufficiently radical, because it still attributes the only valuing ability in the universe to human subjectivity.

Rolston contends that humans *discover* values in the natural world, rather than that they generate them. The human belief that they alone *create* value is as anthropocentric as the belief that they alone *have* value. Value, Rolston argues, is not like colour, which is only present with a perceiver.

⁹³ EE 115.

⁹⁴ EE 116.

Similar defences of objective value in the natural world are found throughout the writings of environmental ethicists and the question cannot, of course, be settled here, or even considered in more detail. The crucial point to make is that environmental ethics is biased towards objective values in the nonhuman world, to escape the charge of anthropocentrism by claiming all value to be human-generated. Callicott does not escape that charge, and this forms a substantial part of the axiological critique made of him by other environmental ethicists.

A second problem generated by the basis of ethics in feelings follows on from the subjective nature of value. In a sense it also refers back to the biological basis of ethics. Rather than arguing that a subjective basis for value is too anthropocentric, it contends that basing ethics on feelings is too irrational. A comparison of Callicott's approach with that of Peter Singer in *The Expanding Circle* makes this point particularly clear.

As we have seen, Callicott bases his ethics on affectional nested communities, the sense of community having an evolutionary basis in inherited community altruism. Singer, in contrast, argues that the altruistic predispositions we may have inherited, whether kin, reciprocal or group, are not the last word in ethics. Humans do, after all, possess rationality which allows consideration of, and movement beyond, inherited feelings. It is rationality which enables generalization from our limited altruistic feelings to all humans and indeed, for Singer, all sentient animals. Singer makes this point with particular clarity in his essay 'Famine, Affluence and Morality'.⁹⁵ 'if we accept any principle of impartiality, universalizability, equality or whatever, we cannot discriminate against someone merely because he is far away from us (or we are far away from him)'.⁹⁶ Attfield similarly points out that tribalists and racists could - and indeed do - endorse an ethical philosophy where being related or being similar to someone else is ethically significant.⁹⁷

⁹⁵ Singer p. 229 - 243 'Famine, Affluence and Morality' *Philosophy and Public Affairs* Spring 1972 vol 1 no 3.

⁹⁶ Singer p.232 'Famine, Affluence and Morality' op.cit.

⁹⁷ TVO 6.

This directly conflicts with Callicott's nested communities, where reason plays no universalizing part, and different ethical relations pertain between any individual and different humans and nonhumans, according to their emotional closeness. But this leads Callicott to some difficult ethical conclusions. Is it ethical, to use one of Singer's examples, to have an expensive family holiday while thousands starve in Africa? Callicott's 'nested communities' can justify this ethically, since one's obligations to one's family outweigh one's obligations to Africans.

Callicott attempts to tackle just this issue in his essay 'Animal Liberation and Environmental Ethics: Back Together Again' with his theory that 'the outer orbits of our various moral spheres exert a gravitational tug on the inner ones'.⁹⁸ This 'gravitational tug' may lead one to concern for starving Africans: 'One may well deprive one's children of a trip to Disneyland...in order to aid starving people on another continent'.

But this is all very tentative, hardly constituting any ethical imperative to act. As Callicott repeatedly says, 'in general, obligations to family come before obligations to remotely related fellow humans'.⁹⁹ (Could one argue the same of sex? or colour?) Callicott may wish to defend this view by attacking the practicality of Singer's ethical position, both in that it imposes intolerable ethical burdens (as the *reductio ad absurdum* of utilitarianism), and that it would never be acknowledged, since it is, in fact 'natural' to have ethical obligations towards one's own family over and above Africans, as indeed we witness daily. However, Callicott's position here does seem to be profoundly unsatisfactory. If he is not careful, in practical terms at least, he will be very close to advocating 'lifeboat ethics' of the sort projected by Garrett Hardin, who endorses a triage aid policy to the poorest nations.¹⁰⁰

⁹⁸ BTA 59.

⁹⁹ *ibid.*

¹⁰⁰ Garrett Hardin *Promethean Ethics: Living with Death, Competition and Triage* (Seattle: University of Washington Press 1980). Hardin uses an argument based on kin altruism to support his position. A thorough response can be found in Nicholas Griffin and David Bennett 'The Ethics of Triage' Discussion Paper in *Environmental Philosophy*

Two alternatives lie before Callicott if he wishes to escape this situation. He could suggest that, since we now live, owing to expansions in global communications, in a 'global village', our community membership includes all humans. Thus, while the mixed community and the biosphere still form separate communities, all humans should be treated in the same way, as part of the same community. This solves the African problem, but at the expense of undermining the affectional basis of his ethics. No-one, after all, is arguing that one should, or more to the point, *could* feel the same about strangers on another continent as one does about one's own family; but rather that one should *treat* them the same, ethically. Callicott would have to accept the inadequacy of the affectional basis of ethics if he were to adopt this position.

His second alternative would be to return to the discriminatory principle already suggested, which would take into account basic and nonbasic needs both within and across the ethical communities, however close or distant the community involved may be. This again means the introduction of a non-affectional criterion into ethical decision-making, not just into the human community, but into all of the communities.

These criticisms of Leopold and Callicott have pointed to some of the difficulties associated with the adoption of a collective land ethic. Biologically and philosophically, a number of unresolved and possibly unresolvable problems have been thrown up. This has set the agenda for a study of process ethics in this sphere. Questions concerning biological origins, parts and wholes and associated ethical priorities, different communities and their relationships are all equally raised in process thinking about the environment.

PROCESS THINKING AND COLLECTIVE ENVIRONMENTAL ETHICS

This section will be divided into three parts. First, the status of ecological collectives in process thinking will be examined. Can they, and do they have, an integrity of their

no. 8 (Australian National University 1984). Griffin characterises Hardin's position as 'leaving the poor to starve and the rich to feast' (p.1).

own? Could one speak of them as organisms or communities? Secondly, the interpretation of such collectives within process thinking will be considered. This will of course build on the conclusion of the first section. Thirdly, the ethical implications of the process position will be compared with the conclusions of Leopold and Callicott.

The Status of the Ecological Collective in Process Thinking.

As Christian points out, since Whitehead designated his philosophy the 'philosophy of organism' it is remarkable that he makes so little use of the term otherwise.¹⁰¹ Thus, although one would expect 'organism' to be the primary metaphor with which we would be dealing in this context, in fact it is found comparatively rarely. Whitehead speaks of 'organic relations' between the prehensions which make up an actual occasion, and between perishing and concreting actual occasions, but he rarely describes anything as an organism in itself. This reflects his emphasis on time over space, an emphasis which will assume increasing importance in this thesis. 'Organic', for Whitehead, is a relationship which has primary reference to the interconnection of past and present. This contrasts with the spatial reference of the metaphor of organism for Leopold and Callicott.

Whitehead's preferred term (although this is not to say that it also does not primarily have temporal rather than spatial reference) is, as we have seen, that of 'society', a concept which was investigated in Chapter 2. Are ecosystems, or species, societies in the Whiteheadian sense? Whitehead only explicitly touches this issue in passing, so any conclusion is bound to exhibit some creative application of his principles.

It is easier to begin with species, because they more obviously display the property which one would associate with a Whiteheadian society: inheritance of a common

¹⁰¹ Christian p.158 *An Interpretation of Whitehead's Metaphysics* (1958; New Haven: Yale University Press 1967).

characteristic. There is a direct genetic¹⁰² linkage between each of the members of any one species; this is, of course, part of the definition of being a member of a species. In Whiteheadian terms, all the members of the species actualize a complex eternal object (the genetic identification of the species, the ability to interbreed) and all the actual occasions which constitute the species members participate in this actualization. This is enough to make a species a society in Whitehead's system; and indeed, on one occasion Whitehead does in fact call a species a society.¹⁰³

It is more difficult to establish whether ecosystems can be described as societies. A first reservation must again be made in the direction of biological studies, where, as was demonstrated during my consideration of Callicott, there is little scientific consensus as to the degree of closeness which may be postulated of ecological collectives. However, assuming that there is sufficient closeness for the concept of an ecosystem itself not to be entirely inappropriate, could the process term 'society' be used?

The criteria for constitution of a society for Whitehead are quite vague in form. Thus, to say that ecosystems are societies is not to say a great deal, merely that there is some common factor holding a number of constituents together. The link is clearly not as close as the kind of society which constitutes for instance, an animal - this is, as we have seen, a society with a personal order. However, this does not mean that ecosystems cannot constitute a society.

What kind of defining characteristic could be attributed to an ecosystem which could render it a Whiteheadian society? One possible candidate is the geographic restrictions of an ecosystem. In this sense, it may be physically closer than a species, which can be

¹⁰² I do not mean genetic here in the general Whiteheadian sense of having inherited (although this is, of course, also true;) but rather in the biological sense of the inheritance of genetic material.

¹⁰³ 'Beyond the soul there are other societies, and societies of societies. There is the animal body ministering to the soul: there are families, groups of families, nations, species...' AOI 335.

spread across the entire globe; an ecosystem (discounting the Gaia hypothesis to which I shall return) is usually much more locally defined, with its members inhabiting the same bioregion. However, this is not enough to constitute a society, since many items within that geographical area may not be part of the ecosystem, having, for instance been imported by humans from outside (such as exotic species). More important than this is the close kind of interconnectedness envisaged within an ecosystem.

'Every item in the Universe, including all other actual entities, is a constituent in the constitution of any one actual entity'.¹⁰⁴ While this is so, there are different degrees of closeness, which are, as Whitehead comments, necessary to 'rescue actual entities from becoming undifferentiated repetitions, each of the other'. He calls this 'the principle of intensive relevance':

Any item of the Universe, however preposterous as an abstract thought or however remote as an actual entity, has its own gradation of relevance, as prehended in the constitution of any one actual entity.¹⁰⁵

One could, then, argue that for any actual occasion in an ecosystem, the other actual occasions within that ecosystem constitute the particularly relevant prehensions in each new actualization. This is not a surprising conclusion; the whole point of designating an ecosystem as such, is to reflect its inner interconnectedness in a way in which those outside the ecosystem do not participate. Components of an ecosystem, both organic or inorganic in our usual sense, are composed from one another and dependent on one another, exhibiting a particular closeness. This kind of closeness is certainly enough to be called a defining characteristic, since such a characteristic is not intended to be final or exclusive. This may have been what Whitehead was intending to suggest by his remark 'Wherever there is a region of nature which is itself the primary field of expression issuing from each of its parts, that region is alive'.¹⁰⁶ It seems likely that

¹⁰⁴ PR 148. This idea is developed in Chapter 4.

¹⁰⁵ PR 148.

¹⁰⁶ MT 31.

Whitehead would accept both ecosystems and species as societies. Whitehead, after all, describes 'groups of different species associated in the joint enterprize of keeping alive'¹⁰⁷ as societies. This sounds as if Whitehead intends, in the language then available to him, to indicate ecosystems.

Hartshorne, however, would have less sympathy with this position, since he distinguishes between organisms and quasi-organisms. It is likely that Hartshorne would consider both a species and an ecosystem to be quasi-organisms - the whole having less unity than its parts. This does not *necessarily* imply that Hartshorne considers an ecosystem to be less unified than Whitehead would allow, since Whitehead's societies have differing degrees of closeness. But this categorization allows Hartshorne to argue that a quasi-organism has no collective good, other than that of the sum of its parts. Whitehead, however, having no such distinction, considers that all societies have a collective good, which may not be identical with the sum of the individual goods of the parts. This will prove to be of some significance.

How, then, do these models compare with those of 'organism' and 'community' in Leopold and Callicott? Unlike Leopold and Callicott, the process system is built from experiencing actual occasions. Lacking this metaphysical backing, Leopold and Callicott can attribute a greater solidity to individual organisms: though it is notable that Leopold in his metaphor of the land as 'fountain of energy' and Callicott in his quantum physics model move away from the attribution of this kind of solidity.

Although Whitehead's term 'society' resembles 'community' more closely than 'organism', in effect the opposite is the case. This is evident from Whitehead's understanding of the common good of a society. Ultimately, although value is registered in individual actual occasions, their role is to generate value for the whole, even if this entails self-sacrifice. Thus they function more as organs in an organism than as members of a community. The parallel is not exact, because the organs of an organism, as Katz suggested, have instrumental not intrinsic value. There is no doubt that, for

¹⁰⁷ AOI 335.

Whitehead, the locus of intrinsic value is the occasions and not the society. But the aim of the occasions, in their value generation, should be at the good of the society. Thus, although they themselves are bearers of intrinsic value, to act most valuably, they must act *as if they were* instrumental to the whole. They should play the part of organs to an organism in their actualization, although they could choose to actualize themselves differently. To act for the good of the whole is to act in accordance with the lure of the primordial nature of God. But this is not coercion. Unlike organs in an organism, they have freedom.

Thus, in a perfect Whiteheadian society, be it an ecosystem, a species or an individual human being, all the concurring actual occasions will behave as if they were organs in an organism, maximizing value for the whole, although they will be doing this by choice, not by necessity. The same is true of a Hartshornian organism. However, the difference is, as I have already pointed out, that Whitehead considers to be societies what Hartshorne sees as quasi-organisms; quasi-organisms have no good as a whole, but only the goods of the true organisms which compose them. Thus for Hartshorne an ecosystem, as a quasi-organism, has no good of its own; and so is unlike either a Leopoldian organism or even the land community. While Whitehead could, in principle, endorse the Leopoldian land ethic in that he could accept the priority of the good of a society over its members (although in fact, his perspective in the case of an ecosystem is rather different, as we shall go on to see), Hartshorne could not. The ecosystem is a quasi-organism; it should serve its truly organic members.

The Interpretation of Ecological Collectives in Process Thinking

To understand the approach of process thinking in general, and Whitehead in particular, to collective environmental ethics, we must first look at the broader context into which these ethics might fit. As was true of Leopold and Callicott, the concept of evolution provides the vital scaffolding. Process environmental ethics are similar in this respect, although evolution plays a somewhat different part.

This opposes the position of George Lucas, who argues that 'evolution and evolutionist

theories play no significant part in Whitehead's metaphysics'.¹⁰⁸ While Lucas is correct in his contention that evolutionary cosmologies such as those of Bergson¹⁰⁹ and Alexander did not have a detailed influence on Whitehead because elements of their systems are deeply at variance with Whitehead's own, he omits some of Whitehead's most interesting comments about evolution, particularly in *Science and the Modern World*. While Whitehead's scientific background was not in evolutionary theory, he assumes a basic evolutionary schema, and this schema is a fundamental influence on his philosophical work. That Whitehead does not refer in detail to scientific evolutionary theory (Darwin, Lamarck) or evolutionary cosmology (Bergson, Alexander) is evidence more of his appropriation of evolutionary theory to his own ends rather than the insignificance of it to his work.

Whitehead considers himself to have accepted the 'full sweep of the modern doctrine of evolution'.¹¹⁰ However, this does not prevent him from having reservations about interpretations of Darwin which concentrate on natural selection where 'instead of dwelling on the brotherhood of man, we are now directed to procure the extermination of the unfit'.¹¹¹ Despite these reservations, evolution becomes one of the building blocks of Whitehead's metaphysical system, as an example of the self-generative creativity which characterizes Nature. But it is important to make clear that Whitehead

¹⁰⁸ George R. Lucas p.287 'Evolutionist Theories and Whitehead's Philosophy' *Process Studies* 14 no.4 Winter 1985.

¹⁰⁹ This does not discount a more general influence; Lewis Ford, for instance, considers that Whitehead's general view on the 'creative advance of nature' in RIM 'is very much like Bergson's elan vital, having the events or actual occasions as its byproducts' Ford p.127 op.cit.

¹¹⁰ PR 93.

¹¹¹ There is some suggestion in this passage that Whitehead had sympathy with Lamarckian ideas. This is not surprising, since Darwin himself did not dismiss Lamarck, and Lamarck's idea of the inheritance of acquired characteristics was not decisively refuted until well into the 20th century (as Rachels op.cit. p.15). Lamarck's concepts were more congenial to a theological interpretation than Darwinian natural selection, which may explain why many theologians, such as Teilhard de Chardin, clung to Lamarck even after he had been largely discredited.

uses the concept of evolution for his own ends; in Jim Cheney's terminology,¹¹² he *colonizes* evolution for his system: taking it over and imposing his own methodology and conceptuality onto it.

Primarily, this colonization takes the form of a teleologization of evolutionary theory which, Darwin and subsequent scientific evolutionary theory explicitly excluded. Whitehead was not, of course, unique in making such a move - teleological evolutionary metaphysics characterizes such works as Alexander's *Space Time and Deity* and Bergson's *Elan Vital*. Whitehead's teleology, however, stamps evolutionary theory with his own unmistakable imprint. It is not just this world which is evolving but the entire Universe which is being lured forward by the primordial nature of God towards 'greater evocation of intensities',¹¹³ to provide rich experience for the consequent nature of God.¹¹⁴

However, this does not mean that any specific occasion, any particular actualization, will manifest either 'progress' from the preceding occasion (measured in terms of harmony and intensity) or even will produce the maximum intensity and harmony that is possible for it, as we saw in Chapter 1. Within contextual constraints, the occasion is free to actualize itself how it chooses. The same openness is true of societies of actual occasions, including the rise and decline of human societies: 'There have been real periods of decadence, and at the present time, as at other epochs, society is decaying...'.¹¹⁵ During times of decline, experience generated is less rich than it might otherwise be, and than that it has been. Indeed, the generality of process thinking - the

¹¹² Jim Cheney 'The Neo-Stoicism of Radical Environmentalism' *Environmental Ethics* 11 no.4 1989 293-325.

¹¹³ PR 105.

¹¹⁴ Daniel Day Williams considers that it is this approach which enables Whitehead to avoid relativism: 'He avoids complete relativism through the evolutionary assumption that there is a movement in Man and in the Universe itself towards a more spiritual, valid and adequate expression of the good and the true'. Williams p.356 *The Relevance of Whitehead* ed. Leclerc (London: Allen and Unwin 1961).

¹¹⁵ AOI 237.

scope being the entire universe - is such that there is no guarantee that the earth as a whole will ultimately go on generating such rich experience. The future is open; its fate depends on the choices of actual occasions and societies of actual occasions. Birch and Cobb reinforce this point by commenting: 'The future is open in the sense that the human species may extinguish itself and destroy much of the life on the planet; yet such an outcome is not inevitable'.¹¹⁶ The only certainty is that whatever happens on, or to, the Earth, the primordial nature of God will continue to lure the actual occasions which constitute the universe to new harmonies and intensities of experience.

This teleological, cosmological backdrop is of vital significance when considering process views on ecological collectives. The initial aim of all actual occasions is the production of rich experience; this is also true of societies of occasions. In harmony with this, ethical behaviour, as has been repeatedly pointed out, must be behaviour which generates maximum richness of experience for the consequent nature of God. This sets process perspectives into a rather different matrix of considerations from the environmental ethics considered earlier in this chapter.

It is somewhat anachronistic to ask detailed questions about Whitehead's understanding of ecology, since when he wrote the bulk of his work in the 1920s the science of ecology as we now know it was in its infancy. The term 'ecosystem' was first proposed by the British ecologist Arthur George Tansley in 1935, (although the concept itself is much earlier, associated with Marsh's book *Man and Nature* in 1864). While 'organism' had been used as a collective term for certain ecological groupings (and was used this early by Leopold, as we have seen, in his essay 'Some Fundamentals of Conservation in the Southwest'), the term 'ecological community' was not yet in currency. As a physicist rather than a biologist, one would not expect Whitehead, in any case, to have extensive knowledge of developments in ecology.

Given these factors, Whitehead makes surprisingly detailed comments about ecological relationships. In several places, most particularly in his chapter 'Requisites for Social

¹¹⁶ LL 4.

Progress' in *Science and the Modern World*, Whitehead clearly seems to be talking about what we now call ecosystems, but he lacked the vocabulary for a more precise definition. Indeed, one passage, to which I shall now turn, prompted Eugene Hargrove to wonder if Whitehead was not in fact a source of some of Aldo Leopold's ideas.¹¹⁷ This is an extensive passage, and I shall go through it in some detail.

To a large extent, the environment is fixed, and to this extent, there is a struggle for existence ...We must admit the struggle. The question is, who is to be eliminated. In so far as we are educators, we have to have clear ideas upon this point; for it settles the type to be produced and the practical ethics to be inculcated.¹¹⁸

Here, Whitehead begins his curious, and revealing, interpretation of evolution. Noticable here is his elision of evolution in nature with evolution in culture. There is no division between the two (unlike Rolston); the same processes are exemplified in each. Thus, Whitehead does not question the derivation of norms for society from nature. The 'struggle for existence, competition, class warfare and commercial antagonism between nations and military warfare' by which he characterizes the nineteenth century, were, as extrapolations from evolution, justified. The problem for Whitehead was with the interpretation, not the extrapolation. He rejects the competitive nature of this interpretation of evolution:

The full conclusion to be drawn from a philosophy of evolution is fortunately of a more balanced character. Successful organisms modify their environment so as to assist one another. This law is exemplified in nature on a vast scale.¹¹⁹

¹¹⁷ 'Most interesting of all is the similarity of some of Whitehead's comments and those of environmentalist Aldo Leopold. Long passages in the last chapter of *Science and the Modern World*, for instance, could easily have served as the source of some of Leopold's ideas, and suggest that Leopold's notion of community could be derived from Whitehead's theory of organism without much difficulty'. Eugene Hargrove p.103 op.cit. I do not know to what extent Hargrove intends this to be a serious suggestion.

¹¹⁸ SMW 238.

¹¹⁹ *ibid.*

The key word here is 'successful'. What does Whitehead mean by a 'successful' organism? At first glance, 'successful' seems to mean 'biologically successful' - able to survive and to produce offspring which survive. This may mean that the organism must alter the environment to best provide for itself and its offspring. However, an organism which improves conditions such as to assist its competitors for the same biological niche is not going to last very long, or be very successful.

To understand what Whitehead actually means, it is necessary to read on a few paragraphs. An initially puzzling passage casts light on how Whitehead actually understands 'successful':

In the history of the world, the prize has not gone to those species which specialised in violence, or even defensive armour. In fact, nature began with producing animals encased with hard shells for defence against the ills of life. It also experimented in size. But smaller animals, without external armour, warm-blooded, sensitive, and alert, have cleared these monsters off the face of the earth. Also, the lions and tigers are not the successful species. There is something in the ready use of force which defeats its own object. Its main defect is that it bars co-operation.¹²⁰

Here, the criterion for a 'successful species' is clearly not that of evolutionary success. Lions and tigers - or perhaps the cat family as a whole - have been very evolutionarily successful. The sabre-toothed tiger, after all, co-existed with the mammoths and other long-extinct 'monsters'. It is not this to which Whitehead refers, but instead to their 'ready use of force' by which one can only assume that he means their carnivorousness. Carnivorous species are, it seems, by nature 'unsuccessful' because they are not 'co-operative'.

There are several responses which can be made to this. Firstly, it highlights Whitehead's misunderstanding of the term 'co-operation' in an ecosystem. As Callicott repeatedly points out, ecosystems are about killing and feeding on other organisms. Even herbivores are no exception to this. A species which does not subsist on others in some form cannot

¹²⁰ SMW 239.

survive, and would most certainly not be evolutionarily 'successful'. It is this cycle of life, death and decay which makes an ecosystem 'co-operative'. Without top predators such as lions and tigers - or, to make the comparison with Leopold more bold, wolves - the ecosystem would collapse. Leopold makes this very clear in his description of the devastation caused by deer when wolves were eliminated.¹²¹ To call top carnivores 'unco-operative' is to misunderstand their vital function in the system.

This misunderstanding is, however, another symptom of Whitehead's imposition of metaphysical categories on biological science. Co-operation is crucial to Whitehead's system; organisms should co-operate together to achieve the greatest good: maximum richness of experience for God. The real good of the individual coincides with the good of the whole. The good for the whole is the real good for the individual, even if the individual seems to be achieving less rich experience than it might if it ignored the whole. Further, the occasion is lured by the primordial nature of God to make its decision towards the good for the whole, rather than merely its own good. It is a persuasive rather than a coercive action.

Predation, however, fits only awkwardly into such interpretative categories. It is not the sacrifice of a little individual gain for the good of the whole in co-operation with the persuasive lure of God. Rather it is the absolute involuntary death of the organism by force. Even though this may ultimately achieve the good of the whole - if as whole here we take the maintenance of the ecosystem, which does, after all generate rich experience for the consequent nature of God - the method of achieving such good is distasteful for Whitehead. He wants to affirm the priority of persuasion over coercion throughout the universe, and as the driving force of the evolutionary process. In *Science and the Modern World*, for instance, he comments: 'Such order as we find in nature is never force - it presents itself as the one harmonious adjustment of complex detail...Evil is overruling, retarding, hurting'.¹²² While acknowledging that predation

¹²¹ 'I thought that because fewer wolves meant more deer, that no wolves would mean hunter's paradise... since then, I have seen every bush and seedling browsed, first to anaemic desuetude, then to death...' ASCA 130.

¹²² SMW 223.

exists (he seems to be referring to this with his comment that 'life is robbery'),¹²³ he is never reconciled to it as a way of achieving the good.¹²⁴

Daniel Day Williams, like Whitehead, affirms the continuity of evolutionary processes in both the nonhuman and the human sphere. However, he also accepts that there is predation and force within the natural world: 'Granted all the tenderesses of life (Whitehead's term) no organism would survive five minutes on the exercise of tenderness alone. Whitehead's doctrine, moreover, leads him to ignore the wide ranges of types of coercion and of mutual interaction'.¹²⁵ Thus Williams concludes that force and coercion 'have their place in the necessities of being and therefore require us to find their place in God's being'. One might say that for Williams, the argument from the 'struggle for existence' acts as an incentive to change his model of God, while for Whitehead, his understanding of God acts as a model through which to interpret the world.

This is illustrated by Whitehead's comments on what we can only call an ecosystem:

The trees in a Brazilian forest depend upon the association of various species of organisms, each of which is mutually dependent on the other species...In nature, the normal ways in which trees flourish is by their association in a forest. Each tree may lose something in its individual perfection of growth, but they mutually assist each other in preserving

¹²³ PR 105.

¹²⁴ There is, however, one reference in Whitehead which seems to contradict my argument. In MT 70, Whitehead comments 'By reason of the individuality of the many things there are conflicts of finite realizations. Thus the summation of the many with the one and the derivation of the one into the many involves the notion of disorder, of conflict, of frustration'. This sounds more like Hartshorne than Whitehead, because of its uncharacteristic suggestion that conflict is inevitable, and is in tension with his comments elsewhere. I take the majority remarks to be his ultimate view. It is, perhaps, worth noticing here, of both Hartshorne and Whitehead, that conflict, particularly predation, is regarded as *tragic*. Most collective environmental ethicists would want to urge that it is *good*, since, as Leopold would insist, it ensures continuance of integrity, stability and beauty in the biotic community.

¹²⁵ Daniel Day Williams p.370 *The Relevance of Whitehead* op.cit.

the conditions for survival.¹²⁶

This describes perfectly the way in which Whitehead envisages all societies working, including human society. Each individual must be prepared to accept some restriction on itself, the 'loss of some individual perfection of growth' in order to preserve the common good. This is ultimately an advantage to the sacrificing organism - who after all, could not exist without the context. But it is also an aim at the summum bonum. Ultimately, the co-operative behaviour of the organisms in such an association will add to richness of experience for God. The loss of small intensities are nothing to the intensities generated by the persistence of the association.

In the benign forest association described above, there is no predation, but rather 'mutual assistance'. It is an 'environment of friends'. Each individual organism complements the others to create a harmonious working whole.¹²⁷ This is a perfect example of Whitehead's belief that the individual's real interest is the common good.¹²⁸

Not all process thinkers agree: Williams explicitly accepts the presence of force in the natural world and its implications for his metaphysics. Hartshorne again contrasts interestingly here with Whitehead. It is most unlikely that Hartshorne would thus describe a 'forest association' since such a 'forest association' would be a 'quasi-organism', having less unity than its most united parts (which, in a plant-only ecosystem such as Whitehead describes, would be the individual cells making up the plants). As a quasi-organism, it does not have its own 'good' in a Whiteheadian sense; its good is the summed goods of its truly organic members. But since its members have freedom, there

¹²⁶ SMW 239.

¹²⁷ Whitehead comments at this point that the sexes also 'exhibit the advantage of differentiation'. One can only assume that he means by this that the two sexes complement one another to make a whole - a position worryingly reminiscent to that of Ruskin in *Of Queen's Gardens* (although unlike Ruskin, Whitehead supported women's suffrage).

¹²⁸ PR 15.

is, inevitably, the generation of tragic conflict:

The tragedy of the world, I conclude, is the price of individuality. The greater the depth of individuality, the greater the possibilities of both good and evil. It is not simply a question of moral evil. The most innocent uses of freedom involve some risk of conflict and suffering...every individual is fate for other individuals.¹²⁹

The ecosystem is no exception to this. Within the natural world, 'every individual is fate for other individuals'. The fulfilment of one individual, the expression of its freedom, may well be at the expense of another individual. Predation is one example of this. Further, the ecosystem, as a quasi-organism, does not represent the kind of common good to which each individual should subordinate itself. It would be misleading to derive from this the view that Hartshorne ultimately has no good at which to aim other than that of individual actual occasions and other 'true' organisms. In fact, like Whitehead, Hartshorne has a strong conception of a cosmic good, the importance of which will be seen in the following section.

THE ETHICAL IMPLICATIONS OF ECOLOGICAL COLLECTIVES IN PROCESS THINKING

I hold that the ultimate value of human life, or of anything else, consists entirely in the contribution it makes to the divine life.¹³⁰

Transcending ecological collectives and individuals alike, for both Whitehead and Hartshorne, is the divine life. All value generated by actual occasions contributes to the value of the consequent nature of God, the final, greatest and all-encompassing whole, and is preserved there. Every other whole - cells, animals, ecosystems, human societies - are, to use Callicott's terminology, 'nested' within God's consequent nature.

¹²⁹ Hartshorne 'The Unity of Man and the Unity of Nature' LP 314.

¹³⁰ Hartshorne p.118 *Wisdom as Moderation* op.cit.

Hartshorne, likewise, speaks of a cosmic organism,¹³¹ which is part of God. The cosmic organism enjoys a degree of closeness equal to, or greater than, that of a cell or an animal; it is a true organism, not a quasi-organism, and therefore must have as much or more unity than its most unified parts. Although Whitehead and Hartshorne differ as to which wholes have collective goods - for Whitehead all societies, while for Hartshorne only true organisms - they are united in their conviction that the ultimate aim of ethical behaviour is the maximization of cosmic value by the maximization of rich experience. Thus, for both, the first ethical question to be asked is 'Does this action maximize possible cosmic richness of experience?'. The aim at value for the cosmic organism, or for the consequent nature of God, is an ultimate aim which reaches far beyond the 'land community' or the ecosystem. This background must underpin all thinking about the ethical implications of ecological collectives.

An immediate tension is thus set up between the approaches of process thinkers and Leopold and Callicott. In common with Leopold and Callicott, this is a consequentialist ethic; ethical behaviour is behaviour aimed at achieving certain states of affairs. For Leopold and Callicott, this is characterized as the good of the community, albeit the human, mixed or biotic community. For Whitehead and Hartshorne, the aim is at the cosmic summum bonum. All other communities, organisms or quasi-organisms are servants to the cosmic summum bonum; they exist to produce value for the divine life (although this does not mean that they always produce the maximum value possible for them: their freedom of choice about actualization remains).

Since, in Whitehead's schema, the only real summum bonum is the contribution to the divine life, there is no conflict between lesser and greater summa bona. The real good for any society coincides with the aim of all other societies. All societies therefore should work together harmoniously to produce the same consequences and should limit their own actions if, ultimately this generates more rich experience. Hartshorne, acknowledging fewer summa bona - the actual occasion, the cell, the animal and the cosmos - is ultimately in a similar situation. Although there may be conflict between

¹³¹ For instance 'A World of Organisms' LP 212.

true organisms, conflict resolution is achieved by application of the principle of maximizing rich experience for the cosmic organism.

To make ethical decisions, then, Hartshorne and Whitehead look beyond the land community, and even the global community, to the cosmic and divine. Any other principle of ethical action is subordinated to the overarching principle of generating rich experience for the divine life.

This focus on experience, however, throws up a particularly vivid contrast between process thinking and Leopold and Callicott. The existence of a value hierarchy based on intensity and harmony of experience is alien both to the land ethic and to Callicott's 'nested communities'. The land ethic, with its aim at the preservation of 'integrity and stability' makes no mention of experience. For process thinking, land health or integrity and stability are purely instrumental to the production of rich experience.

This frankly metaphysical interpretation of the aims of an ecosystem allows process thinking to evade some of the criticisms directed at Leopold and Callicott - while generating some pointing at itself. Unlike Callicott, process thinkers make no claims to have found 'objective criteria of land health' and of unjustifiably elevating them into moral norms. Their particular concerns are not, as we have seen, with 'stability' or 'integrity' at all, but with maximizing rich experience.

Callicott, however, would attack in turn arguing that with its focus on experience, human values which do not relate to the real conditions of the nonhuman world are being imposed onto this world from outside. Experience, Callicott would argue, is not significant in the biotic community, except as a practical mechanism to avoid danger and promote survival. Most of the key members of a biotic community do not experience, or have marginal experience. To consider these to be of less value, when their function is vital, is to show a failure to come to the nonhuman world on its own terms, a refusal to interpret it through anything other than inappropriately human-centred evaluative categories. Whitehead's negativity about predation would be, for Callicott, a further example of this: failure to recognize that the persuasion and co-

operation we might look for in the human community is not appropriately extended into the biotic community. As Callicott points out: 'nature is notoriously indifferent to human suffering'.

Callicott would also argue that process thinking could have profoundly destructive effects on the biotic community. Could process, for instance, resist Callicott's case, cited earlier, where a rare sequoia grove could be felled to provide pasture for feral cattle? The cattle, after all, generate much richer experience than the sequoia grove in itself; unless the grove could support reasonable numbers of high-grade experiencers, such as monkeys, the logic of the process position would be to accept the felling of the grove for the cattle. Indeed, a similar case could be made for the expansion of human population into wilderness areas, on the grounds that richness of experience would be increased by the presence of the highest-grade valuers there. Certainly, process thinking could not support Callicott's suggestion that the human population should be reduced to twice that of bears! The loss of richness of experience for the divine life in that instance would be immense and thus unthinkable.

The process emphasis on experience also sets up problems for valuing species. While Whitehead may consider a species to be a society, it is difficult for species to be valued in any way other than by the value of its individual members. Of course, a variety of species may give observing humans richer experience, and in this sense the loss of a species is undesirable. But if it is a species of bacteria, for instance, which gives human no great aesthetic pleasure, is there a loss greater than the loss of the last individual? It could be argued that the loss of a species is the loss of all potential future experiences stemming from that type of creature, and therefore is far greater than the loss of the last individual. However, arguing from potential experience is always problematic, as is evident in the abortion debate, and I do not wish to enter this dispute here.

Birch and Cobb try to elude some of the problems generated by their position by emphasising the category 'variety of types of experience'. From this basis, they argue that rare species and unique ecosystems have special value because they contribute a

variety of types of experience to the divine life. 'The elimination of a unique desert ecosystem' they argue 'is not to be favoured, even if this were replaced by one that had a higher quantity of high grades of life'.¹³²

This is certainly at variance with Whitehead's and Hartshorne's view, and with Birch and Cobb's own views elsewhere in the *Liberation of Life*. The reason the process value system works coherently is because values are commensurable. Decisions about competing claims, for instance, can be made by judging which will produce the most intense and the most harmonious experience. One can choose to kill a mosquito rather than being bitten by it because this will maximize rich experience overall. But by introducing the concept of *types* of value, Birch and Cobb are suggesting that there are some values which cannot be measured against others, because they are of a different type; they are rare. A rare experience then seems to trump a rich experience, and this principle could be used to protect endangered species and unusual ecosystems.

To acknowledge this throws the process value system into disarray. Value is no longer centred on the harmony and intensity of experience in the subjectivity of the actual occasion, since, as we saw in Chapter 2, no awareness of its 'rareness' or otherwise could possibly manifest itself in such a way. A new, external criterion of value judgement is being made. Such a new criterion first needs substantial argumentation, since it completely shifts the focus of process value thinking. Indeed, it shifts it towards an unprecedented kind of moral pluralism. I will consider this further in my conclusion, and so will, temporarily lay it on one side.

It is clear from the above accounts of experience in process thinking, that members of the ecosystem are valued very differently in the work of Leopold and Callicott. Callicott, in an example I quoted earlier, emphasizes the importance of the honey bee in the biotic community. Like all members of the community, its value is instrumental, tied to the significance of its function in the community. Since its role in pollination and fertilization is so central, the honey bee is of very high value; far higher value than

¹³² LL 174.

such animals as moles and rabbits which perform no vital role in the ecosystem.

The ultimate aim in process thinking, as we have seen, is not the preservation of community health but rather of maximizing values for God. Ultimate significance is given to those organisms which maximize rich experience. A honey bee, in itself, in process terms, generates only a little, trivial, experience. Rabbits and moles have far greater value because of the complexity and intensity of their experiences. Of course, the rabbits and moles are dependent on the system to live, and inasmuch as the bee allows the maintenance of the system, it is of great instrumental value in allowing or promoting the development of intrinsic value elsewhere. But its direct contribution to the divine life consists only of its slight intrinsic value, not its great instrumental value. This does not only apply to the bee. The importance of the entire ecosystem is judged by its capacity to generate intense and rich experiences. This view is expressed clearly by Susan Armstrong-Buck, in one of the few passages in process writing which discusses the place of ecosystems:

We can rate ecosystems on relative importance according to their success in promoting intense experiences in their members, and we can rate individuals partly on their promotion of higher grade order in the ecosystem.¹³³

The aim of both ecosystems, and ecosystem members, is the promotion of value for God. The members of the ecosystem with very low experience of their own -this includes 'inanimate objects' such as rivers, rocks, mountains; and 'low-grade' living organisms, such as bacteria and plants, provide the supportive context out of which those who can generate rich experience arise. The simplest members of the ecosystem act as a kind of raft bearing up the high-grade experiencers. While for Leopold and Callicott plants and bacteria might be the most vital and therefore the most valuable members of the community, for process they are primarily supporters of intrinsic value elsewhere. This approach is taken, for instance, by McDaniel:

¹³³Susan Armstrong-Buck p.246 'Whitehead's Metaphysical System as a Foundation for Environmental Ethics' *Environmental Ethics* 8 no.3 Fall 1986.

We respect the integrity, beauty and stability of ecosystems not because these systems are [moral] agents or patients in their own right, but rather, because they include complex networks of living beings who are moral patients in their own right.¹³⁴

The implications of this experiential approach for practical environmental ethics are profound. One example is the difficulty of maintaining a distinction between domestic and wild animals, a distinction which has already arisen several times in this thesis. Both wild animals and domestic animals have varying degrees of richness of experience; there is no obvious differentiation between 'wild' and 'domestic' experience, unless it can be argued that domestic animals (or, indeed, wild animals) persistently generate less rich experience than their counterparts. Can, for instance, the loss of experience caused by killing a wild boar be distinguished from the loss of experience caused by killing a domestic pig?

Susan Armstrong-Buck argues that such a distinction is indeed possible. The wilderness, she contends, is a 'rich and challenging world' and animals that inhabit the wild have rich and intense experiences. Domestic animals, in contrast, live 'impoverished lives'.¹³⁵ This is a very vague distinction, as Armstrong-Buck admits: 'Wild and domestic animals differ in value, not across the board, but according to the experience issuing from their actual worlds'. Unlike Callicott, Armstrong-Buck is not arguing that human breeding of domestic animals has made them incapable of independence and, in process terms, incapable of sustaining as rich experience as wild animals. Instead she is arguing that the confined and predictable nature of living as a domestic animal generates less rich experience than the free and unpredictable life of the wild (although she makes an exception of 'companion' animals which may have very rich lives).

There may be some general truth in both Callicott's and Armstrong-Buck's arguments.

¹³⁴ GP 82. In fact, McDaniel is being a little inaccurate here; it is the experiences of living beings which are morally relevant, not the beings themselves (although they do not exist outside their experiences).

¹³⁵ Susan Armstrong-Buck p.33 'What Process Philosophy can contribute to the Land Ethic and Deep Ecology' *The Trumpeter* 8 no.1 Winter 1991.

Selective breeding and confined conditions could limit the richness of experience available to domestic animals in relation to wild animals. If we were to accept this, what, in process terms, would be the ethical implications?

If one accepted the first argument, that the capacity of domestic animals for experience is limited by breeding, one might wish to reduce numbers of domestic animals; if one accepted the second argument, that confined conditions lead to lesser experience, one might want to improve their conditions. But as an ethical imperative, this would be an oversimplification. All experience is valuable, and reducing the numbers of domestic animals reduces total value in the world. This could be justified if the domestic animals were replaced with numbers of high-grade experiencing wild animals. But one is unlikely to be able to sustain anywhere near the same wild population of high-grade experiencing animals in the same area that once sustained domestic animals; thus overall loss of experience would result. Similarly, improving conditions would mean that fewer animals could be kept: consider the greater space taken up by free range chickens over battery ones. Would the extra richness of experience generated by a few free range chickens outweigh the loss of the admittedly individually lesser, experience from the many chickens which could have existed on a battery farm?

Similar arguments plague disputes in utilitarianism concerning calculations about pleasure and pain, and trade-offs of quality and quantity. To follow this issue further would lead to questions about total and average experience, with all its application to human population. However, what can be concluded here, in divergence from Callicott, is that for process thinking the bare fact that domestic animals are not essential to the ecosystem, unlike some wild animals, does not place them into an entirely different *ethical* category. One standard of comparison (richness of experience) and one ethical imperative (maximize richness of experience) applies to all.

Having looked, broadly, at process thinking in relation both to biology and wholes and parts in collective environmental ethics, it is also important to consider process in relation to feelings and subjectivity. Feelings and subjectivity are central in determining

Callicott's ethics: firstly because he considers all inherent value to be anthropogenic, and secondly because feelings of community provide the emotional basis of our ethical commitments. One must be clear here; it is not feelings which are valued, but feelings which generate value.

The basis of value in feeling is something which Callicott and process thinking share, against many environmental ethicists. The primary difference is the location of the valuational feeling. For Callicott, it is confined to humans; it is anthropogenic. For process thinkers, it is found everywhere; every actualizing actual entity has a valuational subjective perspective.

This gives process thinking a much broader value base than Callicott. Value exists, even where there is no human valuer; it does not have to wait to be 'ignited' by human presence. An unobserved wild flower, for Callicott, has no inherent value, although it may have instrumental value because of its place in the ecosystem. When the flower is observed, it may trigger valuational feelings in the human, who can value it for what it is in itself, that is to say, inherently rather than instrumentally. For Whitehead, the unobserved wild flower already has intrinsic value as the producer of experience, a society of actual occasions with valuational subjectivity. The presence of a human observer may generate further value in the human - aesthetic pleasure - which, by increasing the human's richness of experience will increase the total amount of value in the world.

This position, while allowing for intrinsic values to exist throughout the natural world, would still be attacked by many environmental ethicists, as we saw in Chapter 1. Since, for process thinking, humans are the supreme exemplars of valuable experience an experiential basis for value is by its very nature human-preferential. Process thinking might be, they would argue, less anthropocentric in this respect than Callicott's, who restricts valuing ability to humans, but the inseparability of value and subjectivity betrays a similar human bias. This is one of the central criticisms made of process thinking about environmental ethics. Here it is sufficient to comment that the widening of the valuing base far beyond humans does not entirely deflect criticisms made of

Callicott in this respect.

However, it does deal with Callicott's problems over nested communities, and the injustice involved in treating those near to one with preference over those far away for no other reason than that they are nearer. The inheritance of altruism, and trigger mechanisms for feelings of community, do not feature in process ethics. In many respects, as we saw in Chapter 1, process thinking here resembles that of Singer. A principle of universalizability is accepted. Nearness or distance, domestic or wild, human or nonhuman, a single principle matters: maximizing richness of experience for the divine life. If giving money to starving Africans generates more richness of experience than taking one's children to Disneyland, one should send the money to Africa. There is no need for the introduction of a basic/nonbasic principle, as suggested for Callicott. The only distinction which needs to be made is that of ability to generate richness of experience. By providing a different basis for ethical behaviour, process thinking has successfully evaded at least this criticism of Callicott.

Consideration of process thinking in the light of the collective environmental ethics of Leopold and Callicott has revealed certain of its fundamentally important features. It has pointed up, again, that the two crucial factors for process ethics are the actual occasion and the cosmic organism or consequent nature of God. These two are in basic or fundamental relationship; the actual occasion generates value for God. Every group in existence, be they Whiteheadian societies or Hartshornian organisms/quasi-organisms are societies of actual occasions generating rich experience for the divine life. Whether or not these societies have a good of their own, they are ultimately secondary to the actual occasions which compose them and to the cosmic organism of which they are a part. This undercuts not only the integrity of an individual such as a human being, as I indicated in Chapters 1 & 2, but also the 'land community'' mixed community' or 'ecosystem'. These point into themselves at occasions of experience and beyond themselves to God. While they may provide nexus in which intense experiences can be generated, they are ultimately compound and instrumental. Ultimately everything except the actual occasion and the consequent nature of God can be deconstructed. Thus, process could be attacked by strongly collective environmental philosophers

arguing that in the same way as process thinking is unable, ultimately, to sustain a sufficiently coherent view of the human body, so it is unable ultimately to sustain a coherent view of a biological community.

It would be impossible to conclude a chapter on collective environmental ethics and process thinking, without considering Lovelock's Gaia hypothesis, in which the same issues are raised again on an even larger scale, and with ethical implications which stand both process thinking and Leopold and Callicott on their heads.

PROCESS THINKING AND THE GAIA HYPOTHESIS

In many respects, the so-called 'Gaia hypothesis' represents the culmination of collective environmental views. However, the hypothesis has taken many forms since its original proposal by James Lovelock in *Gaia: A New Look at Life on Earth*,¹³⁶ in 1979. I will proceed by briefly examining Lovelock's own portrayal, both in *Gaia* and his later book *The Ages of Gaia*,¹³⁷ before moving on to consider possible ethical ramifications of his position and its relation to process thinking.

In *Gaia*, Lovelock states his basic hypothesis as: 'the biosphere is a self-regulating entity with the capacity to keep our planet healthy by controlling the physical and chemical environment'.¹³⁸ He later phrases this more precisely: it is not that Gaia is identified with the biosphere; Gaia is more than the biosphere. Gaia also includes inanimate material:

The biota and the biosphere taken together form part but not all of Gaia. Just as the shell is part of a snail, so the rocks, the air and the oceans are

¹³⁶ James Lovelock *Gaia: A New Look at Life on Earth* (G) (1979; Oxford: Oxford University Press 1988).

¹³⁷ James Lovelock *The Ages of Gaia* (AG) (1988; Oxford: Oxford University Press 1989).

¹³⁸ G xii.

part of Gaia.¹³⁹

Alongside the image of the snail and its shell, Lovelock speaks of the composition of a giant redwood tree:

The tree undoubtedly is alive, yet 99% of it is dead. The great tree is an ancient spire of dead wood, made of lignum and cellose by the ancestors of the thin layer of living cells that go to constitute its bark. How like the Earth, and more so when we realise that many of the atoms of the rocks far down into the magma were once part of the ancestral life from which we have all come.¹⁴⁰

Despite the fact that some of the Earth is inanimate, as is the snail's shell, or the tree's wood, it is still an essential part of the living organism. The biosphere and its environment shape one another, are formed from one another, and determine one another's composition, a process which has been under way since the very first stirring of life on Earth. This close interconnection leads Lovelock to comment:

There is no clear distinction anywhere on the Earth's surface between living and non-living matter. There is merely a hierarchy of intensity going from the "material" environment of the rocks and the atmosphere to the living cells...¹⁴¹

This raises the difficulty of defining 'living', to which Lovelock offers no clear answers.¹⁴² He suggests two important factors: firstly, the ability of that which is alive to retain its own identity, and secondly the social nature of life. A living organism

¹³⁹ AG 19.

¹⁴⁰ AG 27.

¹⁴¹ AG 40.

¹⁴² This wariness is not shared by all his commentators. Lawrence Joseph in his book *Gaia: The Growth of an Idea* p.252 (London: Arkana 1991) offers to 'take a crack' by proffering 'A system is alive if it obtains energy and vital substances from a changeable environment, returns wastes and other toxins to the environment, and maintains the internal chemical and temperature conditions necessary to continue this process'.

maintains itself and lives socially; a dead organism can no longer maintain itself nor, since it has no self-identity, can it relate. Included in the idea of self-maintenance, or maintenance of identity, is that of self-regulation: in particular the ability of the organism to regulate its chemical composition and its temperature.

Thus, for Lovelock, *in isolation* individual rocks or oceans cannot be alive.

However, he contends that they are part of a living system, planet Earth or Gaia. Gaia, Lovelock argues, acts to regulate her¹⁴³ climate (temperature) and chemical composition (primarily in the oceans and the atmosphere) in order to maintain life. In this way, Gaia acts as a super, self-regulatory organism, fulfilling the vital functions of a living being.

His second condition, that of being part of a society or community of life, even on Lovelock's terms, is less certainly met. Unlike all other organisms, she has no others with which, as a whole, she can interact (as far as we know). Lovelock himself accepts this: 'We know that there is no other life in this solar system, and the nearest star is utterly remote'.¹⁴⁴ This is not to say that Gaia is completely independent; in origin, she is dependent on the rest of the universe, however one might account for that; and in continuance, she is utterly dependent on the presence of cosmic rays from the sun to sustain life. But this is not the same as suggesting that as a whole she is part of a community of life. She is complete, the total of life, rather than an interrelating part of it. In this respect, Gaia is an utterly unique organism, and this very uniqueness places her in a different position from all other organisms.

This uniqueness need not disqualify Gaia from organismic status, provided that one does not include in one's definition of an organism interaction with other organisms.¹⁴⁵

¹⁴³ I here follow the convention of referring to Gaia as 'she'. I do not intend this to carry any implication that there is any metaphysical or mystical link between the Earth and the feminine.

¹⁴⁴ AG 206.

¹⁴⁵ It is a different question to ask whether this disqualifies Gaia from moral status: Brennan p.82 'Ecological Theory and Value in Nature' op.cit.

Gaia is not, after all anti-social or even non-social; but all her sociality is internal. She is one huge society of life, which exists across her entire surface, and, Lovelock argues, for any life to exist at all, this must be so: 'I do not believe that sparse life, existing only in a few oases on a planet is viable'.¹⁴⁶

Gaia shares this inner sociality with all organisms, which are collections of other living things. 'You and I are both composed of a collection of organs and tissue..made up of billions of living cells..the cells themselves are communities of microorganisms...'.¹⁴⁷ Gaia is the ultimate and greatest organism composed from smaller organisms. Again, however, this does make her unique in a way which Lovelock does not explicitly acknowledge. He comments that all the living things which compose larger organisms have a relative degree of independence from them. The heart, liver and kidney can be transplanted from one body to another under the right conditions; the cells of these organs can live independently, as can the microorganisms which constitute the cells. The suggestion seems to be that all living things are dependent on *an* environment but, if a sufficiently similar environment can be found, this need not necessarily be the one in which they are originally placed. But the relationship of Gaia's living constituents to her is rather different, indeed, unique - a uniqueness which is the fruit of the uniqueness of singularity. There is not even, as far as we know, any possibility of removal from Gaia for a living organism. While a few humans, or organisms sent by humans, may survive for a short while under carefully controlled conditions beyond the Earth's atmosphere, there is no possibility of anything akin to a transplant taking place. There are no other organisms alongside Gaia. Again, Gaia is unique: the life which is within her could not possibly exist in any other location.

These conclusions concerning Gaia raise a number of important questions, some of which I do not intend to consider here. Concern here is limited to the possible ethical implications of Lovelock's Gaia hypothesis, implications at which Lovelock hints without achieving clarity or consistency.

¹⁴⁶ AG 195.

¹⁴⁷ AG 18.

The foundation of Gaian ethics must be the belief that the Earth is one huge, self regulating system, which acts to preserve conditions best suited for life. It is this belief, coupled with an occasionally unfortunate turn of language (such as speaking of the 'goals' of Gaia) which provoked strong dissent from some Darwinian scientists, in particular Richard Dawkins¹⁴⁸ and W.F.Doolittle¹⁴⁹ on the grounds that Lovelock's Gaia was incompatible with natural selection. For them the Gaia hypothesis suggested a kind of teleology, where organisms somehow planned how to control the environment.

Lovelock attempted to respond to this criticism by creating an imaginary world which was non-teleological but still regulatory.¹⁵⁰ Here individual organisms, by natural selection, without any planning or advance organization, adapted themselves so as to maintain a constant temperature on the planet despite an increase in solar heat. From this model, Lovelock concluded that 'foresight and planning are not required for planetary regulation'.

Possible scientific objections aside, it is clear that, for Lovelock, even if Gaia is not teleological in any conscious sense, she acts so as to produce a certain set of consequences - the best conditions for the maintenance of life on Earth, or, one might say, the maintenance of planetary health. This is an unconscious aim, and as such, it cannot be ethical. Lovelock never suggests that Gaia is a moral agent. Even Goodpaster, who comes very close to according Gaia personal status, considers only that this would make her a moral patient.¹⁵¹ In any case, Gaia's acts are self-oriented ensuring her own survival. 'She is strong and tough, always keeping the world warm and comfortable

¹⁴⁸ Richard Dawkins *The Extended Phenotype* (Oxford: Oxford University Press 1982).

¹⁴⁹ W.F.Doolittle 'Is Nature Really Motherly?' *CoEvolutionary Quarterly* Spring 1981 (I have been unable to obtain copies of this article).

¹⁵⁰ AG ch.3 'Exploring Daisyworld'.

¹⁵¹ K.E.Goodpaster p.21 'From Egoism to Environmentalism' op.cit.

for those who obey the rules, but ruthless in her destruction of those who transgress'.¹⁵² This could hardly be described as ethical.

Gaian ethics, then, concerns the way in which *humans* should act, given the basic postulate of Lovelock's hypothesis. Human ethical aims should coincide with the unconscious, non-ethical aim of Gaia, viz, to ensure planetary health and ability to maintain homeostasis. Thus, one might phrase the fundamental principle of Gaian ethics to be that a thing is right when it tends to preserve the homeostatic ability of Gaia, and wrong when it tends otherwise. This is, of course, a conscious parody of Leopold's land ethic; and a principle which would certainly, if upheld, have very different consequences from those which Leopold intended.

The first question to be asked is what actions would damage Gaia's ability to maintain homeostasis. Lovelock's answer is to point to what he describes as the 'vital organs' of Gaia and to make various suggestions as to what these 'vital organs' might be. Possibilities include the continental shelves and wetlands, vast hordes of microorganisms, such as the algae in the sea, tropical rainforests, procaryotic bacteria.¹⁵³ Lovelock allows that there is a degree of uncertainty about what is 'vital' to Gaia. However, we can know much more clearly what is expendable to her. We know, for instance, that she has survived ice ages where one third of the Earth has been under sheet ice, and all life in this third effectively extinguished.¹⁵⁴ We know also that the temperate forests can be felled without significant damage to homeostasis (and Lovelock admits the possibility that this may also be true of the tropical forest). And we know that for Gaia 'large plants and animals are relatively unimportant...desirable, perhaps, but not essential'.¹⁵⁵

¹⁵² AG 212.

¹⁵³ G 114, 113; AG 64, 177, 183.

¹⁵⁴ G 129.

¹⁵⁵ G 40.

Gaian ethics, then, would concentrate on protecting the 'vital organs at the core' rather than the 'expendable or redundant ones mainly on the periphery',¹⁵⁶ since the vital ones provide for the maintenance of homeostasis. Damage to them might result in disturbance to the Earth's ability to maintain the climate. Felling the tropical forests, for instance, might prevent Gaia from reducing carbon dioxide in the atmosphere, and lead to overheating by an increase in the so-called 'greenhouse effect'. Similar inability to regulate the climate to its optimum condition could be caused by extinction of algae in shallow seas. Preventing this kind of action would, in Gaian ethics, have ethical priority. It is worth noticing at this point that there is a certain fundamental ambiguity, or perhaps vacillation, in Lovelock's accounts as to whether human actions, even by attacking the vital organs, could actually destroy Gaia. This point is noted by Andrew Dobson, who quotes Lovelock's remark in the *New Scientist* that 'on a planetary scale life is near immortal' and draws the conclusion that, in Lovelock's view, life on Gaia is not under threat.¹⁵⁷ However, Dobson's account is based on the earlier *Gaia* and Lovelock's article in *New Scientist*. The possibility that humans could fatally damage Gaia is certainly left open in *The Ages of Gaia*.

What is particularly striking about such a Gaian ethical system is not what it includes, but what is left out, becoming 'expendable' or 'redundant'. Not least among these is homo sapiens, both as species, and as individual. 'It is the health of the planet that matters, not that of some individual species of organism'.¹⁵⁸ Species and ecosystems are only significant in so far as they contribute to the maintenance of the whole. As Antony Weston maintains, there is no land ethic in Gaia.¹⁵⁹ While the Gaian ethic can be phrased in Leopoldian terms, and may in structure echo the land ethic - both

¹⁵⁶ G 127.

¹⁵⁷ James Lovelock *Gaia: 'The World as Living Organism'* *New Scientist* 18th December 1986 quoted in Andrew Dobson p.43 *Green Political Thought* London: Unwin Hyman 1990).

¹⁵⁸ AG xvii.

¹⁵⁹ Antony Weston 'Forms of Gaian Ethics' *Environmental Ethics* Fall 1987 9 no 3 p.218-230.

advocate a consequentialist ethic where a collective has primacy over any single individual - in practice, Gaian ethics and the Leopoldian land ethic are very far removed. Gaia has no particular concern for ecosystems, unless the loss of them would obstruct her ability to achieve homeostasis. She has no particular preference for diversity, having, as Lovelock argues, achieved homeostasis for millions of years populated solely by bacteria.

This conclusion is anathema to most of the collective environmental philosophers I have considered in this chapter, many of whom ignore Lovelock.¹⁶⁰ Yet there is at least some degree of methodological sympathy: an ecosystemic philosophy, if you like, writ large.

For those deontological philosophers I considered in Chapter 2, however, Lovelock's hypothesis is even less acceptable. First, because of its consequentialist nature, Gaian ethics attributes no intrinsic value or inherent worth to any individual organism in itself. What matters are the consequences of actions, not individuals. Secondly, no individual in themselves could possibly make enough difference to Gaia's regulative ability to be of ethical significance. Value is cumulatively acquired through collective significance to Gaia's ability to maintain life. Thirdly (although this would only apply to some of the philosophers in chapter 2) the inner complexity or sentience of the individual organism is utterly unimportant. What matters is the contribution to the maintenance of homeostasis. For this, primitive bacteria are of more value than higher animals and even human beings. The Gaian hierarchy of value is virtually an inverse of that found in much individualist environmental ethics.

With such a value hierarchy and constraint on action, the Gaian ethic is rather different from any other ethic we have so far considered. In leaping over the arrays of local and interlocking ecosystems to the whole planetary system, much that is important to

¹⁶⁰ Rolston never mentions Lovelock. Johnson mentions him but fails to come to terms with the difficult ethical questions which the Gaia hypothesis raises. Callicott considers a 'Gaia myth' in a vague sense in his article 'Tertium Organum and Mankind's Role in Future Evolution' in *Philosophica* 39 1987 (1) p 101-112.

Callicott or Leopold loses its entire value. If it is not vital to the health of Gaia, it is not ethically significant. Thus any human action which might, for instance, destroy wilderness, is acceptable if it poses no threat to homeostasis. Only behaviour which is damaging to Gaia falls within the ethical sphere at all. Relatively few human activities are considered by Lovelock to be so damaging. Emissions of CO₂, felling of tropical forests and destruction of continental shelf algae and bacteria are all potential candidates, although as has already been commented. Lovelock seems uncertain as to the extent humans can damage Gaia. It is possible that Gaia may adjust to all these changes: life is 'tough, robust and adaptable'.¹⁶¹ It is possible that Gaia would find a new equilibrium intolerable to humans, hence Lovelock's dark comments on Gaia's 'destruction of those who transgress'.

Even if humans could damage Gaia's homeostasis in these areas, and were to protect them accordingly, a vast number of activities which other environmental philosophers find ethically objectionable are, for Gaian ethics, ethically neutral. Lovelock is, for instance, famed for his remark that 'the very concept of pollution is anthropocentric, and may even be irrelevant from the Gaian perspective'.¹⁶² In one sense, all organisms pollute, and humans are no exception; in another sense, human pollution does not disturb Gaia, and inasmuch as it is a problem it is purely a human one. One can well see why the Gaian ethic has been accused of giving the green light to industry to pollute.¹⁶³ Pollution is just one of the many areas of environmental ethics -not to mention ethics in general - on which a Gaian ethic has nothing to say. Humans have at best no value in Gaian ethics, and at worst have negative value. This is hardly a very encouraging basis on which to build any kind of ethical system. It is, perhaps, because of this, that Lovelock hints at a human ethic which operates alongside the Gaian one.

¹⁶¹ G 40.

¹⁶² G 110.

¹⁶³ Lovelock attempts to reply to this criticism in a most unsatisfactory way AG 212 by reiterating that Gaia will eliminate those who disturb the homeostasis of the planet, and hence is not giving the go-ahead to pollution. But of course, this only refers to the kinds of pollution which affect her ability to maintain homeostasis, and this encompasses relatively few polluting activities.

The human ethic may, in actuality, issue in the same human behaviour as the Gaian ethic; but its motivation is different. Its basis is the protection of humanity from the possibly negative effects of a loss of, or change in, homeostasis on Earth. A new equilibrium, Lovelock argues, could well be less satisfactory, if satisfactory at all, for humans: 'It follows that, if the world is made unfit by what we do, there is the probability of a change in regime to one that will be better for life, but not necessarily better for us'.¹⁶⁴ Thus it is in the human interest to protect the current state of Gaia, not for her sake, but for ours.

It is from this human perspective that Lovelock discusses such issues as human population and agricultural techniques. Human behaviour must fit in with Gaia's current equilibrium to ensure human survival. This may mean wide-scale vegetarianism and the keeping of far fewer domestic animals in general. It certainly entails avoiding human settlement - however large the population, and however short of space humans are - in Gaia's 'vital areas'. If humanity fails to abide by this principle, it has a black future. 'It will no doubt be decided in due course by natural selection' he comments 'which is the most fit to survive: a maximum population of humans living at bare subsistence level in a semi-desert - the ultimate welfare world - or some other less costly social system with fewer people'.¹⁶⁵ This could mean a bleak outlook: if human population increases, and humans are debarred from Gaia's 'vital areas' to prevent homeostatic change, other areas become yet more crowded and unpleasant; but the alternative of destroying the vital areas risks either the trauma of a new and less favourable homeostasis for humans or the possible destruction of life (including humans) through irreparable damage to Gaia's feedback mechanisms. It is more imperative for humans that they protect Gaia's current homeostasis for their own sake than for hers. The human element underpins and reinforces a Gaian one.

In summary, then, Lovelock's Gaia hypothesis argues that the Earth is a self-regulating

¹⁶⁴ AG 178.

¹⁶⁵ G 130.

organism which keeps conditions optimal for the flourishing of life. The Gaian ethic springing from this advocates the protection of the equilibrium for the sake of Gaia; the human ethic advocates the protection of the equilibrium for the sake of humanity. I would now like to move on to compare these elements of Lovelock's hypothesis with process thinking.

The Process Perspective

The fundamental question here - whether process thinking has any sympathy with the Gaia hypothesis - has by no means a straightforward answer. The most helpful approach is return to the Whiteheadian category of the 'society' and to consider, firstly, what kind of Whiteheadian society would correspond to Lovelock's understanding of Gaia, and secondly whether or not it is likely that Whitehead would consider the Earth to be that kind of society.

We have already examined the criteria which Whitehead suggests constitute a society: primarily that every new actual occasion within it should inherit from its predecessors something which it has in common with all the other members of the society. As has been seen, this is rather a vague criterion, and certainly one which the Gaia hypothesis, with the Earth as a systemic and interconnected organism, would meet. It is more important to ask about the *kind* of society Gaia would have to be in Whitehead's terminology.

The first relevant distinction is that between the 'structured' and 'unstructured' society, where a structured society is one which contains sub-societies and nexus which inter-relate in a structured way. A structured society must also provide a favourable environment for the subordinate societies which it harbours within itself,¹⁶⁶ and, on the other hand, itself be in the kind of favourable environment which facilitates its own continuance.

¹⁶⁶ PR 99.

The Gaia hypothesis certainly fits these criteria. The organisms and ecosystems within her relate in a structured way; she provides them with a favourable environment, by maintaining conditions healthy for life, and exists in an environment herself which allows her own survival. It is worth noticing here, however, that the Gaia hypothesis suggests that it is Gaia who maintains conditions for life, rather than that the external universe is particularly favourable for such maintenance. Of course, this only holds within certain limits - eventually the sun's heat, for instance, may be more than all the feedback mechanisms of Gaia can stand. At that point, the external universe is no longer favourable for the maintenance of Gaia. To this extent, Whitehead's criteria for a structured society do apply to Gaia; it is merely worth pointing out that her role is perceived by Lovelock to be slightly more active than Whitehead's terminology would allow.

Whitehead further subdivides structured societies: judging their complexity and their stability in the face of environmental change. Again, locating the Gaia hypothesis in these categories is fairly straightforward. She is certainly a complex society, encompassing many sub-societies and sub-nexus; and one of Lovelock's main points about Gaia is her ability to maintain herself in the face of external change (most particularly in the case of the increase by 25% of the heat from the sun.) This, together with her long life, would suggest that she is relatively unspecialized as a society. Thus one could see her as a relatively stable, unspecialized, complex, structured society.

Beyond this point, Whitehead is concerned with living and inorganic societies. Into which of these subcategories does the Gaia hypothesis fit? Two explicit statements bear directly on this question. One is found in Whitehead's consideration of structured complex societies which are material objects - that is to say, inorganic societies. His examples of inorganic societies comprise crystals, rocks, planets, and suns. At first sight, then, since Gaia is clearly a planet, she would seem to be an inorganic society, lacking novelty and benignly uniform. If this were Whitehead's last word, one would be forced to conclude that he could not sustain the Gaia hypothesis, since Lovelock would want to say more than this about Gaia viz. that she is a living society. But it seems likely that Whitehead means only to include barren planets in the category of inorganic

societies. If we look more closely at what Whitehead says about living societies, it is very difficult to conclude that his analysis does not include the Earth.

This is suggested by his second explicit comment, which is really an aside illustrating another point: the nature of nexus underlying societies. He remarks: 'The society is always adding to itself, with the creative advance into the future. For example, the man adds another day to his life, and the Earth adds another millennium to its period of existence. But until the death of man and the destruction of the Earth, there is no determinate nexus which in an unqualified sense is either the man or the earth'.¹⁶⁷

This is interesting in several aspects, not least in its leaving open the possibility of the Earth's destruction - a point to which I shall shortly return. It is particularly significant not just that Whitehead calls the earth a society, but that he compares the earth to the paradigmatic living society in process thinking - a human being. Admittedly, he uses the word 'destruction' rather than 'death' of the Earth, but this may be intended to express scale rather than status. The comparison at least raises the possibility that the Earth might be a living society.

Further evidence for this view can be drawn from looking at Whitehead's comment that all living societies include some inorganic matter. That the Earth contains some - or indeed, mostly - inorganic matter does not prevent it from being a living society. Indeed, no society is entirely living:

...a society is only to be termed living in a derivative sense. A 'living society' is one which includes some 'living occasions'. Thus a society may be more or less 'living' according to the prevalence in it of living occasions. Also an occasion may be more or less living according to the relative importance of the novel matters in its final concrescence.¹⁶⁸

Thus any society which contains some living occasions is a living society. If the earth

¹⁶⁷ AOI 237.

¹⁶⁸ PR 102.

is to be accepted as a society at all, as I have suggested, then it follows necessarily from this that it must be a living society, since it contains some living constituents, despite a large number of inorganic ones. This attribution of the title 'living' to something involving both living and inorganic components calls to mind Lovelock's analogy of the snail and its shell, or the 99% dead wood in a redwood tree. Despite the predominance of the inorganic as a part of the whole, the whole is still living.

Whitehead makes several further interesting observations about the living complex society. Using the animal body as an example, he describes how:

a complex inorganic system of interaction is built up for the protection of the 'entirely living' nexus, and the originative actions of the living elements are protective of the whole system. On the other hand the reactions of the whole system provide the intimate environment required by the entirely living nexus.¹⁶⁹

Here the living society is called a *system*. In addition, Whitehead suggests that the living parts of the society act on the inorganic parts in order to protect the whole system. This sounds almost like a direct description of how Lovelock envisages life on earth maintaining the best conditions for the continuance of life. The whole system, built up by its living members, acts to protect them.

As we have seen, Whitehead further subdivides living societies into those which are higher and lower, conscious or unconscious, democracies or monarchies. It is at this point that we need follow Whitehead's sub-divisions of increasingly complex societies no further. As Lovelock insists, Gaia has no consciousness, no foresight or planning, no thought. Whitehead would certainly not suggest otherwise. Gaia, in Whitehead's terms, would be a democracy, resembling most closely the structure of a plant - alive, but without a governing or conscious centre, making all adjustments to her situation unconsciously. She is not a higher organism.

¹⁶⁹ PR 103.

Some difficulties still remain with the argument that the Earth is a living society. Not least among these is Whitehead's insistence that a living society needs food.¹⁷⁰ He compares crystals, as inorganic objects, with animals, which, as living societies, need to eat. It is, of course, rather difficult to suggest that Gaia, as a system, needs to eat. Gaia's living components eat; but Gaia as a whole cannot eat. One possible approach would be to suggest that all useful input into Gaia is the equivalent of food; ie, Gaia's form of eating are solar rays. Sunlight must count as food for plants, so why not for Gaia? One might return to the example of the redwood tree and point out that it is only the living parts of the tree which actually eat, yet one can transfer the term to the whole and speak of the whole organism as eating. Another approach would be to say that Whitehead had the example of an animal in his mind, and could not, at the time, think of any living society which might not fulfil the criteria of needing to eat. Presented with the Gaia hypothesis, he might have modified his view or expressed it somewhat differently. Or one may consider that this disqualifies Gaia from being a living society in Whitehead's terms. However, I do not think that this query over food is sufficient to undermine the obvious closeness between Lovelock and process thinking, to this point at least. Certainly, Gaia would be a unique living society for Whitehead, in very much the same way as she is a unique organism for Lovelock. Thus far, Whitehead seems to be able to support the Gaia hypothesis, and to express Lovelock's concept in already available process terminology. This is a conclusion also drawn by the environmental philosopher Aaron Gare, who claims that process thinking;

...sees life on Earth as a multiplicity of self-regulating ecosystems, ranging from the world ecosystem, which maintains the conditions for life on earth, to the interdependence of a few species of organisms in a small community.¹⁷¹

It is worth briefly considering what Hartshorne, in contrast to Whitehead, would make of the Gaia hypothesis. Is Gaia, for Hartshorne, an organism, or a quasi-organism? Is she

¹⁷⁰ PR 105.

¹⁷¹ Aaron Gare 'Environmental Ethics and Process Theology' in *The Trumpeter: A Journal of Ecosophy* 8 No.1 Winter 1991.

as unified, or more unified, than her most unified parts? It is uncertain whether Lovelock would try to argue that Gaia is as unified as her most unified parts. What degree of closeness is he trying to evoke by the use of organismic language? In Lovelock's terms, Gaia could be an organism while not being as unified as the most unified organism (if indeed this is appropriate terminology to export outside the context of process thinking). Relevant here is the closeness of association in Hartshorne's thought between a true organism and the possession of a dominant actual occasion. Lovelock would never assert that Gaia had anything like the unifying cohesion given by a dominant actual occasion; and Hartshorne certainly does not hint anywhere in his work that he considers the Earth to have a dominant actual occasion. Since other true organisms within Gaia do have dominant occasions, it is clear that, for Hartshorne, Gaia is not more unified than her most unified parts, and consequently cannot be a true organism, but is, rather a quasi-organism.

There is one further important observation which must be made here about process reactions to the Gaia hypothesis. Cobb and Daly, in one of the few mentions of the Gaia hypothesis in any recent process writing, comment on the 'obvious fact' that:

...the earth is part of a still larger system, so that abstracting it from that larger system as the object of ultimate concern exaggerates its autonomy and continues to encourage devotion to the part rather than to the whole.¹⁷²

Lovelock's description of the Earth as lone life, divided from an inanimate local universe (at least), is rejected by process thought. Everywhere, throughout the universe, actual occasions are actualizing themselves, even if they are of very low grade intensity. There is no absolute division between the Earth and what lies beyond. To make such a distinction is to be as reductionistic, for Cobb and Daly at least, as to suggest that individual humans can be separated from their environment. Every actual occasion, in some way, however remote, reflects the whole universe. Thus process

¹⁷² Hermann E Daly & John Cobb Jr p.382 *For The Common Good* (London: Green Print 1990).

thinking, regards the Universe as the greatest organism, that is to say, everything that exists. The Earth, or Gaia, cannot be separated from this universal context. This metaphysical difference of perspective is far less conspicuous than that caused by the disparate *focus* of Whitehead's system. Here, key dissimilarities become evident between Lovelock's approach and the way in which the Gaia hypothesis could work out in process thinking.

This difference largely stems from the *theological* and consequently *teleological* nature of the foundations of Whitehead's system, as discussed earlier. Whitehead has a complex teleology of overarching significance for the development of the Universe, including the Earth, and thus has a very different perspective from that of Lovelock:

The primordial appetitions which jointly constitute God's purpose are seeking intensity and not preservation. His aim ... is depth of satisfaction as an intermediate step towards the fulfilment of his own being...Thus, God's purpose in the creative advance is the evocation of intensities. The evocation of societies is purely subsidiary to this absolute end.¹⁷³

Both the concept of a lure acting within the universe (and specifically within the life of the planet) and of an aim at intensity are foreign to Lovelock. For Whitehead, complex societies, such as those found on Earth, make the generation of intensities more likely. He comments that 'the growth of a complex structured society exemplifies the general purpose pervading nature'.¹⁷⁴ Indeed, 'the problem for Nature is the production of societies which are 'structured' with a high 'complexity' and which are at the same time 'unspecialized'. In this way, intensity is mated with survival'.¹⁷⁵

This significantly tempers any argument that Gaia could be a structured, unspecialized living society. While Whitehead might have accepted Gaia as a self-regulating organism maintaining optimum conditions for life on Earth, in process thinking the aim of Gaia

¹⁷³ PR 105.

¹⁷⁴ PR 100.

¹⁷⁵ PR 101.

passes far beyond this. The lure of the primordial nature of God gives Gaia a cause beyond herself and her survival: to generate value for God's consequent nature. It is not preservation but intensity at which Gaia aims.

This, of course, means that Gaian ethics in process thinking would differ, both in motivation and in expression, from that of Lovelock's Gaia. The only fundamental similarity is in its consequentialist nature. For both, the effect of actions is what really counts. However, since their aims are different, so, inevitably, are their consequences.

Two kinds of ethic were distinguished in Lovelock's thinking: a Gaian ethic, aiming for optimal planetary health, and a human ethic which involved protecting the current equilibrium of the Earth in order to ensure the survival of the human species. In effect, these two ethics supported one another, the human imperative leading to the desire for optimal planetary health. For process thinking, the aim is rather different. Ultimately what matters is the generation of values for the consequent nature of God. This is achieved through intensity, and intensity is best obtained by structured complexity. The Earth, being, as far as we know, the place where value is delivered most intensely to the consequent nature of God, is thus particularly significant. In luring the Earth onwards, God aims to generate more intensity - in part at least by increasing complexity.

For complexity to persist and increase, Gaia must continue to survive. If Gaia's self-regulatory ability is destroyed, and life destroyed with it, there will be a massive loss of complexity and intensity - and hence value - for the consequent nature of God. Thus the persistence of Gaia is essential to process thinking as well as to Lovelock. But it is a subsidiary, or instrumental, aim rather than the ultimate principle of the system, rather as ecosystems were similarly instrumental.

Furthermore, while Gaia, for Lovelock, is largely indifferent to the kind of life on her surface (but being comfortable with the one-third ice cover of glaciation) for process thinking the kind of life, and the amount of life, is crucially significant. Maximum total richness of experience is, after all, the aim. More complex forms of life deliver

plentiful rich experiences. This has several important effects on process values. First, phases of Gaia where life is more complex and intense are to be preferred. If one-third of the planet is under an ice sheet, this is unlikely to be conducive to rich life forms over at least that amount of the planet's surface. The much smaller ice caps of the present time allow a much greater volume of life and are therefore preferable.

Secondly, more complex life forms in any one phase of Gaia's existence are to be preferred, and subject to certain conditions, they should be maximized in number. Thus, mammals, and more particularly humans (as the most complex mammals) are the most important members of the biosphere. Lovelock's 'vital organs' are still vital - in order to protect living conditions for complex organisms. But the focus has shifted from these 'vital organs' onto complex life. It is complex life which is vital for generating value for the consequent nature of God.

Complex life does not only mean human life, a point which Birch and Cobb raise:

Life does not aim specifically at the creation of human beings. It has no one goal for the course of evolution on our planet. Life has achieved rich value in dolphins as well as human beings.¹⁷⁶

While at the moment humans may be the most rich source of value (as we have already seen, Birch and Cobb think human culture is worth more than the lives of whales, and, presumably, dolphins, despite their rich value) there is no guarantee that this will continue. Certainly the destruction of human life would be, in process thinking, a great evil: in Whitehead's terms, the substitution of a lower experience for a higher. But it would not be the end. There is always the belief that the lure of the primordial nature of God would continue to act in the world - or, if there were no world, the Universe - to produce ever new intensities of feeling. In this, despite the obvious difference of approach, there is a strange conformity to Lovelock's hypothesis. Lovelock also, as we have seen, speaks about the continuance of life at a new equilibrium, even if the Earth has become uninhabitable by humans. Gaia will go on working to achieve the best

¹⁷⁶ LL 197.

conditions for life. However, if Gaia is destroyed, then Lovelock, lacking the theistic perspective of process, cannot affirm the continuance of new intensities elsewhere.

What, then, is the more practical outcome of the process ethic, with its emphasis on rich experience? It falls between the Gaian ethic and the human ethic which Lovelock presents. Both are consequentialist rather than deontological. However, process ethics is neither human-centred (although humans at present are the primary producers of rich experience) nor Gaia-centred, but ultimately centred around rich experience.

Few process thinkers have written about the possible ethical consequences which flow from Lovelock's Gaia hypothesis. Cobb and Daly, however, do level the individualist criticism of Gaia at Lovelock: 'the commitment of Lovelock to Gaia does not do justice to the intrinsic value of each living thing, or to the biosphere as a whole'.¹⁷⁷ We have already considered why process thinking would think Lovelock's hypothesis might not do justice to the biosphere (it elevates a part into being the whole). This lies here alongside criticism of the place of 'the intrinsic value of every living thing'. It seems rather an ironic attack, coming from a process thinker such as Cobb whose position on the integrity of the individual is also questionable. The criticism probably stems more from Cobb's desire to defend complex but inessential members of the biosphere (such as humans and higher mammals which generate rich experience) than from his strong feelings about the importance of the individual.

In summary, then, process thinking could countenance the 'Gaia hypothesis' and has, ready-made, the language and conceptuality with which to express it. Ultimately, however, it has a very different focus. Rather than Gaia, the 'Earth-organism', it is God, the 'cosmic organism' on which process thinking is focused. It is not the preservation of planetary health (for whatever reason) which should be the aim of ethical behaviour, but rather the generation of maximum richness of experience for God. Thus the 'vital organs' of process thinking are not the deep sea algae or the

¹⁷⁷ Cobb and Daly p.398 op.cit.

tropical rainforests, but the complex and rich lives of higher mammals. Thus the ethics which arises from the Gaia hypothesis is very different from that issuing from process thinking.

In Conclusion

Process thinking, unlike the individualist deontological ethicists of Chapter 2, has some ability to acknowledge ecological collectives. In Whitehead's terminology, ecosystems, species and even the planet can be called 'societies' and can have a good of their own. Hartshorne's philosophy, however, is less amenable to this interpretation, ecosystems and species being 'quasi-organisms' without goods of their own. However, both Hartshorne and Whitehead differ significantly from Leopold, Callicott and Lovelock in their insistence that the consequent nature of God, the cosmic organism, lies beyond even Gaia, and is the ultimate aim of ethical behaviour. Thus the process emphasis ultimately falls on maximizing richness of experience, rather than the integrity, stability and beauty of the land community or the maintenance of planetary health. These may be instrumental aims, but they are not final ones. This contrasting process approach leads to diverging understandings of the nonhuman world, and consequently diverging ethical approaches to it. Whitehead in particular, with his emphasis on co-operation for the greater good, finds predation difficult to accept; and Hartshorne, more reconciled to the idea of conflict, regards predation to be tragic. This conclusion is foreign to Leopold and Callicott, where predation is regarded as a good. Ethically, the process aim at maximizing richness of experience results in substantially different ethical decisions than those of either Leopold and Callicott, or Lovelock.

Both this chapter, and Chapter 2, have revealed a substantial disparity between the conclusions of process thinking about environmental ethics and those of both individual deontologists and collective consequentialists. Indeed, there is little doubt that both these approaches would attack process ethics, albeit for different reasons. Chapter 4, in contrast, considers an approach to environmental philosophy which claims, at least, to share common ground with process thinking.

CHAPTER 4

A TAG WITHOUT BAGGAGE? WHITEHEAD'S PROCESS METAPHYSICS AND THE DEEP ECOLOGY MOVEMENT

Introduction

The focus of this chapter differs in several respects from those which preceded it. Process thinking has, until now, been compared with environmental ethical approaches which, generally speaking, have themselves made little comment on process thought. Here however, process thinking will be compared with a philosophy which actively claims support from it: deep ecology. Secondly, deep ecology does not only concern environmental ethics; it also emphasises metaphysics. The relationship between ethics and metaphysics in deep ecology is a complex one, as I will go on to explain. This chapter will compare the process system with the metaphysics of deep ecology, a comparison which is interesting in its own right, but which has important ethical implications.

Deep Ecological Claims about Process Thinking

A variety of claims are made by different deep ecologists concerning process thinking. Warwick Fox, for instance, claims that Spinoza, Whitehead and Heidegger 'articulate the vision' of deep ecology,¹ while Paul Shepard argues that 'the wisdom of deep ecology' is manifest in 'current Whiteheadian philosophy'.² One would expect to find a substantial number of articles elaborating such claims; after all, a small and frequently controversial new philosophical school could only gain by revealing conceptual closeness to relatively illustrious philosophical ancestors. Such articles do

¹ Warwick Fox p.149 'The Intuition of Deep Ecology' *The Ecologist* 14 no. 5/6 1984.

² Paul Shepard p.3 'Ecology and Man - A Viewpoint' *The Subversive Science* ed. Paul Shepard & D.McKinley (Houghton Mifflin 1969).

exist in the case of Heidegger and Spinoza. Both Arne Naess³ and George Sessions⁴ have written reasonably substantial pieces on Spinoza; and Sessions⁵ and Michael Zimmerman⁶ on Heidegger. However, there is a marked void where Whitehead is concerned. In a tightly-packed seven-page appendix to *Deep Ecology* entitled 'Western Process Metaphysics: Heraclitus, Whitehead and Spinoza' George Sessions only manages two meagre paragraphs on Whitehead. If Whitehead really is 'one of the patron saints of deep ecology' as Richard Sylvan suggests, why is so little evidence cited to support this view?⁷ Why is Whitehead's name so frequently used as a reassuring philosophical tag, with no explanatory philosophical baggage?

There are several possible explanations. Firstly, perhaps the Whiteheadian system is so self-enclosed that, without concentrated study, a detailed consideration is impossible. Deep ecologists thus simply appropriate popular conceptions of the system as supportive of their own ideas. There is certainly some truth in this, but Whitehead's approach is not markedly more self-enclosed or difficult than that of Spinoza or Heidegger. Perhaps it is just historical chance that those writing about deep ecology have focused on other philosophers whilst acknowledging that a Whiteheadian perspective shares some common ground. This is also a possible explanation, although not a very satisfying one. A third possibility is that the relation of Whitehead's process philosophy to the conceptual world of deep ecology is profoundly ambiguous and complex. It is this complexity which renders an approach such as that of Naess to Spinoza, where he 'invites the reader to consider a set of [sixteen] hypothetical connections between Spinozist and ecological

³ Arne Naess 'Spinoza and Ecology' *Speculum Spinozanum 1677 - 1977* Helsing (ed.) (London: Routledge 1977) 418-426.

⁴ George Sessions p.481 'Spinoza and Jeffers on Man in Nature' *Inquiry* 20 1977.

⁵ George Sessions 'Martin Heidegger' in his chapter 'Some Sources of the Deep Ecology perspective' 98-100 *Deep Ecology (DE)* George Sessions and Bill Devall (Salt Lake City: Peregrine Smith Books 1985).

⁶ Michael Zimmerman 'Towards a Heideggerian Ethos for Radical Environmentalism' *Environmental Ethics* 5 no 2 Summer 1983 99-132.

⁷ Richard Sylvan 'A Critique of Deep Ecology' (CDE): p.10 Part II *Radical Philosophy* 41 Autumn 1985.

thought' unfeasible.⁸ This ambiguity becomes obvious even on a brief study. George Sessions, for example, in the two paragraphs mentioned above, expresses some doubts about the compatibility of Whitehead's system with his own view of Deep Ecology.⁹ It is this complex relationship which will be examined in this chapter.

Deep Ecology: An Attempt at Delimitation

The use of the expression 'deep ecology', already suggests - misleadingly - that there is some clear definition of deep ecology, or that there are, at least, defining characteristics to which those who call themselves deep ecologists adhere. In reality, this is far from the truth. Deep ecology is an amorphous cluster of ideas, not all of which are held by all who call themselves deep ecologists, and some of which are held by those who definitely would not. These concepts are frequently prioritized differently and are sometimes in tension with one another. To complicate matters still further, over time individuals (in particular Arne Naess) have altered the presentation of their views. The first priority, then, is to clarify this situation, so that it is clear which individuals, and which of their ideas, are being considered, in order to find some sort of path through what Sylvan describes as a 'conceptual bog'.¹⁰

The expression 'deep ecology' was first used by Arne Naess in his 1973 article 'The Shallow and the Deep, Longrange Ecology Movement'.¹¹ Here, Naess drew a distinction between the movements for 'shallow ecology' and 'deep ecology', putting forward what he called the fundamental tenets of a deep ecological position. Shallow ecologists, he argued, 'fight against pollution and resource depletion', their central objective being the 'health and affluence of people in the developed countries'. Deep ecologists, however, had deeper concerns: 'principles of diversity, complexity, autonomy,

⁸ Naess: p.418 'Spinoza and Ecology' op.cit.

⁹ DE 236.

¹⁰ CDE I.2.

¹¹ Arne Naess p.75 'The Shallow and the Deep, Longrange Ecology Movement' (SDE) *Inquiry* 16 1973.

decentralization, symbiosis, egalitarianism and classlessness'. He states that the tenets of the deep ecology movement are 'clearly and forcefully normative'.

This was the beginning of a long series of attempts to describe the basis of deep ecology, attempts already catalogued by Richard Sylvan.¹² These attempts often divide deep ecology into two categories: the principally *metaphysical* and the principally *ethical*. However, the one does not preclude the other; indeed, ethics and metaphysics stand in such close, if controversial, relationship in deep ecology that it is impossible to consider the one without reference to the other. Thus, although the explicit focus of this chapter is on the metaphysics of deep ecology, it is impossible to disentangle metaphysics from its ethical foundation and conclusions, as I will shortly indicate.

Before doing this, I must add one further delimitation. Some philosophers, most recently T.L.S.Sprigge, have adopted a definition of deep ecology so wide that it includes a substantial number of environmental ethicists. He comments that 'the deep ecophilosopher...believes that nature...must be respected as valuable in itself'.¹³ This broad definition includes Paul Taylor and Holmes Rolston, and would also encompass Richard Sylvan, who makes it quite clear that he is not a deep ecologist.¹⁴ It seems to me to be far safer, not to mention simpler, to restrict this inquiry to those who actively call themselves deep ecologists or who are associated with the deep ecology movement.

THE METAPHYSICAL AND THE ETHICAL IN DEEP ECOLOGY

The relative significance of the metaphysical and the ethical in deep ecology is much disputed. In his 'Critique of Deep Ecology', for example, Richard Sylvan argues that

¹² CDE I & II.

¹³ T.L.S.Sprigge p.108 'Some Recent Positions in Environmental Ethics Examined' *Inquiry* 34 1991.

¹⁴ '...While I applaud much about the deep ecology movement and what it stands for, I cannot find my way to accept deep ecology as formulated by any of its main exponents'.CDE I,2 Author's note.

deep ecology was originally, and is fundamentally, a normative or value system. The metaphysics, he suggests, came later, being introduced by other deep ecologists such as John Seed and George Sessions:

Although Deep Ecology was in origin part of value theory, and basically concerned with environmental values, it has been presented as a metaphysics, as a consciousness movement (and as primarily psychological) and even as a sort of (pantheistic) religion.¹⁵

Sylvan later suggests that deep ecology has been hijacked by the metaphysicalists. While he accepts Naess's deep ecology as 'authentic' (because of its ethical emphasis), Sylvan calls other deep ecologists, especially Warwick Fox, 'Western Deep Ecologists' (stemming from the West Coast of Australia and the USA)¹⁶. Their form of deep ecology, he implies, is inauthentic.

Warwick Fox's own interpretation of deep ecology is diametrically opposed to that of Sylvan. For Fox, deep ecology 'renders ethics superfluous'.¹⁷ He rejects 'intrinsic value approaches', claiming concern with ontology rather than ethics, and quotes supporting passages from other deep ecologists such as George Sessions:

The search for an environmental *ethics*, in the conventional modern sense (which Routley wants to endorse) seems wrongheaded and fruitless...the search, as I understand it, is not for environmental ethics but for ecological consciousness.¹⁸

The situation is thus extremely unclear. Is deep ecology a value system, proposing a new

¹⁵ CDE I.2.

¹⁶ Richard Sylvan 'A Critique of (Wild) Western Deep Ecology: A Response to Warwick Fox's Response to an earlier Critique' (CWWDE) *In Defence of Deep Environmental Ethics* Discussion Paper in Environmental Philosophy no.18 (Australian National University 1990).

¹⁷ Warwick Fox p.225 *Towards a Transpersonal Ecology (TTE)* (Boston: Shambhala Press 1990).

¹⁸ Sessions, broadsheet *Ecophilosophy* III p.5a (as cited TTE 225).

ethics of the natural world, or is it a metaphysical system which goes 'deeper' than ethics, and regards ethical reform not only as insufficiently radical but as actually completely wrong in approach?

Naess's 1973 article speaks of deep ecology both as 'clearly and forcefully normative' and as metaphysical, with metaphysical principles, such as 'rejection of the man-in-environment image in favour of the relational, total field image'. This suggests that, at this point at least, Naess considered the ethical and the metaphysical to co-exist. This impression is reinforced in Naess's subsequent work: in 1974, he explained his plainly metaphysical system to A.J.Ayer;¹⁹ his 1984 article 'Intuition, Intrinsic Value and Deep Ecology',²⁰ and his 1989 book *Ecology, Community and Lifestyle* confirm the importance of metaphysics.²¹ He speaks of a four-level discussion, beginning with 'verbalized fundamental philosophical and religious ideas and intuitions' moving through the 'Deep Ecology Platform' to general consequences and finally concrete situations. Everything is derived from the fundamental metaphysics. Naess's 'authentic' deep ecology is, in fact, strongly metaphysical and cannot be separated from 'Western' deep ecology in the way which Sylvan suggests.

However, Sylvan's case does not entirely lack justification. While deep ecology was always perceived by Naess to be a metaphysical system, there is no doubt that he also repeatedly expressed its normative nature - as is true of his 1973 article. The exact role he considers ethics to play is somewhat obscure and contradictory. In the same article in which he remarks 'I have the feeling that moralizing is not a great force in the world',²² he includes what has become known as the '8-point Platform of Deep

¹⁹ Arne Naess in conversation with A.J.Ayer 'The Glass is On the Table' *Reflexive Waters* ed. Fons Elders (London: Souvineer Press 1974) 30-37.

²⁰ Naess 'Intuition, Intrinsic Value and Deep Ecology' *The Ecologist* 14 5/6 1984 201-204.

²¹ Arne Naess; *Ecology, Community and Lifestyle (ECL)* (transl.ed.David Rothenberg, Cambridge: Cambridge University Press 1989).

²² Arne Naess Schumacher Lecture 1987, transcribed as 'The Basics of Deep Ecology' *Resurgence* 126 Jan/Feb 1988 4-7.

Ecology' apparently agreed by Naess and Sessions in 1984.²³ These principles (to which I shall return) are clearly value-oriented.²⁴ Variations of these 8 points appear throughout discussions of deep ecology and are restated as recently as late 1990 in Naess's work.²⁵ There is no doubt of their centrality. Certainly, Naess sometimes claims that they represent the second level of deep ecological thinking, which as we have seen, follows from fundamental religious ideas and intuitions. But even if we accept that Naess has always thought of the deep ecology Platform as in this sense derivative, it need not imply secondary importance. After all, Naess insists on the need for pluralism at the primary level, while commenting that all who call themselves deep ecologists must accept something approximating the 8-point Platform. This may make ethics more, rather than less, significant than the underlying pluralist metaphysics. In addition - a point which Sylvan does not make - there seems to be a hidden ethical imperative at work behind the metaphysics of deep ecology. Naess repeatedly affirms the importance of a pluralist metaphysics; both he and Fox guide others by suggesting ways in which they might construct their own ecosophical system. But the word 'guide' is significant here. This is pluralism within very tight restraint - that of ecosophy. Neither Naess nor Fox could accept truly pluralist metaphysics, in case they issued in the wrong conclusions. A metaphysics of the supremacy of humanity, for instance, would not be welcomed by either. Is this the re-emergence of an ethical imperative? The whole purpose of the deep ecology enterprise is to 'guide' - to achieve a change in outlook. Fox's fundamental argument seems to be that a change of world view to 'transpersonal ecology' will issue in a symbiotic approach to the natural world. Under these circumstances, ethics becomes superfluous, because the flourishing of others would instinctively be regarded as the flourishing of our selves, (as will be illustrated).

²³ DE 69-76.

²⁴ Warwick Fox denies this value orientation, claiming that the Deep Ecology platform is colloquial and 'not a formal philosophical position'. Sylvan is correct to say that this defence is 'ridiculous': the deep ecology platform can surely be interpreted in no other way than as a series of value statements. Fox, p.49 'Approaching Deep Ecology: A Response to Richard Sylvan's Critique of Deep Ecology' Environmental Studies Occasional Paper no.20 (University of Tasmania 1986); Sylvan CWWDE 48.

²⁵ Arne Naess 'Sustainable Development and Deep Ecology' in J.R and J.G Engel *Ethics of Environment and Development* (London: Belhaven Press 1990) 87-97.

However, concealed within this denial of ethics is a clear ethical imperative: that one ought to change in attitude to the natural world, and that changing metaphysics is the most successful way to do so. Thus, at the most fundamental level, the urge within deep ecology is an ethical one - the urge to change, and still more, the urge to make others change. Without this imperative, what point would there be in such extensive publication and propagation of the deep ecological view?

This would suggest that ethics is, in this sense at least, fundamental to deep ecology. It is the ethical imperative for change which produces the pluralist metaphysics that, according to Fox, render ethics superfluous. This does not mean that metaphysics is superfluous, but that it is founded on an ethical imperative, and issues in ethical conclusions.

Thus Sylvan is right to cavil at Warwick Fox's attempt to drop the normative side to deep ecology; an attempt which reaches its climax in *Towards a Transpersonal Ecology*. Here Fox, by a remarkable sleight of hand, argues that the concept of the *extended self* is in fact the defining characteristic of deep ecology, which should, therefore, more accurately be called transpersonal ecology. Indeed, Fox employs a number of deceptive and even contradictory arguments to make this point. He argues that deep ecology is popular because it is misunderstood to be a value theory; whilst simultaneously arguing that deep ecology is popular because those that use it perceive that there is *more to it* than a value theory, that is, a metaphysics. He also operates a *distinctiveness criterion*: what is *authentic* to deep ecology must be what is *distinct* or *unique*. Since ecological value theories are found elsewhere in environmental philosophy, they are not distinct to deep ecology, and are therefore not authentic; the theory of the extended self is not found elsewhere in environmental philosophy and is therefore distinct, authentic, and in fact the defining characteristic of deep ecology. The fallacy involved in this argument is clear. The fact that a concept is or is not distinctive bears no necessary relation either to its authenticity or its centrality.

Nonetheless, Sylvan certainly has a hidden agenda of his own. Since his primary interest is environmental ethics, it is the ethical side of deep ecology with which he wishes to

engage. Thus he accepts the parts of deep ecology of which he approves (that is, the 8-point Platform) as 'authentic' while dismissing the rest as 'inauthentic' - Fox in reverse. These positions are unbalanced. Both ethics and metaphysics are of central importance to deep ecology, and to attempt to strip either of them away is to present deep ecology only half-clad. Hence this comparison between the metaphysics of deep ecology and the metaphysics of process thinking is carried out very much within an ethical context.

As we have already seen, Naess repeatedly affirms that metaphysical pluralism must lie at the root of deep ecology: his own system is but one path amongst many.²⁶ Despite this, there is extensive homogeneity in the views of those who call themselves deep ecologists. Two closely related metaphysical themes are particularly prominent: *holism* and *the extension and realization of the self*. It is these two themes upon which I will be focusing.

HOLISM IN DEEP ECOLOGY AND PROCESS THINKING

Holism can be and has been defined in different ways, and as several writers suggest, can be held with varying degrees of intensity. For the sake of clarity, I will begin by using the classification of D.C. Phillips in his book *Holistic Thought in Social Science*.²⁷ Phillips divides holism into three types, which he calls Holism 1, 2, and 3. He focuses primarily on Holism 1, which he claims is composed from five inter-related ideas, viz: {a} Rejection of the 'analytical' or 'reductionist' approach of much science; {b} Argument that the whole is more than the sum of its parts; {c} Argument that the whole determines the nature of its parts; {d} The parts cannot be understood in isolation from the whole; {e} The parts are dynamically related, or interdependent.

To distinguish Holism 2 from Holism 1, it is important to understand 'emergent properties'. An 'emergent property' is a property possessed by a whole which is not

²⁶ Naess p.88 'Sustainable Development and Deep Ecology' op.cit.

²⁷ D.C. Phillips *Holistic Thought in Social Science (HTSS)* (Stanford University Press 1976).

possessed by its parts: for instance, water having the property of being a clear liquid at 5°C which is not a property of its constituents, hydrogen or oxygen. As Phillips understands it, in Holism 1, emergent properties *cannot be predicted from investigation of the parts*. This does not mean that after one has the whole, one cannot explain it by examining the parts and their interactions. This is a weaker contention than Holism 2, which claims that even after one has the whole, *it still cannot be explained by studying the parts*. Holism 3, in contrast, is a much simpler hypothesis; merely that new terminology is needed to explain the properties of wholes.

In this chapter, Holism 1 and 2 will be of primary interest. This is not to say that Holism 3 would be refuted by either process thinking or deep ecology, which would certainly affirm the need for new terminology to explain the properties of wholes. Indeed, there are very few scientists or philosophers, as Phillips points out, who would refute Holism 3, and it is for this very reason that 1 & 2 are more significant.

Within deep ecology, support for holistic views is often derived from quantum physics or scientific ecology, although the support of neither is necessary; Naess for instance defended a kind of holism against Ayer in 1973 without reference to the physical or biological sciences. Most commonly, however, deep ecologists refer to the work of physicists such as Fritjof Capra and David Bohm as a basis for their views.

Capra argues that the discoveries of modern physics invalidate not only Newtonian physics, but also the whole philosophical view of the world which, he claims, was built on it. This view espouses mechanism and reductionism: that is to say, the twin beliefs that everything which exists has a mechanical explanation, and that the best way to understand something is by breaking it down into its components. The Newtonian view of the world is built on atomism - elementary solid particles - and the concept of absolute space and time. However, the new physics, according to Capra, invalidates this view: (rejection of analytical approach: Holism 1 {a}).

In contrast to the mechanistic, Cartesian view of the world, the world view emerging from modern physics can be characterized by words like

organic, holistic and ecological.²⁸

Central to the new physics, claims Capra, is the discovery that 'subatomic particles have no meaning as isolated entities, but can be understood only as interconnections'.²⁹ (Interdependence: Holism I{e}) There are no 'isolated building blocks' but only a great 'web of relations':

Quantum theory has shown that subatomic particles are not isolated grains of matter but are probability patterns, interconnections in an inseparable cosmic web that includes the human observer and her consciousness...at the subatomic level, the interrelations and interactions between the parts and the whole are more fundamental than the parts themselves.³⁰

Capra's characterization of quantum physics describes one common interpretation of holism. One can sensibly *only consider the whole*, (parts dependent on whole: Holism I {d}) since as modern physics has shown, everything is interconnected. Atomism and reductionism fail to recognize this and create artificial divisions between things which cannot be separated. It is not therefore so much that the whole is greater than the sum of its parts, but that there are no clearly defined parts, just one constantly interacting, changing web of energy.

Scientific ecology is also used as a source for the deep ecological holistic view; in particular the work of Barry Commoner. Commoner defines holism as the belief that a whole is more than the sum of its parts (Holism I {b}) - that is, the whole may have emergent properties very different from the properties of the individual parts which make it up. He uses this concept to attack the work of molecular biologists for concentrating on the molecular structures of cells and failing to look at the complexity of the whole - that is to say, studying the parts as if that would explain the whole.

²⁸ Fritjof Capra p.66 *The Turning Point* (TP) (1982; London: Flamingo, Fontana Books 1984).

²⁹ TP 69.

³⁰ TP 83.

(rejection of analytical approach: Holism I {a}; possibly Holism 3). Commoner is at pains to emphasise the complexity and degree of interdependence among ecosystems. Indeed, he describes the principle that everything is interconnected as the first and foremost Law of Ecology (Holism I {e}).³¹

Statements of this kind by physicists and ecologists have both *generated* deep ecological views and acted to *reinforce* them. Indeed, many deep ecologists view their relationship to modern physics and scientific ecology as surprisingly close. Both Warwick Fox and Arne Naess claim that their systems are *inspired* by ecology [as science] rather than *derived* from it.³² Warwick Fox's position illustrates the centrality of science to his philosophy:

Not to refer to the parallels between deep ecology...and the so called 'new physics' (ie post 1920s physics) might well indicate that one had missed the central intuition of deep ecology since, fundamentally, each of these fields of understanding subscribes to a similar structure of reality, a similar cosmology.³³

The descriptions of holism in deep ecological writing reflect the influence of such writing by physicists and ecologists. The most extreme statement stems from Warwick Fox, who comments that the central intuition of deep ecology is:

the idea that there is no firm ontological divide in the field of existence. In other words, the world is simply not divided up into independently existing subjects and objects, nor is there any bifurcation in reality between the human and non human realms. Rather, all realities are constituted by their relationships. To the extent that we perceive boundaries, we fall short of deep ecological consciousness.³⁴

³¹ Commoner p.37-41 *The Closing Circle* (London: Jonathan Cape 1972).

³² eg.ECL 39.

³³ Warwick Fox *The Ecologist* 1984 op.cit.

³⁴ *ibid.*

This emphasis on complete interrelationship again falls clearly into the category of Holism I {e}, and is a common feature in most deep ecological writing. Indeed, although there are some differences of emphasis and degree among deep ecologists about holism, certain features seem to be common to all of them. Leaving aside for the present questions about the extension and realization of the self, these features can be presented as follows.

1) The fundamental idea that all is ultimately one, and that the 'whole' or 'total' view is the best. A rejection of so-called 'reductionism' necessarily follows.

2) The description of the world as a metaphor of ecology (the web of life) or a metaphor of physics (the field of energy) which not only interlinks everything, but which actually constitutes all that is. With this as a basis, it is common to describe individual organisms as 'knots in the biospheric web' or 'centres of interaction in one great field'. This 'web' or 'field' of relations is in a constant state of flux, or as Fox puts it 'characterized by process, dynamism, instability, novelty, creativity, etc'.³⁵

3) Since individuals are 'knots' or 'centres of interaction', their solidity disappears. The 'notion of the world as composed from discrete, compact, separated things' should be abandoned.³⁶

4) A doctrine of internal or intrinsic relations is proposed. Naess describes this in 1973 as 'An intrinsic relation between A and B, so that without the relation, A and B are not the same things'.³⁷ This is sometimes expressed as 'everything being constituted by its relationships'. Rather than the world being made from objects which are fundamentally independent, but which may touch one another externally and so cause an effect,

³⁵ Fox 'The Intuition of Deep Ecology' op.cit.

³⁶ *ibid.*

³⁷ This analysis is virtually identical to that found in Bradley *Appearance and Reality* (Oxford: Oxford University Press 1946) and McTaggart *The Nature of Existence* (Cambridge: Cambridge University Press 1921).

it is the relationships which fundamentally constitute what is. Relationality is more fundamental than independence.

5) Following from this, there is a rejection of the categorization of 'objects and subjects'. While the subjective and the objective as perspectives still exist, they are not conceived of as properties pertaining to some items and not others.

6) No ontological divide between humans/nonhumans, spirit/matter, soul/body. 'The two aspects of nature, those of extension and thought are both complete aspects of one single reality'.³⁸

7) The world is seamless and cannot be divided into independent parts, neither can parts of the world be analyzed in isolation from the whole.

If this analysis is considered in the light of Phillip's categories, all the elements of Holism I: parts {a} to {e} are represented here. In addition, there is a strong suggestion of Holism 2: that even if knowledge of the whole is obtained, it cannot be explained by examining its parts and their interactions.

However, it will be noted that deep ecology also stresses an element not prominent in Phillip's account: the rejection of categorizing subjects and objects. This is not a necessary stress of holistic thought (although it could be said that, by its emphasis on interconnectedness, it leans in such a direction). It is, however, significant to deep ecological thinking.

Holism and Process Thinking

Process philosophy is frequently described as holistic and organic, the two terms being closely associated. Whitehead himself, as we have seen, explicitly describes his philosophy as a philosophy of organism . This immediately sounds like Holism 1{e}

³⁸ Naess p.419 'Spinoza and Ecology' op.cit.

establishing a similarity between process thinking and deep ecology, (which could well be described as an organic philosophy). It is important, however, to note that a coincidence of vocabulary between process thinking and deep ecology does not necessarily mean a coincidence of conceptuality. It is necessary to explore further what Whitehead means by organism in order to see how similar his philosophy might be to deep ecology.

For Whitehead, the world should be 'founded upon the ultimate concept of organism'.³⁹ Actual occasions can be described as organisms; indeed, 'Biology is the study of the large organisms, while physics is the study of the small organisms'.⁴⁰ Like deep ecologists, Whitehead supports this organismic understanding of actuality by reference to his understanding of relativity and quantum physics, both new concepts when Whitehead was writing (indeed, not existing until virtually the conclusion of Whitehead's mathematical and scientific career). He argues that his philosophy of organism is compatible with the discoveries of modern physics, a conviction which frames his methodology in *Science and the Modern World*. As with deep ecologists, Whitehead does not say that he *derives* his conclusions from modern science but, like them, sometimes he is very close to so doing. For Whitehead, as a mathematician/mathematical physicist, this is to some degree inevitable.⁴¹

Returning to the earlier 7-point summary of holism in deep ecology will assist in a further comparison with holism in process thinking. The fifth point, the question of subjects and objects, provides a good place to begin, since this lies at the heart of the metaphysics of process thinking, as it does deep ecology.

³⁹ SMW 81.

⁴⁰ SMW 129.

⁴¹ As Dorothy Emmet remarks 'I am constantly conscious that the way in which his mind is working is that of a pure mathematician. I have an uneasy suspicion that [his ideas] probably connote something quite different to someone with a trained understanding of the mathematical ideas involved in them'. Preface to Dorothy Emmet *Whitehead's Philosophy of Organism* (London: Macmillan 1932).

Both Whitehead and deep ecologists cite Descartes (almost universally vilified in environmental philosophy) as affirming the centrality of the subject/object distinction. Descartes viewed the human mind, and God, as the only subjects; everything else was perceived to be an object. This perspective raises two problems for process thinking: firstly that, apart from God, subjectivity is confined to humanity, and secondly that it is seated in the Mind, not in Feeling.⁴² As we have seen, Whitehead attributed subjectivity to all actual occasions; human consciousness is just a peculiarly concentrated form of the experience which is present in all existence, indeed which defines all existence. Further, it is not identified with Mind or thinking; there is no mind or thinking in Whitehead which is separable from feeling or emotion. Thus he can say of Descartes:

(His) structure presupposes that the subject/object pattern is the fundamental structural pattern of existence. I agree with this presupposition, but not in the sense in which subject-object is identified with knower-known. I contend that the notion of mere knowledge is a high abstraction, and that conscious discrimination itself is a variable factor only present in the more elaborate examples of occasions of experience. The basis of experience is emotional.⁴³

As every actual occasion, when coming to be, exercises subjectivity, so, once it is complete, does it become objective - to be 'felt' or prehended by other concreting actual occasions. There are no longer pieces of matter (*res extensa*) which are purely objects - or anything (*res cogitans*) which is purely subject. Subjective and objective perspectives pertain to all that is actual, at different phases of existence. Thus Whitehead has *reinterpreted* the understanding of subject/object to fit with his philosophy of organism, and, with this reinterpretation, 'the subject-object relation is the fundamental structure of existence'.⁴⁴

⁴² Here Whitehead seems to be reacting rather as Schleiermacher against rationalism.

⁴³ AOI 171.

⁴⁴ *ibid.*

How far does this interpretation dovetail with that of deep ecology? Deep ecologists also argue that the traditional understanding of subject/object as divisible categories is obsolete. Callicott, (wearing his deep ecology rather than his Humean hat), argues, for instance, that quantum physics indicates that we cannot escape from subjectivity: '..to make an observation, energy must be exchanged between the object of observation and the observer'.⁴⁵ In other words, there are no 'objects' and 'subjects' but only *interactions*.

Both process thinking and deep ecology seek to undercut the 'mechanistic science' idea of 'subject' 'object'. In fact, both reject dualism of any sort: of subject/object, mind/matter, extension/thought. This is as clear in Whitehead and other process thinkers as it is in deep ecology. Hartshorne comments:

The real difference between mind and matter is not an absolute difference in kind of singulars but a) a relative difference in kind (between high and low forms) of experiencing singulars, this difference falling within Mind in the broadest sense, and b) a difference in kind, not between singular and singular, but between singular and inadequately apprehended group.⁴⁶

There is no divide between mind (meaning subjectivity) and matter. There are merely differing degrees of mind (depending on the strength of the mental pole of the actual occasion) and inanimate objects, which lack mind as a whole, but which are composed from actual occasions with minds. Thus there is no bifurcation in reality. Everything has some degree of animation, even if only in the actual occasions which compose them.

This attack on dualism is one which would be strongly defended by deep ecologists, although for differing reasons. (Many would be unhappy with Hartshorne's suggestion of 'grading' subjectivity - from the most primitive to the human - as was clear in Chapter 2.). Involved in this denial of dualism, for both deep ecology and process thinking, is the

⁴⁵ Callicott p.269 'Intrinsic Value, Quantum Physics and Environmental Ethics' op.cit.

⁴⁶ CSPM 112.

question of interrelatedness and interconnectedness. This has several important aspects: the idea of the 'web' or 'field'; the tendency to dissolve the individual into the web or field; and the doctrine of internal relations.

Here again, some terminological caution is required. Deep ecologists, and their scientific sources such as Capra, argue that 'holism' must be seen in opposition to 'atomism'. This opposition even forms part of Phillip's definition of holism. Here, atomism is interpreted as meaning fundamentally composed from independent elementary solid particles. Yet Whitehead can describe his own philosophy as atomic: 'Thus, the ultimate metaphysical truth is atomism. The creatures are atomic'.⁴⁷ Whitehead means by atomic something rather different: not that the world is fundamentally composed from solid, independent particles, but that it is made up from tiny discrete units - the actual occasions.

Every concurring actual occasion is surrounded by other, perishing actual occasions which it can positively or negativelyprehend. The closeness between past and presently actualizing occasions may be so close as to almost equal identity. Indeed, it is this kind of identity - where a new occasion virtually repeats the content of the old - which creates the enduring objects we recognize. Enduring objects endure because the new actual occasions composing them are indistinguishable in the short term and recognizable in the long term as what they used to be. The old has emptied itself into the new, the past continues to live in the present. This means that Whitehead can envisage a strong connection between an actual occasion in the present and the past:

The data for any one pulsation of actuality consist of the full content of the antecedent universe as it exists in relevance to that pulsation.⁴⁸

This closeness also applies to the future, which, says Whitehead:

⁴⁷ PR 35.

⁴⁸ MT 121.

..lives entirely in its antecedent world. Each moment of experience confesses itself to be a transition between two worlds, the immediate past and the immediate future...Also, this immediate future is immanent in the present with some degree of structural definition.⁴⁹

Thus process thinking envisages very close *temporal* interconnectedness: there are no abrupt discontinuities between past and present, present and future (a view common to other organic political philosophers, such as Richard Hooker). However, this temporal interconnectedness is not identical with the interconnectedness of deep ecology, where the emphasis is far more on interconnectedness over space, not time. This is an important distinction echoing that between 'successive' and 'co-existent' laws of society suggested by Mill in *The Philosophy of Scientific Method*.⁵⁰ Process interconnectedness is primarily temporal or successive, while deep ecology envisages interconnectedness as simultaneous or co-existent. One might also call these 'vertical' and 'horizontal' interconnectedness (as Phillips, in another context).

Whitehead insists that simultaneous actual occasions are independent of one another.⁵¹ Actual occasions can only 'feel' or 'prehend' perished actual entities which are complete or which have reached their satisfaction:

It is the description of contemporary events that they happen in causal

⁴⁹ AOI 187.

⁵⁰ 'The empirical laws of society are of two kinds: some are uniformities of co-existence, some of succession..' J.S.Mill p.347-8 *The Philosophy of Scientific Method* E.Nagel (ed.) (New York: Hafner 1950).

⁵¹ Hartshorne considers this lack of contact between simultaneous occasions to be very 'troubling'. He comments in 1972: 'Can it be without qualification true that contemporaries are causally independent? Since they are all immanent in God and he immanent in them, must they not be immanent in one another?' (Hartshorne, p.87 *Whitehead's Philosophy* Lincoln: University of Nebraska Press 1972). By 1984, he is more favourably disposed to the idea: while referring to several possible explanations of influence of contemporary actual occasions on one another, he leaves the field open. ('Whitehead's Concept of Prehension' in Charles Hartshorne *Creativity in American Philosophy* Albany: SUNY 1984.) If influence between contemporaries is accepted - although it is most emphatically not a Whiteheadian concept - then this would bring process thinking and deep ecology still closer.

independence of each other. Thus two contemporary occasions are such that neither belongs to the past of the other.⁵²

Temporal interconnectedness cannot apply to simultaneous occasions. This by necessity has an impact on spatial interconnectedness, because at any one instant of time, all the occasions which are actualizing are actualizing independently of one another. There is no connection between them - in other words no immediate spatial connection, as Whitehead continues:

Indirectly, via the immanence of the past and the immanence in the future, the occasions are connected. But the immediate activity of self-creation is separate and private, so far as contemporaries are concerned.

What form does this immanence take? Two contemporary occasions, A and B may have prehended the same preceding actual occasion, C, and therefore, the occasion is, objectively, within both of them:

Ĉ is objectively immortal in both A and B, thus in this indirect sense, A is immanent in B and B is immanent in A. But the objective immortality of A does not operate in B, nor does that of B operate in A. As individual actual entities, A is shrouded from B, and B is shrouded from A.

It is this indirect immanence which characterizes spatial interconnectedness for Whitehead. At any one instant of time, there is only indirect interconnectedness between concurring actual occasions.

Whilst in a frozen instant of time it is the discrete nature of actual occasions which is foremost, this is a narrow, if very important perspective. At a broader level, of longer timespans, Whitehead can suggest a very intense kind of interconnectedness. The individual nature of the actual occasions does not mean their independence from all other occasions, but only contemporary ones. Whitehead indeed goes so far as to say 'Whenever we think of some entity, we are asking "What is it fit for here?" In a sense,

⁵² AOI 190.

every entity pervades the whole world'.⁵³ To unpack this a little, we must consider what Whitehead understands by *internal relations*.

Phillips considers that a Hegelian doctrine of internal relations underlies all expositions of Holism I & 2, and is the most important constituent of a philosophy of holistic organism. He uses as an example F.H Bradley in *Appearance and Reality*. Bradley's doctrine of internal relations in fact resembles Whitehead's in some respects although not in all.⁵⁴ Whitehead's most detailed exposition of internal relationality is found in *Science and the Modern World*:

The theory of relationships between events at which we have now arrived is based first upon the doctrine that the relatedness of an event are all internal relations, so far as concerns that event, though not necessarily so far as concerns the other relata.⁵⁵

The emptying of actual occasions into one another means that each actual occasion is, to some extent, determined by the actual occasions with which it is surrounded. Without them, the concreting actual occasion would take a very different form. Thus Whitehead can say that if an occasion is extracted from its environment, its very existence would be destroyed. It is this formulative nature of relationships which makes them internal. Internal relationships have the power to affect and to change - in this case, to form - those who are involved in them. Every concreting occasion is involved in a large number of internal relations with perished occasions which it is positively prehending.

⁵³ PR 28.

⁵⁴ Whitehead has a very ambiguous attitude towards Bradley. Despite periodic penetrating criticisms of Bradley, he comments that 'my final outcome is, after all, not so greatly different' PR xiii. Lewis Ford argues that in the early 1920s Whitehead himself held Bradleyan views on internal relations and that he only developed his distinctive interpretation later. Certainly, by the time Whitehead wrote *Process and Reality*, his views on the asymmetricality of internal relations were developed; and, as I made clear in the Introduction, it is with Whitehead's mature ideas that I am predominantly concerned.

⁵⁵ SMW 147.

However, Whitehead's explanation of internal relationships makes a further, key point: 'not necessarily so far as concerns the other relata'. The 'other relata' are the objective actual occasions being prehended by the actualizing occasion. They are complete; their subjectivity has perished, they cannot be changed by their relations. All relations are external to the objective actual occasion, and internal to the concreting actual occasion. That is to say, the internal relations are one way - into the future. They are not *mutually* determined by one another.

This illustrates a significant difference between Whitehead's and Naess' view of internal relations. Naess defined an internal relation as 'An intrinsic relation between A and B so that without the relation, A and B are not the same things'.⁵⁶ These are reciprocal internal relations; Whitehead's are emphatically not reciprocal. If A is the complete, objective actual entity, it remains unaffected by its prehension by B, the concreting actual entity.

This difference again stems from the process emphasis on time over space. Naess envisages simultaneous interactions from different locations; Whitehead envisages temporally staggered interactions from identical or surrounding locations. Internal relations in process thinking are successive, not simultaneous; asymmetrical, rather than symmetrical. It is the symmetrical, mutual nature of internal relations in much holistic philosophy - including deep ecology - which Hartshorne blames for its general lack of acceptance. The process understanding of internal relations, he argues:

avoids the mysticism of wholes acting on their very own parts, a notion which would imply unrestricted and symmetrical internal relations between every part and every other, dissolving all definite structures into ineffable unity, a consequence which has caused clear thinkers to turn away from "holistic" or "organicist" doctrine.⁵⁷

This process understanding of internal relations, according to Hartshorne, allows for the

⁵⁶ Thus Bradley's symmetrical internal relations have more in common with Naess than Whitehead.

⁵⁷ LP 199.

possibility of separation which is explicitly denied in most holistic metaphysics, including deep ecology, and explicitly contradicts Holism I {3} (that the whole determines the nature of its parts). Indeed, this discreteness at the heart of process thinking limits its holism, certainly in Phillips' terms; one may perhaps describe process thinking as a 'restricted holism I'.

What effect does this have on the degree of interconnectedness in Whitehead's philosophy vis a vis that of deep ecology? It suggests interrelatedness of a different kind, although not necessarily of a lesser intensity. It allows Whitehead to state:

Thus, as disclosed in the fundamental essence of our experience, the togetherness of things involves some kind of doctrine of mutual immanence. In some sense or other, this community of the actualities of the world means that each happening is a factor in the nature of every other happening. The whole antecedent world conspires to produce a new occasion.⁵⁸

Mutual immanence is an expression which one might find in Holism I and certainly in the work of deep ecologists; but here again there is a terminological difference. Whitehead refers to the past and future being immanent in the present; deep ecology to things which presently exist being immanent in one another.

This has important implications for the language of 'web' or 'field', and the tendency to dissolve the individual into the web in process thinking. Again, terminological caution is required here. In process thinking, 'individual' usually refers to the *actual occasion*, not to the human or nonhuman individual. To call a human being 'individual', is to speak with a high degree of abstraction. A human individual is more fundamentally seen as a society.

Naess also uses the idea of 'abstraction', or 'superficiality':

The total field model dissolves not only the man-in-environment concept, but every compact thing-in-milieu concept - except when talking at a

⁵⁸ MT 225.

superficial or preliminary level of communication.⁵⁹

For Naess, talking about objects is abstract, not because they are really societies of actual occasions, but because objects cannot be separated out from their environment. Naess wants to escape from the idea of 'fixed, solid points' altogether, whilst 'retaining the relatively straightforward, persistent relations of interdependence'.⁶⁰ Whitehead also rejects the concept of fixed solid points; but retains ultimate units, the actual occasions, which while neither exactly fixed nor solid, form the discrete elements at the base of his system. They cannot be reduced entirely to their relationships, because while these relations have, as I have said, a formulative part in their concretion, ultimately the freedom of the occasion determines its shape. The way in which the occasion decides is *not* entirely governed by its relationships.

Whitehead and Naess do, none the less, have something significant in common here: the treatment of the individual in its more usual sense: the enduring object, the plant, animal or human. The disjunctive, distinct nature of the individual is weakened. For Whitehead, the individual becomes a society in the midst of other societies, albeit a closely knit one; for Naess, the individual dissolves into a web of interactions.

It remains to consider, briefly, the process response to Holism 2, which, while not explicit in deep ecological writing, would probably not be refuted by it. Could process thinkers accept that if one has the whole, it could not be explained by knowledge of its individual constituents and their interactions?

The most obvious whole - in fact the only whole which is not, at some level, a society (apart from God, who is described as we have seen, as an actual entity) in process thinking is the actual occasion. From this perspective, one can reframe this statement of Holism 2 'Can the new actual occasion be explained by knowledge of its constituents and their interactions?' It is at this point that process thinking introduces a fresh

⁵⁹ SDM 80.

⁶⁰ ECL 50.

dynamic. While eternal objects (for Whitehead, if not Hartshorne) and objective actual occasions are vital constituents of the concreting occasion, the way in which the entity, as a whole, is finally actualized is dependent on its exercise of freedom. This certainly could not be predicted (Holism 1); but does it suffice as an explanation (Holism 2)?

This again brings us to the question of the aim of the occasion, which was examined in Chapter 1. Can the choice of an occasion be explained, or is it purely arbitrary or irrational? Whitehead, while emphasising that an occasion is more than the sum of its parts,⁶¹ (Holism 1,(b)) certainly suggests that one could explain why an occasion made the choice it did.⁶² If this is the case, process thinking would not support Holism 2.

By comparing the holism of process thought to that of deep ecology, I hope to have already indicated some of the complexities of their relationship. These are further complicated when the concept of the extended self is taken into consideration.

THE EXTENSION AND REALIZATION OF THE SELF IN DEEP ECOLOGY AND PROCESS THINKING

As early as 1974 in 'The Glass is on the Table', Naess expounds the concept of the extended self, and it is likely that this philosophy lay behind his formative paper on deep ecology in 1973. As with holism, at the root of Naess' concept of the extended self is the intuition that 'all things are ultimately one'. This intuition is interpreted by Naess in Spinozan terms: there is ultimately only one substance, God or Nature, of which everything which exists is a manifestation. This unity of substance immediately works to undercut the idea of radically different beings, or selves. Ultimately, all beings are one; their natures cannot be as disjunctive as we (in the West) are inclined to imagine. The 'Western' self is too narrowly constituted; there are, Naess argues, several selves:

⁶¹ PR 140. 'Hume discovered that an actual entity is at once a process and is atomic; so that in no sense is it the sum of its parts'. This terse remark suffices to make the point.

⁶² eg.PR 87.

The ego, the self with a small "s" and then this great Self, the Self with a capital "S", the atman⁶³...the power of which gradually increases. You might still say the limits are those of your body, but there you would have to include units of your central nervous systems such as, for instance, those corresponding to the Milky Way and the Andromeda nebula in so far as you have sensuous or other bodily interactions with them...⁶⁴

Naess contrasts the idea of the self as identified with the human body and its traditional 'selfish' desires, to a broader self which stretches far beyond the individual, ultimately encompassing the vision that all is one and hence that one's self is everything and everything is in one's self: 'Humans can develop in such a way that in a sense, their selves include the other selves in a certain way'.⁶⁵

Here, Naess envisages a kind of physically extended self: that inasmuch as one's body interacts with things as far away as the Milky Way, they are part of one's greater self. One cannot confine oneself to one's bodily limits in a strict sense because of physical interaction with what is outside the body. This develops the interconnectedness which features so strongly in Naess' philosophy: since the individual is physically dissolved - 'biologically we are just centres of interaction in one great field', as Naess tells Ayers - it is physically impossible to draw boundaries of self.

However, to suggest that this was all that Naess meant by his concept of the extended self would be misleading. Naess also describes his concept of self as: 'something like: if I hurt you, I hurt myself. Myself is not my ego, but something capable of vast development...'. This is a kind of psychological identification with other selves so that

⁶³ From his use of the term Atman, it is clear that Naess is here influenced by Indian religion. He acknowledges a debt to Mahayana Buddhism in his paper 'Through Spinoza to Mahayana Buddhism or Through Mahayana Buddhism to Spinoza?' *Spinoza's philosophy of Man: Proceedings of the Scandinavian Spinoza Symposium 1977* ed. John Wetlesen (Oslo: University of Oslo Press 1978) p.136-158.

⁶⁴ Naess p.34 'The Glass is on the Table' op.cit.

⁶⁵ *ibid.*

their pain becomes ours,⁶⁶ and hence, in Naess' terminology, their selves part of our self. If we concentrate on developing our greater self, we can come to identify, and feel with, not only all other human selves, but with the Oneness at the basis of all that is. Naess' concept of the extended self, and his twin concept of self-realization, are most fully developed in *Ecology, Community and Lifestyle*. Here, again based on his intuition that all life is ultimately one, he urges identification with all that is: 'by identifying with greater wholes, we partake in the creation and maintenance of the whole. We thereby share in its greatness'.⁶⁷ The greater our identification with all that is around us, the greater our self-realization. In the light of this understanding of self, Naess places self-realization as the most basic norm of his system.⁶⁸ Self-realization is greatest when those with whom one's self is identified are most realized too. As Naess comments 'The higher the Self-realization attained by anyone, the more its further increase depends upon the Self-realization of others'. This leads him to advocate 'Self-realization for all living beings'.⁶⁹ Thus, from the concept of the extended self, Naess has derived an imperative to allow and even encourage the flourishing of all life:

The greater our comprehension of togetherness with other beings, the greater the identification and the greater care we will take. The road is also opened thereby for delight in the wellbeing of others and sorrow when harm befalls them. We seek what is best for ourselves, but through the extension of the self, our 'own' best is also that of others. The own/not own distinction survives only in grammar, not in feeling.⁷⁰

⁶⁶ Rather as Charles Williams' doctrine of coinherence: the capacity to literally endure another's pain. See, for instance, *Descent into Hell* p.100-101 (London: Faber & Faber 1939.)

⁶⁷ ECL 173.

⁶⁸ ECL 197. Fox qualifies this use of the word 'norm': it is not any kind of moral 'ought' but 'the overarching or most generally formulated positive goal or value within his own attempt'. (TTE 220) Thus, it is not binding on all, but only as part of Naess' system.

⁶⁹ ECL 197.

⁷⁰ ECL 175.

Naess' concept of the extended self encompasses both physical and psychological identification with what lies outside the immediate human body. The self is in a constant state of change and process,⁷¹ and may reach ever greater depths of self-realization, achieved by ever increased identification with others and with their realization. Ultimately, all selves are one, and our perception of division between them is due to our limited perspective.

This theme is taken up by more recent work in the deep ecology movement. Alan Drengson, for example, comments: '[Deep ecology] directs us to develop our own sense of self until it becomes Self, that is until we realize through deepening ecological sensibilities that each of us forms a union with the natural world and that protection of the natural world is the protection of ourselves...'.⁷² Protection of the nonhuman world thus can be justified as a protection of one's Self. Destroying the natural environment means destroying part of oneself or preventing oneself from reaching the fullest possible self-realization.

Warwick Fox is the most prominent exponent of extended self theory in deep ecology, regarding it as deep ecology's 'defining characteristic'. In his early articles, Fox's emphasis falls on holism and explanations of the characteristics of holism which we have already investigated. It is Fox's insistence on the dissolution of the boundaries between any individual and her environment which forms the basis of his concept of the extended self, or at least the physical aspect of it. The world is fundamentally one.

As with Naess, on whom Fox is partially dependent, the extended self is not purely conceived in a physical sense. Fox opposes destruction of the natural world not because of its usefulness to us, or because of its value in or to itself, but because 'it is part of

⁷¹ As is made clear in Naess' paper 'Gestalt Thinking and Buddhism'.(Unpublished).

⁷² Drengson p.86-87 Review of Devall and Sessions, *Deep Ecology Environmental Ethics* vol 10 no.1 1988.

My/Our wider self; its diminishment is My/Our diminishment'.⁷³ This suggests a psychological interpretation of the extended self, one which is developed in his later *Towards a Transpersonal Ecology*. Drawing on the work of transpersonal psychologists, Fox argues, like them, that 'trans' bears the meaning 'beyond' and so 'transpersonal ecology' means 'psychological identity with the ecological world beyond the confines of the person' or more particularly, beyond the selfish individual ego.⁷⁴ Fox urges deep ecologists to 'realize one's ecological, wider or big self'.⁷⁵

To support this contention, Fox turns to physical field theory, using it as an image for the human psyche. As with the natural world, the psychological self has been wrongly conceived as narrow, atomistic or particle like. Our image of the self must change to that of a more field-like or web-like picture, which can encompass all that is. The key to this transformation for Fox, as Naess, is identification. Fox looks at modes of identification more carefully than Naess, suggesting that there are three different varieties: personal, ontological and cosmological. Primary for Fox is ontological identification (identification with what exists, that which stands out of nothingness) and cosmological identification (identification with the All, the great underlying oneness of the cosmos). These must come prior to personal identification and provide a context for it. Personal identification suggests the priority both of those to whom we are closest and of the most personal beings - ie, humans and mammals - and has no place for identification with nature in a wider sense without significant anthropomorphism. Ontological and cosmological identification, on the other hand, allow identification with everything that exists: 'impartial identification with all entities'.⁷⁶ Fox does add, as a coda, that he is not intending to oppose personal identification, but to shift emphasis

⁷³ Fox p.71-72 'Approaching Deep Ecology: A Response to Richard Sylvan's Critique' op.cit.

⁷⁴ While drawing vocabulary from transpersonal psychology, Fox does not advocate its methodology wholeheartedly, considering it to be anthropocentric in expression, if not in essence.

⁷⁵ TTE 198.

⁷⁶ TTE 268.

from the personal to the cosmological and ontological. That is to say 'ontologically and cosmologically based identification are seen as providing a context for personally based identification'.⁷⁷

Fox, like Naess, links this closely with self-realization. Cosmological and ontological identification with all means, according to Fox, the desire to 'promote the freedom of all entities to unfold in their own ways; in other words, actions that tend to promote symbiosis'.⁷⁸ Self-realization renders morality superfluous since, once one has identified oneself with all that is, the desire for self-realization dovetails with the desire of others to unfold in their own ways.⁷⁹ Thus there is no conflict and no need for moral guidelines.

For deep ecologists then, the extended self and self-realization are key metaphysical concepts. With their approach in mind, we can consider whether the extension and realization of the self have a role to play in process metaphysics. To explore this, it is first necessary to examine process conceptions of the self.

Process Thinking about the Extension and Realization of the Self.

Central to process thought are the actual occasions, of which everything that exists including human beings are essentially composed. Whitehead considers that 'the life of man is a historic route of actual entities which...inherit from each another'.⁸⁰ The enduring personality is: 'the historic route of actual occasions which are severally dominant in the body at successive instants'.⁸¹

⁷⁷ *ibid.*

⁷⁸ *ibid.*

⁷⁹ TTE 218.

⁸⁰ PR 89

⁸¹ PR 119.

It is the jurisdiction or control of the dominant actual occasion which creates the boundary of the individual human self. It generates unity within the individual: a 'special strand of unity within the general unity of nature'.⁸² That which is beyond the jurisdiction of the dominant occasion is beyond the body. However, the boundary is not tightly delimited. Whitehead leaves room for considerable movement and change. At a simple level, this is true of all that exists, even those enduring objects which lack a dominant actual occasion. Whitehead insists, for instance, that while we think something like Cleopatra's Needle is a solid and enduring object, it is, in fact, an event or a society of events, subject to change:

A physicist who looks on that part of the life of nature [Cleopatra's Needle] as a dance of electrons, will tell you that daily it has lost some molecules and found others...Where does Cleopatra's Needle begin, and where does it end?⁸³

If this is true of a 'democratic' society of actual occasions, lacking in a presiding occasion, it is also true of a 'monarchical' society such as a human being. Physically, the degree of interaction between individual humans and the world around them is immense. Constantly, new elements enter the body and old ones pass out. In Whiteheadian terms, one might say that, constantly, new concurring occasions largely formed by prehending perished occasions from beyond the jurisdiction of the presiding occasion, are coming within the control of the presiding occasion. Similarly, other actual occasions, formed largely by prehending perished occasions from within the jurisdiction of the presiding occasion, are passing beyond its control.

This constantly changing pattern makes it impossible to physically confine the individual human self in process thinking. As early in his philosophical career as 1919, Whitehead comments:

⁸² AOI 183.

⁸³ Whitehead p.120 *The Concept of Nature* (Cambridge: Cambridge University Press 1920).

The functions of the body shade off into those of other events, so that for some purposes, the percipient event is to be reckoned as merely part of the bodily life and for other purposes it may even be reckoned as more than the bodily life. In many respects, the demarcation is purely arbitrary, depending where on a sliding scale you choose to draw the line.⁸⁴

This inability to confine the physical human self is closely related to his approach to the psychological human self. Whitehead asserts that we have a peculiar 'intimacy of association' with our own bodies; they are for us more definite and distinct than the rest of the natural world. Having said this, the feelings which we have for parts of our body, of pain, perhaps, or pleasure, are 'the feelings of derived feelings'. We are not immediately conscious of pain; rather, we feel the pain, for instance, of the actual occasions constantly coming to be in the stimulated or damaged nerve endings of our body. While 'feeling the body as functioning' is still our most primitive perception, it is not different *in kind* from feeling the rest of the world: the body is only a peculiarly intimate part of the world.

These factors certainly open the possibility of an extended self in process thinking. Firstly, the boundaries of the physical self with the rest of the world are very loosely drawn. Secondly, there is no privileged immediate identification with, or feeling of, aspects of one's own body which is qualitatively different from one's ability to identify with or feel the world outside the body, or beyond the jurisdiction of the presiding actual occasion. Feeling, or even identifying with, that which lies outside the body remains perfectly possible. Indeed, in some sense it is inevitable.

As we have already seen, according to Whitehead, any actual occasion 'has in its nature, a reference to every other member of the community so that each unit is a microcosm, representing in itself the entire, all inclusive universe'.⁸⁵ Thus, although the concurring occasion negatively prehends some parts of the universe, and grades others according to relevance, the entire universe is necessary for each occasion to become

⁸⁴ Whitehead p.107 *The Concept of Nature* op.cit.

⁸⁵ AOI 91.

what it is. This has considerable implications for the idea of the extended self. In one sense every actual occasion has an extended self, in that the entire past universe has gone into its composition. This is, of course, also true of the human being which, as a society of actual occasions, is intensely connected with the past world. The entire past world has made the self what it is. The distinction of the past of the self from the past general world, and the present of the self from the past general world, becomes blurred, and the separation of self from world more difficult.

This constant coming to be and perishing of the actual occasions composing the self has a further important implication: the undercutting of any idea of a permanent or unchanging human self. At any one time a person is the society of concurring entities which are coming to be at that time, and nothing more persistent; the person is continually renewed. The expression 'personal sequence' is therefore preferred to that of 'person'.

Thus process thinking weakens a strong understanding of the self in two ways. Firstly, the *unity* of the self is fragmented into a society of occasions (albeit ones which are closely interlocking) and consciousness is thus seen as narrowly selective. Secondly, the *permanence* of the self is undercut, with the person becoming a constant flux of actual occasions. The concept of a substantial, permanent, united self is, according to process thinking, both an abstraction and a simplification of reality.

This leads process thinkers to interesting perspectives on the concept of an extended self. Hartshorne argues that it is not only the past of one's self which merges into the more general past; it is also the future of one's self -or preferably one's personal sequence - that merges with the more general future. Thus it becomes impossible to separate one's own future self, and, as a corollary, one's own future interests, from the general future and general interests. Alongside this blending of the particular and general there is also the fact that since the 'self' is a constantly changing set of occasions, it becomes difficult for self-interest to exist at all. As Hartshorne explains:

Any future self, call it mine or not mine, which can benefit from my

present act will be numerically a new and distinct unit of concrete reality. Hence, self interest has no privileged metaphysical base whatsoever.⁸⁶

Whatever happens in the future, whether or not it is perceived to be part of one's own personal sequence, is something quite new. Any act to benefit the future must be altruistic, since it cannot benefit one's present self, that is, the society of actual occasions currently constituting oneself. Thus Hartshorne can go on to say 'We can love the other as ourselves, because even the self, as future, is also another'. In this sense, by limiting the self, Hartshorne has also extended it. The future is both not oneself and entirely oneself.

Thus process thinking suggests an understanding of the self based on inner plurality and a kind of ephemerality. This leaves the way open for some sort of concept of an extended self - at the most fundamental level, a physical one. This physically extended self has both similarities with, and differences from, Naess.

Naess explicitly comments that his understanding of the underlying 'oneness' of existence derives from Spinoza. By looking at Whitehead's remarks on this aspect of Spinoza, we may discern how close Naess' and Whitehead's concept of the extended self might be. Whitehead comments that 'the philosophy of organism is closely allied to Spinoza's scheme of thought'.⁸⁷ However, he claims to *invert* Spinoza: 'Spinoza bases his philosophy upon the monistic substance, of which the actual occasions are inferior modes. The philosophy of organism inverts this point of view'.⁸⁸ Where Spinoza emphasizes the priority of the underlying Oneness, of which the occasions are but modes, Whitehead would emphasize the priority of the Many, of which the One is composed. 'The World', he says 'is primordially Many'.⁸⁹ This multiplicity at the heart

⁸⁶ CSPM 191.

⁸⁷ PR 7.

⁸⁸ PR 81.

⁸⁹ PR 349.

of existence contrasts with Naess as well as Spinoza, founding the extended self on a different principle.

Despite this, the temporal interlocking of the Many in Whitehead means that, in practice, there is considerable similarity between process thinking and deep ecology. The absorption of the past into the present and of the present into the future leads to a temporal oneness in process, similar, in effect, to the spatial oneness of deep ecology. The extended self across time becomes as the extended self across space. Both process and deep ecology dissolve the human self - deep ecology into the One, process into the Many. While these may seem to be diametrically opposed philosophies, they are identical in their result - the undercutting of a strong concept of an independent individual self. The physical self becomes more diffuse, and thereby extended.

What then of the response of process thought to 'psychological identification' rather than the physical extension, in deep ecology? This is not a subject which process writers have considered, unlike the extension of the physical self. As an obvious beginning one might say that because of the nature of the self in process thinking, the possible 'fields of identification' shift. That is to say, if humans become aware of their own inner complexity, their contingency and interdependence with the world around them; the temporary nature of their current self, and the fact that their own future self is another self, then the possibility of extended identification is increased. In other words one could argue that recognition of the extended nature of the human self might lead to identification with an extended self. Whitehead himself hints at such an identification:

In fact the world beyond is so intimately entwined in our own natures that unconsciously we identify our more vivid perspectives of it with ourselves. For example, our bodies lie beyond our own individual existence. And yet they are a part of it. We think of ourselves as so intimately entwined in bodily life that man is a complex unity - body and mind. But the body is part of the external world - continuous with it. In fact it is just as much nature as anything else there - a river, a mountain or a cloud.⁹⁰

⁹⁰ MT 29-30.

Here he reinforces his assertion that the human body is continuous with the natural world and that our natures are inextricably linked to our bodies, with which we identify. It is but a small step to move from this identification with the body (which is continuous with the rest of the natural world) to identification with the natural world (which is continuous with the body). The idea is certainly implicit in Whitehead's remarks. More explicit, perhaps, are the remarks of Cobb and Griffin:

The environment that is the true body would extend beyond it to all human beings and all creatures. The sense of mutual participation with all life and even with the inanimate world would radically alter the way in which we treat the environment...When we have existentially realized that we are continuous with the environment, that the environment is our body, then we will find new styles of life appropriate to that realization.⁹¹

Here 'the sense of mutual participation' is very close to the idea of psychological identification. In that Cobb and Griffin mention the inanimate world, there is a resemblance to Fox's cosmological and ontological identification: this participation goes beyond the personal, as, perhaps, Whitehead's mention of rivers, mountains and clouds. There is, then, considerable evidence to suggest that process thinking, physically at least, has a concept of the extended self similar to that in deep ecology. Does it also have a concept of self-realization?

Self-realization, in the context of the actual occasion, is vital in process thinking: it is the ultimate fact of facts'.⁹² It carries several nuanced ideas. First, realization means actualization, the process of coming to be. Whitehead frequently speaks of the realization of eternal objects, meaning their being brought into being from abstraction by actual occasions when they concreate. A second nuance is that of being fulfilled, of 'being realized', becoming what the occasion chooses to be, without hindrance. This self-realization, or satisfaction, is the attainment of value.⁹³ As was made clear in

⁹¹ Cobb and Griffin p.117 *Process Theology: an Introductory Exposition* op.cit.

⁹² PR 222.

⁹³ SMW 114.

Chapter 1, the fullest self-realization which an actual occasion can achieve is maximum harmonious intensity of experience, taking into account the effects of its realization on other, future actual occasions. The aim should be, of course, at generating total maximum harmonious and intense experience for God rather than maximum individual self-realization, even if this means the sacrifice of experience for the occasion itself.

Moving beyond the scale of individual actual occasions to societies of occasions, in particular to the human being, similar principles apply. The individual human is encouraged to seek self-realization. However, Whitehead does not interpret this in Hobbesian fashion, as the individual human realizing herself at the expense of others. Rather, he identifies individual good/self-realization with social and cosmic good. Self-realization, even on the human level is not a competitive activity; true self-realization is that which looks to maximum general good in the future, rather than to the projected future interests of the individual (which, as we have seen, are really those of another in any case). Self-realization for Whitehead is the aim at maximal future good of the cosmos.

This idea is not explicitly linked with that of the extended self in process thinking, although there is a natural connection. Whitehead, for example, comments:

It is the importance of others which melts into the importance of the self. Actuality is the self-enjoyment of importance. But this self-enjoyment has the character of the self enjoyment of others melting into the enjoyment of the one self.⁹⁴

'Self-enjoyment' as a concept is virtually identical with 'self-realization': the pleasurable experience of becoming actual.⁹⁵ But self-enjoyment, self-realization, cannot be achieved in isolation. It inevitably involves the self-enjoyment of others.

⁹⁴ MT 161.

⁹⁵ Becoming actual is always a pleasurable experience in Whitehead; all experience is valuable; evil is measured by degrees of value - value which is less than it might otherwise have been. The issue as to whether this is a satisfactory explanation of evil is too large to be debated here.

Thus, the concept of the extended self in process thinking ties in very closely with self-realization *in its broadest sense*: where all that exists, or will exist, is a part of oneself.

Finally, then, we must consider how the concept of realizing the self in process thinking compares with that in deep ecology. Since process thinking begins at the level of the actual occasion, rather than that of the human person, it inevitably has a somewhat different focus from deep ecology. Self-realization in process thinking is primarily concerned with the way in which an occasion concretes. However, there are extensive initial points of contact even here between process thinking and deep ecology.

The actual occasion itself cannot, due to its lack of sophistication, *psychologically* identify with other actual entities; it is very clearly discrete and therefore not *physically* identical with them. It is these two kinds of identification which, in deep ecology, mean that self-realization is extended self-realization. In process thinking, at the level of the actual occasion, the lure of God performs this function. It is this lure, providing the initial aim, which means that each concreting occasion takes into account (or rather, is able to take into account, since it may choose not to do so) the interests of future occasions. Thus, for process thinking, as deep ecology, self-realization is that which is best overall, rather than best for the 'narrow' self. This is also true on the level of the human being, for Whitehead, as for deep ecologists. At the human level psychological identification is also possible.

One significant difference has, however, been glossed over here - a difference generated by the presence and role of God in the process system. For deep ecology, self-realization means the desire for realization for all. In process thinking, self-realization, both at the level of the occasion and at the level of the human self, means the desire for maximum realization of the consequent nature of God. In other words, in a strange inversion, ultimate realization for process thinking aims at realizing the One (the consequent nature of God) while ultimate realization for deep ecology is an aim at the realization of the Many (all that 'blossoms and flourishes'). This is of course, an oversimplification, since for deep ecology, the many are all expressions of the One. But the

One is not perceived as an aim for deep ecologists; this is, perhaps, another function of the deep ecology emphasis on extension, in contrast with the process emphasis on temporality.

In a world without 'tragic conflict', to adopt Hartshorne's expression, this differentiation would be abstruse. However, in a world of conflict, the result is that process thinking and deep ecology respond differently, and face different problems. In a situation of conflict between two living beings, deep ecology primarily faces the problem of *adjudication*. If one identifies with both parties equally, as part of one's extended self, and wishes both of them to be maximally realized, how does one judge between them? The process system, in contrast, has a built-in principle of adjudication: that which provides maximum total richness of experience for the consequent nature of God. This raises problems of *justice*, rather than adjudication. Thus metaphysics issues in ethics, both for deep ecology and process thinking; and both approaches have important difficulties.

A CRITIQUE OF HOLISM AND THE EXTENSION AND REALIZATION OF THE SELF IN DEEP ECOLOGY AND PROCESS THEOLOGY.

This critique falls into two major categories: the *methodological* and the *substantial*. A methodological critique, while brief, is the necessary preliminary to a substantial critique; the methodological problem shadows many of the more specific problems of substance.

Methodology

Both deep ecology and process thinking are heavily indebted to certain interpretations of modern scientific investigation; in particular in the field of quantum physics. Both, however, fight shy of claiming to *derive* their ideas from modern science, preferring to speak, for instance, of 'inspiration'. However, there is little doubt that the language of 'scientists' such as Capra has shaped the expression and conceptuality of a significant amount of deep ecology, while Whitehead's own scientific background inevitably

influenced his philosophical work. This raises important questions concerning the use of scientific theory in the construction of philosophical or metaphysical systems. Such uses of science have associated dangers.

First, many scientific theories are open to plural philosophical and sociological interpretation. A good example of this is the scientific concept of evolution.⁹⁶ With the same data, the natural world can be seen to be a jungle red in tooth and claw, or a peaceful harmony of co-operating ecosystems. The fact that such plural interpretations are possible means that extreme caution is necessary when using scientific theory in the construction of a metaphysical system - caution which is rarely exercised. The likelihood of neglecting either competing scientific theories of the same data, or neglecting competing philosophical interpretations of the same theory is very great. This is specifically true of the use of quantum physics in deep ecology. Warwick Fox accepts an apparently oversimplified idealistic Copenhagen interpretation of quantum physics - an interpretation found universally in popular 'alternative' science writers such as Capra and Bohm. In doing so, he neglects opposing scientific theories about quantum physics, such as the many worlds or alternative logic approaches.⁹⁷ He also neglects alternative philosophical interpretations of his preferred Copenhagen theory. Weizsacher, for instance, derives a much more strongly idealistic theme from the Copenhagen interpretation of quantum physics, and uses it to suggest the human mind-dependency of the natural world: an interpretation which Fox would reject.⁹⁸

This is not intended to suggest that either Fox or the Copenhagen theory is necessarily

⁹⁶ These uses of evolution are described by Mary Midgley in *Evolution as a Religion* (London: Meuthen & Co 1985); and by James Rachels in *Created from Animals* (op.cit.).

⁹⁷ I am unqualified to comment on these scientific theories, and am indebted to Richard Sylvan for detailing the alternatives. Sylvan: CWWDE 86-90.

⁹⁸ C.F Von Weizsacher *The History of Nature* (Chicago University Press) as cited by Herbert Marcuse in ch.6 of *One-Dimensional Man* (Boston: Beacon Press 1964).

mistaken; I am in no position to judge.⁹⁹ What is, however, evident is that quantum physics is open to a plurality of theoretical and philosophical interpretations. In this, it seems that quantum physics resembles most scientific theories: often, there is no single, obvious, interpretation, but rather they can be read - politically, sociologically, philosophically - according to the climate of the time or the predisposition of the interpreter.

This 'reading' of scientific theory forms part of a more complex process of 'reading down' and 'reading up' in both deep ecological and process thinking. Whitehead, for example, takes as his starting point human experience. The natural world, in the form of the actual occasions, is interpreted as being composed from something like human experience. This constitutes a kind of 'reading down'. This 'reading down' is followed by a 'reading up' from the actual occasions into human society. Randall Morris makes a similar point:

Not only do I believe that Whitehead considered human societies to exhibit the same principle as other societies, I also hold that he often writes as though an analogy exists between human individuals as a society and the interactions of actual occasions. In other words, human beings, while not of the same ontological status as actual occasions, appear to behave like actual entities in their mutual interactions.¹⁰⁰

Scientific theory (in Whitehead's case, quantum physics) is 'colonized' to support this reading of the natural world. (Indeed, as we saw in Chapter 3, this is also true of Whitehead's treatment of evolutionary theory.) The result of such colonization is Whitehead's contention that:

the world of physics, described in terms of the transference of energy in the electro-magnetic field, has analogous properties to the sensory and emotional elements immediately experienced by us, as he describes the

⁹⁹ Richard Sylvan, however, is prepared to judge, commenting that Capra 'extends the Copenhagen interpretation of quantum theory virtually to absurdity' giving it a 'wild, holistic, and anthropocentric interpretation'. CDE 17.

¹⁰⁰ Morris p.44 op.cit.

physical quanta of energy as primitive throbs of emotional intensity.¹⁰¹

It would not be unreasonable to suggest that Whitehead is using quantum theory to support an interpretation of the world which he already holds for other reasons, much as he used ecological theory to support his understanding of 'co-operation' throughout nature. The problem with this, as with the deep ecological use of quantum theory, is that this is a partial interpretation, neglecting competing alternatives. Scientific theories are selected and interpreted not according to what is most likely to be the case, but according to their adherence to a pre-existing philosophical or political agenda. This need not be a conscious and cynical manipulation; rather a largely unconscious procedure of innate sympathy with scientific theories which reflect (and reinforce) one's own view of the world.

Obviously, this is not an argument that science and philosophy should operate in totally separate spheres; both must, and do, influence the other. A philosophical system which ignored or contradicted accepted scientific conclusions of its age would be both foolish and, one imagines, unpopular (although this argument may be confounded by the persistence of so-called Creationism). Rather, the suggestion here is that, while philosophical systems such as process thinking and deep ecology should not be incompatible with scientific theory, support by or 'inspiration' from such theory should be treated with the utmost caution. Scientific theories can be, and no doubt have been, used as support for any number of alarming political and philosophical structures: extensive eugenic manipulation and even genocide could probably claim some kind of scientific substantiation. When scientists move into the realm of philosophy, or when philosophers use scientific theory to support their arguments, it is surely as philosophers that they should be judged.¹⁰²

¹⁰¹ Mays p.19 *The Philosophy of Whitehead* (Muirhead Library of Philosophy; London: Allen and Unwin 1959) Mays himself, along with many of Whitehead's critics, finds this impossible to accept.

¹⁰² Andrew Brennan is, I think, making a similar point when he comments that 'Physics gives no special support either to idealism or to global holism - these doctrines should be seen for what they are - metaphysical positions that are not open to

The 'reading up' of certain interpretations of quantum physics into the world of normal human perception leads both deep ecology and process thinking into considerable philosophical difficulties. Even if their understanding of quantum physics is correct, the application of it beyond the quantum level is extremely problematic.

Substantial Critique: Holism

The philosophical concept of holism is, of course, not new with deep ecology. The first, and most general, criticism of holistic thinking is its essential impossibility. This is put most concisely by Bertrand Russell, when he commented: 'If all knowledge were knowledge of the universe as a whole, there would be no knowledge'.¹⁰³ This applies directly to point 7 of my characterization of holism in deep ecology, if taken to the extreme: that the world is seamless and cannot be divided into independent parts, neither can parts of the world be analyzed in isolation from the whole. Russell is essentially arguing that if one can only analyze the whole before one can have knowledge, one can never have knowledge (the unstated clause being that one can never know the whole). D.C. Phillips himself argues, in analogous vein, that one could never know any part of the world if one had to know the whole completely, before one could know the part. Sylvan raises a parallel point in his *Critique of Deep Ecology*. Responding to Fox's claim that the perception of boundaries is a 'falling short' of deep ecological consciousness, he argues that, without boundaries, there could be no perception. Perception 'necessarily involves selection and discrimination and hence separation and boundaries'.¹⁰⁴

All of these arguments contend that the very emphasis on undifferentiated wholeness in holistic thought renders it impossible. It is very difficult for unmodified holism (which Sylvan calls 'extreme') to resist this argument: and some of the comments made by deep ecologists certainly sound as if they accept this degree of oneness. Naess' claim that

conclusive proof or refutation' p.7 Brennan *Thinking about Nature* op.cit.

¹⁰³ Bertrand Russell, quoted HTSS 29.

¹⁰⁴ CDE 12.

there are no 'discrete and separable things', (point 3 of my characterization of holism) certainly lends itself to this interpretation. However, when faced with this question, deep ecologists deny that their holism is this thoroughgoing. Sylvan, for example, challenges Naess in his *Critique of Deep Ecology* by asking if Naess believes that there are 'No forests! No wildernesses!' since nothing can be separated from the whole. Naess' response is to say '(Does Sylvan) think that *anyone* can be so silly?'.¹⁰⁵ At the very least, this response suggests that Naess does not intend his earlier words to be taken at face value. In later work, Naess occasionally attempts to qualify his statements about holism:

But the expression "drops in the stream of life" may be misleading if it implies that the individuality of the drops are lost in the stream. Here is a difficult ridge to walk: To the left we have the ocean of organic and mystic views, to the right the abyss of atomic individualism.¹⁰⁶

This statement is obviously intended as protection against the accusation that he is drowning in the 'ocean of organic and mystic views' and to suggest that he, himself, takes some kind of 'middle way' between the two. In fact, this is the only evidence we have that he is not in the organic and mystic ocean, and since this remark runs contrary to the general tone of his work, it is difficult to take seriously.¹⁰⁷ Warwick Fox makes a more concerted attempt to come to terms with this accusation by suggesting that the images of knots in webs, fields of energy and ripples on oceans, *while being perfectly acceptable*, are not his preferred choice. He suggests the image of leaves on trees,¹⁰⁸ thus preserving both interconnectedness and individuality as well as impermanence. Since there are clear boundaries between leaves on trees, which appears to be the very reason why Fox uses the image, we can only assume that he has changed

¹⁰⁵ Arne Naess p.12 *Response to Richard Sylvan's Critique* 1985 (Unpublished).

¹⁰⁶ ECL 165.

¹⁰⁷ Capra, by whom Naess is influenced, actually advocates mystical concepts: p.321 *The Tao of Physics* (London, Wildwood House 1982).

¹⁰⁸ TTE 262. Fox appears to be heavily dependent on Naess' remark about drops in oceans in ECL, although the dependence is unacknowledged.

his mind and modified his holism accordingly.

Process thinking, at least in its expression in Whitehead, is much less easily accused of this lack of differentiation. This is because of the multiplicity which lies its heart. Whitehead and Hartshorne attack dualism of mind and matter not to suggest that there is an undifferentiated whole which contains both, but rather to propose a multiplicity of occasions which have both perspectives.

This is not to say, however, that the problem of undifferentiated wholeness does not touch process thinking. Earlier Whitehead was quoted as saying 'In some sense or other, this community of the actualities of the world means that each happening is a factor in the nature of every other happening. The entire antecedent world conspires to produce a new occasion'.¹⁰⁹

For Whitehead, the whole world is implicated in the production of each actual occasion. Every occasion which ever existed is required for the production of a new occasion. But is there not here a failure to operate boundaries in time, much as deep ecology fails to operate boundaries in space? Is it not possible, and indeed on many occasions desirable, to say that one past event had no bearing on an event that followed it? Process thinking, of course, allows for the possibility of negative prehension: the concreting occasion selects what data it wishes to include, and which to reject, in its actualization. But is this enough? Is it really the case that everything which has ever happened is available to each occasion?

This argument seems to receive broad support from Stephen Ross, who comments (in a remark only obliquely related to his own argument:)

It is fundamental that every occasion prehends other occasions. It is not so clear that every occasion must prehend the entire past world. Remote events in time or space do not appear to be relevant to each other even where the societies to which they belong are relevant. The principle of

¹⁰⁹ MT 225.

perspective [Ross' own interpretation of Whitehead] is compatible with events lost in time, having no relevance at all to the present. Whitehead's theory of experience does not permit this conclusion...¹¹⁰

It is certainly possible to argue that, with respect to the past, process thinking also fails to make the necessary distinctions and to draw the necessary boundaries.

A second crucial criticism of holism is closely linked to the first: that, at root, things are only partially, rather than wholly, interdependent. This constitutes an attack on the concept of internal relations. There seems to be a certain amount of confusion around this question, so it is worth considering in some detail.

The principle of internal relations, that is to say 'an intrinsic relation between A and B so that without the relation, A and B are not the same things',¹¹¹ is a common characteristic of holistic writing. It is also the most commonly attacked. Phillips, for example, makes this his most basic criticism of holistic thought:

A thing can still be the same thing when one of its characteristics is altered, for most characteristics are accompanying characteristics; and furthermore, most things are defined by reference to a cluster of characteristics, in which one or two characteristics can leave or join without the thing being different.¹¹²

This point is made in varying ways by Richard Sylvan and Andrew Brennan. Both want to emphasize that there are relationships which are not constitutive or necessary. Sylvan comments, for example, that the fact that A passed by B in a street does not make their relationship constitutive. Brennan, in a more biological analysis, distinguishes between supervenient and essential qualities and relationships. A supervenient quality is not essential to make A, A; it is still A whether or not it interacts with B or C. In other words, there are interactive but not internal relationships, which are

¹¹⁰ Ross p.150 op.cit.

¹¹¹ SDM 80.

¹¹² HTSS 155.

superveniently, but not essentially determinative.¹¹³

There are several responses which holists might make to this. They might argue that the internality of relations is only intended to operate at the fundamental level of interaction in the universe: for instance, Fox might argue that universal internal relations occur at the quantum level, while individual humans behave rather differently. This would be a very unusual argument for a deep ecologist to make however, since it entails the drawing of boundaries and distinguishing between levels.

A second, more likely argument, might be to suggest that even passing someone on the street really does change both parties, however infinitesimally; that all interactions actually do affect one's essential being - that everything is constantly being changed and shaped by what is around it. In other words, a holist might continue to affirm the primacy of internal relations. This is certainly what Fox suggests in his response to Sylvan's critique.¹¹⁴

At this point, both holists - in this case represented by deep ecologists - and those criticising the holistic approach seem to be setting themselves at unnecessary odds. Holists insist that all relationships must be internal; their attackers that none are. But it seems obvious that some relations are internal and some are not. There are some relationships without which I would undoubtedly be a different person; these are internal relationships, constitutive of what I am in a fundamental sense. There are also relations which are supervenient, and which do not have such an effect. Even these two distinctions are not clear cut; rather, there is a sliding scale of the degree to which I am affected by different relations.

This does not, however, let the holists off the hook, since the argument of holists like Naess is that *all* relations are internal. To admit any supervenient relations in fact nullifies the whole position of unreformed holism, since it means the creation of

¹¹³ Brennan p.124 *Thinking about Nature* op.cit.

¹¹⁴ Fox p.17 'Approaching Deep Ecology' op.cit.

distinctions and boundaries and the suggestion that there are things which are not interconnected in any profound sense. Thus, without a significant reform of the fundamental root of their holism, it is impossible for holists to admit the existence of relations which are not internal. Yet it seems impossible to deny that some relations are not internal. This is surely a blow at the heart of unmodified holistic thinking - and more particularly at the heart, in this context, of deep ecology.

How does this affect the modified holism of process thinking? Can Whitehead be attacked in a similar way? Whitehead is happy to admit the existence of certain external relations (that of the objective actual occasion which is being prehended by the concrescing occasion) as well as to insist that there is *no relation at all* between simultaneously concrescing actual occasions. Thus he is not open to the criticism that he advocates universal internal relations.

However Whitehead's doctrine of internal relations remains problematic. He asserts: 'If you abolish the whole, then you abolish its parts; and if you abolish the part, then you abolish *that whole*'.¹¹⁵ The first clause states, quite comprehensibly, that if the whole is destroyed, inevitably the parts go with it. The second part of the clause, however, suggests that if one part of the whole goes, *something may go on, but it will no longer be the same whole as before*. In other words, the parts are constitutive of the nature of the whole.

The most obvious whole in process thinking, and the wholes meant in this context, are actual occasions. Thus Whitehead is arguing that everything which an actual occasion prehends is constitutive of its being. Without it, the occasion would no longer be the same: 'the relatedness of an event are all internal relations, so far as concerns that event'.¹¹⁶ All *active* relations are, thus, internal. The only non-internal relationship which Whitehead concedes, that of the objective actual occasion to the concrescing one, is a passive relationship. The objective actual occasion is, after all, perished, and being

¹¹⁵ PR 288.

¹¹⁶ SMW 82.

used as fodder for the new occasion. Where there is subjectivity, that is to say, in the concreting actual occasion, all relationships are internal. Everything prehended is, therefore, essential to make the occasion what it is; had it prehended just very slightly different data, it would have been a different occasion. Thus, Whitehead is affirming that there are no supervenient or interactive but non-essential, non-internal relationships. So Whitehead is, like deep ecology, open to the criticism that he cannot account for supervenient relations.

Within the process tradition, some later thinkers have attempted to modify this Whiteheadian view. Stephen Ross for instance, argues that his process philosophy of perspectives avoids the difficulties inherent in Whitehead's doctrine of internal relations.¹¹⁷ Birch and Cobb, however, reinforce Whitehead's view of internal relations:

An electromagnetic event, for example, cannot be viewed as taking place independently of the electromagnetic field as a whole. It both participates in constituting that field as the environment for all the events and also is constituted by its participation in that field. In abstraction from that field it is nothing at all. It does not have independent existence and then relate to the field. It is constituted by the complex interconnections which its place in the field gives to it. The same is true when the event in question is the functioning of a gene, a cell or a rabbit. This functioning does not exist in itself apart from its total environment and then relate to the environment. It is a mode of interacting, of being affected and affecting.¹¹⁸

This passage is an important one since it illustrates both methodological and substantial problems. Birch and Cobb have 'read down' into their understanding of electromagnetic fields an interpretation of internal relationships of which they already approve (whether or not it is accurate or merely one of many interpretations I do not know). Then they have 'read up' from the electromagnetic field into the world of normal perception: a rabbit. They then suggest that the rabbit and the electromagnetic event have the same

¹¹⁷ Ross p.21,150 op.cit.

¹¹⁸ LL 87.

relations with their environment: that a rabbit cannot exist apart from its total environment; in abstraction from its 'field' it is nothing at all. But this is manifest nonsense. Certainly, a rabbit needs an environment, and indeed, must of necessity have one; but no particular environment is constitutive of it; and were it to be moved to another environment, it would still be the same rabbit. This argument of Birch and Cobb's comes from a combination of failure to draw boundaries between the level of the micro (the electromagnetic field) and the level of the macro; together with a contentious doctrine of internal relations. The methodological problem shadows and supports the substantial problem; perhaps if Birch and Cobb had not been so aware of electromagnetic fields they might not have drawn such extreme parallels.

There is no doubt that, in this respect at least (although not necessarily where ecological *value* is concerned) Birch and Cobb, in *The Liberation of Life*, have driven process thinking closer to deep ecology - possibly due to the influence of Capra, with whom both are evidently familiar. This has the effect of making their work more open to the criticisms made of deep ecology. As we have seen, however, these weaknesses are present in the work of Whitehead himself; Birch and Cobb merely accentuate this and drive it to its logical conclusion.

These two criticisms of holistic thought form the centre of a nexus of questions about deep ecology and process thinking. Ancillary concerns about the relations of wholes and parts and the objection to so-called 'mechanism' and 'reductionism' are also raised. These have, however, been adequately dealt with elsewhere.¹¹⁹ I hope only to have raised some issues which question the understanding of holism in both deep ecology and process thinking.

¹¹⁹ Brennan: *Thinking about Nature* has an illuminating chapter on the relationship of wholes and parts in which he concludes that wholes and parts are as real as one another, neither more nor less so. Sylvan, in CDE and CWWDE, approaches the issue of mechanism; while Phillips in HTSS argues that holists (in particular those supporting Holism 1 and 3) have an unnecessarily jaundiced view of the 'reductionism' of science, commenting that many scientists would only object to Holism 2.

Substantial Critique: The Extension and Realization of the Self.

The concept of extension and realization of the self is less widespread, although not without forebears, in Western philosophy. As a result, it has not received as much critical attention, and therefore much of this critique is breaking fresh ground. However, it would be misleading to suggest that it has no substantial philosophical forbears. Naess, at least, is influenced by Eastern philosophical thought. More immediately potent, it would seem, is the prominence of self-realization (without a direct link to the extended self) in Western liberal political and philosophical thought. This liberal tradition, while examined as an influence on Whitehead and Hartshorne by Randall Morris, has not been considered as a source for deep ecology (perhaps because the reputation which deep ecology has for radicalism conceals its extensive connections with liberalism). Yet liberal philosophers (albeit with application only to the human) can sound very like deep ecologists. Hobhouse for instance, comments:

Instead of the rule of self-repression, we have the idea of expansion, of harmonious self development which... blossoms into the full flower of human excellence conceived as the realisation of many-sided capacities, physical, moral, intellectual and spiritual.¹²⁰

If one were to construe Hobhouse's self as an extended self here, this statement would echo deep ecological thinking closely. It also highlights the problems which this approach poses for deep ecology, in particular with its claim to be 'ecological'. The background for Hobhouse's remarks is a world of harmonious co-operation, where human individuals, in interaction, develop and realize themselves and their potential. Deep ecologists move in a similar world, where extended human selves include the great Oneness of the world, enveloping them in one great Self, allowing all to develop and realize their fullest potential.

Presented in this way, two problems become obvious. The first is that of humanization

¹²⁰L.T.Hobhouse p.561 *Morals in Evolution: A Study in Comparative Ethics* (London: Chapman and Hall 1951).

and other associated issues; the second is that of conflict.

This ideological approbation can only be (human) self serving. One must ask if humanity is naturalized in such self-realization, or is nature merely humanized?¹²¹

Luke's question penetrates to the heart of the problem of the extended self: ultimately arguing that deep ecology, in Hegelian vein, projects humanity's alienated self-understanding onto the natural world, and seeks to find its own realization and permanence in it. By 'thinking like a mountain' one can find a way of coming to terms with one's own impermanence. 'One may survive' he argues 'physically, in fact, within other humans, whales, grizzlies, rainforests, mountains, rivers and bacteria; or (psychologically in faith) as an essential part of an organic whole'.¹²²

Luke's argument reflects one particular strand of a general criticism of the extension and realization of the self in ecological terms: that it is thoroughly anthropocentric, and even egocentric. Firstly, it begins from the concept of the individual human self, which is of primary importance, even though it has been extended to include everything that is. So Sylvan can say that it presupposes the belief that the only real motivation and interests which we have concern ourselves, and that this doctrine of the extended self is for 'people raised and hooked on a narrow self'.¹²³ Ultimately, it is the human self which matters and which should be realized. As a direct result of this, the non-human natural world becomes valuable purely as an instrument of human self-realization. Of course, deep ecologists argue that realization of the expanded self lies in the fulfilment of others; but it is the motivation which is at issue here. Fox says explicitly that the nonhuman world should not be protected because of its value in and to itself, but

¹²¹ Tim Luke p 81 'The Dreams of Deep Ecology' *Telos* Summer 1988.

¹²² Ibid. Sometimes deep ecological writing sounds as if it is deliberately laying itself open to this interpretation. Note for example John Seed's bizarre comment (indeed, one among many) 'Love the plump worms you will become' 'Beyond Anthropocentrism' *Thinking Like a Mountain: Towards a Council of All Beings* ed. John Seed, Joanna Macey, Arne Naess and Pat Fleming (Heretic 1988).

¹²³ CWWDE 73

because 'it is part of My/Our wider self; its diminishment is My/Our diminishment'.¹²⁴ This kind of remark prompts Andrew Dobson's comment that it 'involves a return to the original sin of anthropocentrism':

It seems clear that the principle of self-realization described above, although it generates concern for the non-human world, generates it for human providential reasons...diluting the non-anthropocentrism that is held to be central to an ecological perspective.¹²⁵

This would only be perceived as an *ecological* criticism of deep ecology by those who attribute value to the nonhuman natural world other than the human-instrumental. This would, however, include ethical statements by deep ecologists themselves, notably in the 8-point Platform, where the non-instrumental value of nonhuman life is emphasized. There seems to be some unresolved inner contradiction here.

These reservations are, in fact, not only ecological, but also apply to the treatment of fellow humans. We would surely find it rather strange if someone were to claim that they had not harmed me because I was part of their own self, and they did not want to harm themselves. We would expect not to be harmed because we were respected as individuals, as others, with value in ourselves. The deep ecological concept of the extended self fails to acknowledge otherness. Value is only assigned as an extension of oneself, not to others in their own right. Oneself is the ultimate source of value.¹²⁶

There are other, concomitant problems with this approach. The argument that you are part of myself, and therefore I will not hurt you, is not necessarily convincing. It would

¹²⁴ Fox p.71-72 'Approaching Deep Ecology' op.cit.

¹²⁵ Dobson p.60 *Green Political Thought* op.cit.

¹²⁶ Brennan makes the criticism that deep ecology only extends identification to the living, and thereby is making an arbitrary divide. This critique is unjustified, since as we have seen, Fox's ontological and cosmological identification do not specify the living (although admittedly Fox is writing after Brennan) Brennan, *Thinking about Nature* op.cit. p.143.

also be possible to argue that if I hurt the 'you' part of me, but gained in the 'me' part of me, the act is justified. Indeed, one could justify anything that benefitted me on the grounds that I was also paying the cost, in another part of me: ie, you. This may seem abstruse, but could have powerful political implications, some of which already hover on the so-called 'fascist' edge of the deep ecology movement, and are expressed in the more right-wing material in *Earth First!*¹²⁷ This leads to the second part of my critique of the extended self - the problem of conflict.

Human nature is such that with sufficient, all-sided maturity we cannot avoid identifying ourselves with all living beings, beautiful or ugly, big or small, sentient or not...¹²⁸

Here Naess puts forward the case for impartial identification. But this offers no solution to the problem of conflict between different elements of those with whom one is identified. There is a genuine failure to come to terms with the reality that, in a limited world, conflicts are inevitable. This seems to be based on the fundamental conviction that the world could operate entirely harmoniously, and that the realization of the extended self could include the full realization of all that exists. But of course, this is not so; the realization of one living being is often inevitably at the expense of another. This failure to acknowledge conflict means that, as Luke points out, 'no criteria (are advanced) for deciding between alternatives when such acts are necessary'.¹²⁹ How can there be, when all are subsumed into one's extended Self?

This leaves deep ecology (which is still largely unresolved on the issue) with three possible alternatives. It could adopt the original ethical position by which it stood: that all that exists has an equal right to blossom and flourish. This generates extreme

¹²⁷ There is an extensive popular literature on this subject; see *Green Synthesis* Summer and Autumn 1988; *Bulletin of Anarchist Research* no.15 Nov 1988; *Kick it Over* no.23 Spring 1989; and in particular *Earth First!* November 1 1987 and *Green Perspectives* no. 10 September 1988.

¹²⁸ Naess p.19 'Self Realization: An Ecological Approach to being in the world' *Thinking like a Mountain* op.cit.

¹²⁹ Luke p.92 op.cit.

problems, as we saw in Chapter 2. Secondly, it could adopt some kind of hierarchical structure based on diversity, complexity, essential need, etc. (some moves have already been made in this direction). Thirdly, which has been the cause of the most controversy, at least in the United States, one could follow the 'fascist' path I identified above. This alternative serves to illustrate that while the concept of the extended self may be in origin human-centred, in result it can be misanthropic in the extreme. If one's extended self is identified with all that exists, its interests become those of everything that exists. The interests of the Earth thus come first (hence Earth First!). The advocacy of a rapid decrease in human population by, for example, release of the smallpox virus, the spread of AIDS and the abandoning of the starving, (all of which have been advocated) follow hard on the heels of such views. This brings to a head the question whether personal identification can co-exist with ontological/cosmological identification, as Warwick Fox seems to hope. Is it possible to have both a particular personal identification with individuals and an identification with all that exists, wanting the fulfilment of both? Are not the two in irreconcilable conflict?

A subsidiary problem which follows from this identification with everything, is that of identifying with what we might call evil. One must identify not only with the forest, but with the developer; not only with the starving, but with the oppressor; not only with the Jews, but also with Hitler. At the root of the problem is a failure of discrimination in deep ecology. The affirmation that everything should realize its potential denies the political reality of the world in which we live.¹³⁰

It should be clear from this that the extension and realization of the self in deep ecology generate insuperable problems - and these are by no means all of them. How far, if at all, do these problems also apply to process thinking?

When characterizing process thinking about the extension and realization of the self earlier, it was suggested that its emphasis was much more on physical extension than

¹³⁰ This point in fact forms the basis of the criticism of deep ecology by social ecology, spearheaded by Murray Bookchin. See, for instance, Bookchin: *The Ecology of Freedom* (Palo Alto: Cheshire Books 1982).

psychological extension, largely because of its focus on actual occasions, which are too primitive to evince any kind of psychology. Where process thinkers have advanced human psychological identification views they are vulnerable to entirely the same critique as deep ecology. However, this is not something at which Whitehead does more than hint; and it is not taken up, as one would expect, were it to be a key ecological theme, by Birch and Cobb in *The Liberation of Life*.

Nevertheless, curiously, as will have become evident in earlier chapters, process thinking (at least that of Whitehead) is vulnerable, at least in part, to exactly the same criticisms as those which arise from the psychologically extended self, although for different reasons. Whitehead's inability to cope with conflict, such as that involved in predation, became clear in Chapter 3. His habitation in the same co-operative world as Hobhouse and Naess means that he envisages the actual occasions working in harmony with one another to achieve an overall good. Hartshorne, as we have seen, admits much more forcefully the inevitability of conflict and of competition between the actual occasions, thus indicating that this is not a necessary problem of process thinking in the same way that it is a necessary problem for the psychologically extended self. As a further insulation from this criticism, process thinking has a built-in adjudicative principle: that of maximizing richness of experience. Where conflict is acknowledged, such as by Hartshorne, the correct resolution is that which achieves maximum richness of experience for the consequent nature of God. Deep ecology has no such principle.

Process thinking is, however, vulnerable to the criticism that it has no real place for the Other. This is not because it subsumes the world into an extended self, but rather because it assumes that the world is composed from self-actualizing experiencing occasions, like human beings 'writ small'. The world is humanized, transformed into a place composed from rudimentary human beings. Human experience in fact becomes both the model and the standard for the entire Universe. This kind of humanization is, however, unlikely to result in the kind of environmental fascism and misanthropy possible from the deep ecological position. The value concept of richness of experience is inexorably tilted towards humanity, and the ultimate aim is at the best consequences for God, not the Earth. Thus process theologians are unlikely to advocate, for example,

the release of the smallpox virus or the spread of AIDS, since human beings contribute the richest experience to God.

What is particularly striking here is that, without a strong concept of the psychologically extended self, process thinking draws some similar conclusions to those of deep ecologists. This similarity raises one further - and fundamental - question about the extended psychological self in deep ecology. *How necessary is it?* - or to be more precise, how necessary is it to propose an extended self in order to identify with other organisms? How far, in fact, is identity possible, beyond, that is, a kind of sympathy? This is a question Ayer raises in conversation with Naess:

Well, I share your moral sentiments, but I think that what you've been saying is very largely just false...of course, I sympathise with you, and if you are hurt I shall be sorry, but I shan't be hurt in the same way. Its indeed true - empirically true - that to a rather limited extent human beings sympathise with one another, with people they know and like and feel close to; but to say that they are one in any literal sense is just false.¹³¹

Naess fails to counter this satisfactorily; and, as this study has suggested, it is perfectly possible for a similar practical position to be derived without resort to the psychological concept of the extended self. Ayer also argues that resort to the *physically* extended self is unnecessary. He insists that personal identity can only be found within the identity of the body; one's self does not and cannot extend beyond this. Here we return to the problem of boundaries and distinctions which characterized my critique of holism. The question of the physically extended self seems to be partly a question of a failure to perceive boundaries, and partly the problem of confusing different kinds of language.

Let us take, for example, Whitehead's use of Cleopatra's Needle, which daily gains and loses molecules, so that one can ask "Where does it begin, and where does it end?".¹³² This may be true in a scientific sense, on a micro-level, but on a macro-

¹³¹ Naess p.32 'The Glass is On the Table' op.cit.

¹³² Whitehead p.120 *The Concept of Nature* op.cit.

level, it is quite clear where Cleopatra's needle begins and ends. For all normal purposes, Cleopatra's Needle has distinct boundaries. The same is true of my own body. Similar questions arise when one considers the extended self over time, as elaborated by Hartshorne, when he comments that all acts with a view to the future are altruistic, since the future is composed from new selves. But what meaning could 'altruistic' have here? If all deeds are altruistic to the same degree, then the word loses its meaning, since it would be impossible to be anything other than altruistic. If there are degrees of altruism, then presumably it would be more altruistic to act for the future selves which have least in common with one's own present self; which makes the statement that all acts are altruistic rather empty. In any case, how can one, in common sense terms, understand this argument of Hartshorne? Why would one, for instance, ever apply for a job, since it isn't going to be oneself that gets it anyway, but a future self which may or may not have any special relationship to one's present personal sequence?

In fact, Hartshorne's argument leads to absurdity, as does any strong argument for an extended physical self over time and space. Haunted by 'reading up' from scientific theory, and stricken with an inability to draw boundaries, doctrines of an extended physical and psychological self cause process thinking, but more particularly deep ecology, insuperable problems.

In Conclusion

This chapter began with the question whether the use of Whitehead's name as support for deep ecological ideas was a tag without philosophical baggage. In an attempt to answer this question, two metaphysical concepts central to deep ecology: that of holism and the extension and realization of the self were compared with similar aspects of Whitehead's metaphysics. In both areas, process thinking had extensive points of contact with deep ecology, but also some significant differences, largely stemming from an emphasis on the individual nature of the actual occasion, on time over space, and the lack of a developed psychological concept of the extended self. These differences acted, as a general rule, to protect process thinking from some of the flaws in deep ecology, although where process thinking shared similar conceptuality, it was also vulnerable to

the same critique.

So is the use of Whitehead's name by deep ecologists a tag without baggage? This entirely depends how specific the tag is about the baggage to which it is referring. To claim, as a general statement, that Whitehead is either a source for deep ecology, or is, in essence, conceptually similar, would be to claim too much; to say that Whitehead and deep ecology bore little or no resemblance would be equally misleading. If deep ecologists wish to use process thinking to support their own work, they must be very specific about which aspect of it they are using. Those who claim baggage in ignorance of its content may find themselves in unprecedented difficulty when they arrive at Customs.

With or without the support of process thinking, deep ecology generates numerous, seemingly intractable difficulties. Its metaphysics raises questions about the significance of wholes and parts, the value of individuals and the resolution of conflict, with all their ethical implications; questions which deep ecology fails to address satisfactorily. Process thinking, as we have seen, avoids the worst of these difficulties. However, as I shall go on to suggest in the Conclusion, this does not mean that process thinking is itself satisfactory.

CONCLUSION

The comparisons made in this thesis have brought to light a number of difficulties generated by applying a process framework to environmental ethics. This is partly a product of the totalizing, maximizing approach of process ethics, and partly because that which is maximized is harmony and intensity of experience, located in actual occasions. As we have seen, the implications of this for process ethics in general, and particularly for process environmental ethics, are extensive.

As was made clear in Chapters 1 and 4, the only true individuals in the process system are the actual occasions and the consequent nature of God, or in Hartshorne's terminology, the 'cosmic organism'. The concept of a persistent and enduring individual organism is undercut, the organism diffusing into a constant flow of changing experience.¹ The problematic effects of such an approach - that of the compromise of individual integrity where justice is concerned, and the possibility of replaceability - are enough to cause the rejection of process ethics by nonconsequentialists. However, the process emphasis on experience as the location of all value results in the inability of process thinking to affirm one of the positive results of the maintenance of a consequentialist position in environmental ethics: restitution. Since the experience, for instance, of a cultivated wheat plant, was much the same as that of a wild plant, restitution proves unnecessary in a process system.

Unlike collective environmental ethicists, who are also often accused of failing to give

¹ This is strongly reminiscent of Buddhist approaches to the human self, aptly summarized:

'Mere suffering exists, no sufferer is found;
The deeds are, but no doer of the deeds is there;
Nirvana is, but not the man that enters it;
The Path is, but no traveller on it is seen.'

p.512 *Visuddhimagga* of Buddhaghosa (trans. S Hamilton, ed. CAF Rhys Davids; London: Pali Text Society 1975 ed.). I am indebted to Sue Hamilton for this reference and others on this topic.

individual human and nonhuman organisms sufficient ethical consideration, process thinking does not stress the wholeness of the human or ecological community. Although Whitehead, unlike Hartshorne, affirms that the 'collective' has a good of its own (rather than being merely a collection of individuals) it is still a society. In addition, it is a society which as a whole does not generate high-grade experience, unlike some of its members. Since it is high-grade experience which matters, ecosystems and species, unless they are species of high-grade members, are not of great ethical importance (except inasmuch as they are instrumentally valuable for the survival of high-grade experiencers). Thus, from the perspective of collective environmental ethicists, process thinking fails to affirm the significance of units which are of primary importance. In addition, from the collective perspective, process thinking is unable to uphold such qualities as diversity or rarity as valuable; only complex, harmonious and intense experience can be valued.

At the root of these criticisms, both from collective environmental ethicists and from individualist deontologists such as Paul Taylor, is the accusation that process thinking both with its value basis in experience, and with the subjectivity of its relative judgments, is irredeemably anthropocentric. It elevates qualities supremely possessed by humans to the ultimate location of value.

This brief summary indicates that, despite claims that process thinking offers an approach peculiarly equipped to tackle the so-called eco crisis, from the perspective of two of the main schools of environmental ethics, process thinking is essentially inadequate. For both individualist non-consequentialists and collective ethicists, process ethics says too little about crucial aspects of environmental ethics. It has, one could argue, all the disadvantages of an individualist position in environmental ethics without its accompanying advantages.

A process thinker, at this point, might make several responses. The first would be, as was suggested in Chapter 1, to bite the bullet - that is, to conclude that the process system, as currently constituted, in fact describes the way that things are, and a different approach is not only undesirable, but impossible.

A second response would be to attempt to reform the process system in order to make it more responsive to the concerns expressed by environmental ethicists. It seems to me that there is some room for this, although it would generate difficulties of its own, and substantially alter the process system. Some hints of such an approach are suggested in Birch and Cobb's *The Liberation of Life*, and were alluded to in Chapter 3. A sketchy outline of such an approach might proceed as follows.

Whitehead describes God as an actual entity - that is to say, God is like the experiencing occasions which constitute the world 'writ large'.² God's primordial and consequent natures are sometimes described as corresponding to the mental and the physical pole of the actual occasion (although as was seen in Chapter 1, this is in fact an analysis which Morris rejects).³ The argument here involves taking seriously what might be meant by the description of God as an actual entity.

Certainly, there are respects in which God must be an atypical actual entity. There can be no lure, or subjective aim beyond that of self-fulfilment. Nor is there an external environment, so the process of prehension is hardly the same. To continue, however, I will assume that the description of God as an actual entity is, despite these asymptomatic features, still tenable. Within this structure, process thinkers contend that God 'feels the feelings' of the actual occasions, 'takes into his own life all the currents of existence'.⁴ God thus prehends the multiplicity of self-creating actual occasions in the world, and transforms them into a new, united experience. This standard process argument forms the core idea of Hartshorne's *The Divine Relativity*. It is at this point that a different interpretation could transform the process value system, but I can find no place in process writing which makes such an interpretation explicit. This reinterpretation has two stages.

² 'God is an actual entity, and so is the most trivial puff of existence in far off space'.PR 18.

³ Morris, p.30 op.cit.

⁴ Hartshorne p.xvii *The Divine Relativity* (1948; New Haven:Yale University Press 1967 ed.).

The first stage is at the level of the actual occasion. Actual occasions are, as we have repeatedly seen, units of feeling or experience which constitute all that exists. What is valuable to them, and to God, is the harmonious intensity of their experience, which God feels. The reinterpretation I am suggesting here, however, introduces a new element: either that God feels more than just their feelings of themselves, or that their feelings are constituted by more than just harmonious intensity.

The first alternative suggests that God feels something about the occasions other than their own feelings. God somehow distinguishes between occasions emanating from different societies. Returning to the example of the wheatfield and the wildflowers, one might say that God feels a 'wheatiness' about the actual occasions constituting the wheat plant, and a 'cowslippiness' about the actual occasions constituting the cowslip, which does not constitute part of their feeling of themselves. Thus, God can distinguish between wheat plants and cowslips.

The second alternative resembles the first but perhaps fits more easily into a process system. It is not so much that the actual occasions are different from outside to God, but rather that they are different from inside, to themselves. Alongside the degree of harmony and intensity being actualized, the occasion also feels some kind of identity with the society in which it is concreting. An occasion concreting in a wheat plant must feel its own 'wheatiness', differentiating it from an occasion in a cowslip which feels its own 'cowslippiness'. While this may sound bizarre, it is not a radical departure in the process system. Indeed, what makes an occasion part of a society is its prehension of common elements from preceding actual occasions in the same society. That these may provide it with a distinctive self identity is not surprising.

In the first alternative, then, it is God who feels the difference: the occasions are different from outside; in the second alternative, the occasions themselves feel differently: they are different from inside. Fortunately, it is not essential to the argument here to make a definitive decision between these two alternatives.

The second crucial step in the argument is the effect which such 'wheatiness' or

'cowslippiness' has on God's valuation. For this step to succeed, God's valuing of the actual occasions must differ from their own self-valuation; in other words, a new layer of value is superimposed by God onto the value of the occasions for themselves.

To make this step clear, we must return to Whitehead's argument that, despite some asymptomatic qualities, God is an actual entity aiming at the generation of maximum harmonious intensity of experience. The source of such experience in a process system, is ordered contrast: 'Contrast elicits depth, and only shallow experience is possible when there is a lack of patterned contrast'.⁵ We have repeatedly seen that this is the case for actual occasions and that the harmonious intensity they achieve is absorbed into the consequent nature of God. The interpretation here supposes that God, as an actual entity, acts in the same way. Not only does God feel the harmony and intensity of the actual occasions, but also draws them together, generating more value from the patterned contrasts between them. Thus, the concreting actual occasion within a wheat plant does not only generate value to God inasmuch as God values its value-to-itself, but it also generates extra value: the value-in-contrast of this occasion with that of, for instance, a cowslip. This could be the case whether the contrast was 'outside' from God, or 'inside', from the occasion's feeling of itself. Thus 'different types of experience' as Birch and Cobb described them, could add to the total value generated for God. This resolves the problem of the equal intrinsic value of the wheatfield and the wildflower meadow. A wheatfield could provide only one kind of experience for God - actual occasions with 'wheaty' feelings. The myriad species possible in a wildflower meadow, while generating equivalent intrinsic value, provide God with more contrasts - 'cowslip' feelings, 'harebell' feelings, 'speedwell' feelings and so on, and hence greater intensity of value.

Such an interpretation of process thinking goes some way towards resolving the criticisms of collective environmental ethicists. Diversity and rarity now become valuable; protecting endangered species becomes ethically important since every species increases the contrasts present in God's experience. Complex ecosystems would be

⁵ PR 114.

preferred to monocultures; restitution would also become a valuable compensatory practice if new areas of biological complexity are created to substitute for areas lost.

However, this reinterpretation could not do much to resolve the problems of the individualist deontologist concerning injustice and replaceability in the process system. Initially, the valuing of diversity might seem to favour protecting the highly diverse lives of individual human beings. However, diversity is only valuable inasmuch as it provides for contrast. The contrast between any two humans, however, is very much the same. My experiences may have a certain 'Clareness' about them, which forms a valuable contrast for God with the 'Julieness' of Julie's feelings. However, were I to be painlessly killed and replaced by Sarah, who would not otherwise have existed, the 'Sarahness' of Sarah's feelings would equally contrast with the 'Julieness' of Julie. Thus the valuable contrast would probably not be appreciably different or diminished. This reinterpretation, then, does not redeem process thinking for individualist deontologists.

What appears to be at least a partial response to criticisms of process thinking is, however, something of a quicksand. It is, firstly, an unprecedented overhaul of the process value system. Value is still found solely in actual occasions, but only in the 'stretched' sense in which God is an actual entity. More potently, value is no longer in the same way commensurable. Although the commensurability of harmony and complexity of experience was a complex one, involving a high degree of subjective judgment, the introduction of another good, that of varieties of experience, means the loss of commensurability. This loss is not evident in the example of the wheatfield and the wildflower meadow, since there harmony and intensity of experience were equal and thus diversity could, so to speak, have the ethical casting vote. However, if the conflict between a wildflower meadow and a herd of cows is taken as an example instead, an initially irresolvable situation is created. The aim is still at generating maximum harmonious and intense experience for the consequent nature of God; but there are now two possible ways of achieving it. If harmony and intensity of experience generated by actual occasions is taken as the standard, then the cows are infinitely preferable to the wildflowers. If variety of experience is the standard, from which God then derives intensity at a higher level, then the wildflowers win over the cows. Which is better at

generating valuable experience for God? High-grade experiencers, or many varieties of contrasting experience?

No guidelines exist as to which of the two value-generating principles have priority. Indeed, who is to say whether God derives more value from contrasting experience or from receiving rich experiences from the actual occasion? The judgment about what God would prefer pushes the subjectivity of relative judgments onto a new plane. It would, of course, be possible to introduce priority principles, but these generate their own ethical problems. One could say that variety of experience should only be given priority where richness of experience is equal. This, however, would leave most situations about which collective ethicists are concerned untouched. The feral cattle could still eat the sequoia; the cows can replace the wildflowers, the concert hall can be built on the wilderness, the ski and leisure centre can be constructed at Mineral King. If intensity and harmony of experience were to be given priority only where variety was the same, the results could be even more unpalatable. Apart from the suggestion that genetic engineering should be stepped up to maximize numbers of species, to base value on varieties of kinds of existence, irrespective of what they are like, could have some very misanthropic consequences. How misanthropic would depend on the degree of contrast the difference between individual people generated compared to that between individuals of different species. If one were to assume that a large part of the 'Clareness' of my experience is 'humanness', then the contrast between my experience and that of another human is only slight, and the contrasts between experience of other species would give God more intensity. If the contrast between my experience and that of another human was equivalent or greater than that of the experience of two members of other species, then human beings could still expand into wilderness areas. Indeed, such a conclusion would presumably tend towards urging a population increase, since what matters for God is not the harmony and intensity of experience of the human individuals involved but rather the contrast between their feelings.

It would obviously be best to urge some kind of balance between the two principles, but exactly how this could be achieved would require a detailed exposition, which cannot

be carried out here. What is primarily significant is that the introduction of a new value principle has, as I suggested in Chapter 3, thrown the value system of process thinking into disarray. The exclusive identity of value with the harmony and intensity of experience of concreting actual occasions is no more; there is no longer a single 'scale' of value; there is no longer a guarantee that high-grade experiencers generate more value than low-grade ones.

This kind of reform, then, is the second alternative which process thinkers might adopt in order to customize the process system to take account of the concerns of environmental ethicists. The third alternative is more radical than reformist. It considers that the reinterpretation of the process system I have suggested above has diagnosed the problem wrongly, and hence is offering the wrong medicine. The problem is not that the process system says too little about environmental ethics, but rather that it tries to say too much.

Such a radical approach to the process system may take several forms. It may reject the basis of the process system, but consider that another kind of all-embracing system could be satisfactory. It may reject the idea of all-embracing systems altogether, and opt for a completely pluralist approach. Or it may opt for some kind of pluralism in ethics, without necessarily rejecting the process metaphysical system.

All of the environmental philosophers I have so far considered in this thesis (with the possible exception of Naess, who affirms a kind of pluralism) have taken the first option, at least in an ethical sense. All affirm the significance of one overarching ethical system which can deal with all eventualities - but not the process one.

The reasons for rejecting the process system as an approach to environmental philosophy are, as we have seen, manifold. Fundamentally, however, rejection of process thinking in this context stems from the recognition that the process system is about humanizing the universe. This observation is made perhaps most powerfully by Colin Gunton, who objects not so much to its humanization of the world, but its humanization of God. He comments that:

the paradigm case of experience, human knowledge (understood as that which relates us to the world) is attributed by analogy to 'lower' beings in the world. Insofar as this is so, it is a kind of anthropomorphism.⁶

Similarly, Gunton comments, not only is human experience extended down into the subatomic level, it is extended up into God, making God into a supreme case of human experience. Everything which exists is therefore modelled around human beings; human experience has been generalized into the universe, is 'an example on which to found the generalized description required for metaphysics'.⁷

Indeed, the further point could be made that it is not so much 'human experience' which has been generalized into the universe, if, indeed, such a phenomenon can be said to exist at all, but Western liberal human experience, a point on which I touched in Chapter 4. The self-actualizing, self-creative aspect of the actual occasion mirrors very closely the liberal understanding of humanity portrayed in the writing of T.H.Green and L.T.Hobhouse, as Morris has argued. That this limited representation of human experience should be the interpretative filter through which the entire universe is understood, elevates a regional, temporal and species-specific concept into a universal and eternal principle.

The effects of such a system on environmental ethics are, as we have seen, to create a hierarchy with those species which are most like (Western liberal) humans at the top, and those which are least like (Western liberal) humans at the bottom. One might describe this as what Primo Levi calls 'selfishness extended to the one who is closest to you' or 'us-ism'.⁸ This would certainly be the response of egalitarian deontologists

⁶ Gunton, p.90 op.cit.

⁷ PR 112.

⁸ Primo Levi p.61 *The Drowned and the Saved* (1988; London: Abacus, Sphere Books 1989). It is interesting to speculate about what Levi would have made of the 'cosmic optimism' (to use Gunton's words) of process thinking, where, according to Hartshorne, 'there is always more satisfaction than dissatisfaction', God should 'always have more reason to rejoice than to grieve over the world', and 'there will always be a net increment of value accruing to God at each moment.' (Hartshorne: p.46 *The Divine*

such as Paul Taylor and collective ethicists such as J.Baird Callicott.

However, neither Callicott nor Taylor reject Whitehead's fundamental, foundational principle: that a coherent, logical and universally applicable (metaphysical and moral) system is possible.⁹ Taylor makes this one of the formal conditions of his moral approach: that all morals and standards must be 'considered to be universally applicable to all moral agents as such' and 'must be advocated as normative principles for all to adopt'.¹⁰ Similarly, Callicott vehemently advocates a 'univocal ethical theory embedded in a coherent world view'.¹¹ That such an approach should be rejected has been increasingly advocated in environmental philosophy in general, and environmental ethics in particular. In other words, there has been an increasing move towards some kind of pluralism in environmental philosophy.

Pluralism in this context can mean several things. It can be used as Arne Naess does, to express tolerance for other metaphysical frameworks. Thus Naess accepts that one can construct or adhere to any one of a broad range of metaphysical systems, based on for instance, Spinoza, Whitehead, Heidegger, AmerIndian religion or even his own system, Ecosophy T. What is important, as was suggested in Chapter 4, is that the metaphysical structure should issue in the same ultimate concerns of non-violence, respect for the nonhuman world and so on. Since Naess' tolerance is restricted to that which issues in the same conclusions, this does not seem to be a very deeply pluralistic position. This kind of broad tolerance for the similar will not be further considered here.

A second kind of pluralistic approach rejects the concept of all-embracing metaphysical and moral systems altogether, in favour of local, contextual and historical interpreta-

Relativity op.cit.). The optimistic face of process theology must surely cast its eyes down when confronted with the survivors of Auschwitz and Bergen-Belsen.

⁹ See, for instance, PR 3.

¹⁰ RN 25, 27.

¹¹ CMP 123.

tions of the world.¹² Within the field of environmental ethics, such an approach has been championed by Jim Cheney, notably in his article 'The Neo-Stoicism of Radical Environmentalism'.¹³ Here, Cheney attacks the metaphysics of deep ecology, arguing that it, like Stoicism, is a metaphysical system designed to give its adherents security during a time of upheaval: for the Stoics, the collapse of the Empire; for the deep ecologists, the 'shattering of the security of modernism'.¹⁴ In these insecure external conditions, deep ecology is projected as an ahistorical, eternal, uncontextual system, which 'provides a unifying framework in which others can be encountered without risk'.¹⁵ For Cheney, the metaphysics of deep ecology is an insulation against encountering otherness. Everything can be fitted into a secure overarching framework (an especially secure framework when it is composed from one's own, extended self); 'otherness' can be controlled, and loses its alien nature. Deep ecology thus is for Cheney a 'colonizing' or 'totalizing' system, attempting to subsume the world into its own interpretative categories.

Although Cheney has not written a critique of process metaphysics, it is clear that a similar attack could be made of the process metaphysical system - perhaps even more so, since it lacks Naess's nod towards pluralism. Like deep ecology, process is a universal system, subsuming the universe into its own interpretative categories. Rather than the deep ecological 'Me' which encompasses the world, process thinking proposes a plurality of tiny 'me's' which humanize and familiarize the world, diluting any sense of difference or alienness. This conceptual colonization of the world, Cheney argues, is symptomatic of the need to dominate and control. Although process thinking claims to have freedom and self-creation as a primary concern, the very fact that it interprets

¹² Paradigmatically expressed, of course, in the work of Alasdair MacIntyre and Richard Rorty.

¹³ Jim Cheney 'The Neo-Stoicism of Radical Environmentalism' *Environmental Ethics* 11 no.4 Winter 1990 293 - 325.

¹⁴ Cheney, op.cit.p.302.

¹⁵ *ibid.*

the world in such a way indicates its need to control. The only freedom which the nonhuman world has is the freedom to behave like a human being 'writ small'. The world is not allowed to be truly Other, to stand outside the governing structure of self-actualizing experience.

Cheney would, of course, extend such a critique to all metaphysical systems. Such systems, he argues, demonstrate a 'fear of plurality and the need for oneness'.¹⁶ Such oneness is, however, a comforting and blinkered fiction, failing to acknowledge the difference and multiplicity which really exist in the Universe. For Cheney, one's understanding of the world - and consequently one's ethics - is unavoidably contextual:

We cannot tell *the* story of the world and then lay down rules for how we are to respect that world. Our (ethical and ecological) stories are positioned stories, and we can only just keep on telling and retelling them, and contesting the various tellings.¹⁷

If Cheney's position here is taken seriously, the process system, like any other metaphysical system, must, of necessity, be rejected. No reformation could change the fact that the fundamental premise of process theology is its universal application. Process thinking can, then, have no association with this kind of pluralism.

The third approach, 'moral pluralism', is, perhaps, the most common in environmental ethics. Wenz defines moral pluralism as an approach which 'contains a variety of principles which cannot be reduced to, or derived from, a single master principle'.¹⁸ It is a conscious rejection of 'moral monism' where 'there is a single key' to ethics, be it 'life, or the capacity to feel pain, or the powers of reason, or something else...Monism implies that in arguing for the preservation of a species we have to appeal to the same principles we would invoke in determining the punishments of terrorists or the

¹⁶ Cheney p.314 'Callicott's Metaphysics of Morals' op.cit.

¹⁷ Cheney p.325 'Callicott's Metaphysics of Morals' op.cit.

¹⁸ Wenz p.310 op.cit.

obligations of our kin'.¹⁹ To put this rather colloquially, moral pluralism is a rejection of a 'one size fits all' approach to ethics.

Stone and Wenz adopt moral pluralism because of their conclusion that none of the monistic ethical approaches - such as those considered in this thesis - can fully address all the problems raised in the complex human and nonhuman world in which we live. Attempts to generate united theories which give moral consideration, for instance, both to individual animals and to ecological collectives such as species and ecosystems, have been notoriously unsuccessful. (Callicott's 'Animal Liberation and Environmental Ethics: Back Together Again?' met a stony response from advocates of animal liberation who felt that Callicott had made very few concessions to their position.)

Stone in *Earth and Other Ethics* and Andrew Brennan in *Thinking about Nature* express this pluralism in terms of differing ethical 'frameworks'; Wenz in *Environmental Justice* in terms of concentric circles (but circles rather different from those of Callicott). With such an approach, a number of different ethical frameworks can be brought to bear on any ethical problem: a pain-centred framework, a species-centred framework, a diversity-centred framework: indeed, as Brennan comments 'an indefinite number of frameworks can be brought to bear. When we restrict our modes of thinking to just one framework, we thereby choose to ignore the perspective supplied by other relevant frameworks'.²⁰

Attractive as this may sound, obvious difficulties are immediately generated by this pluralistic approach, as Callicott is not slow to point out. How does one make moral decisions, where two frameworks deliver conflicting ethical responses? How can one prevent an unscrupulous moral agent switching between inconsistent ethical frameworks in order to make personal gains?²¹

¹⁹ Christopher Stone p.13 *Earth and Other Ethics: The Case for Moral Pluralism* (New York: Harper and Row 1987).

²⁰ Brennan p.3 *Thinking about Nature* op.cit.

²¹ Antony Weston p.283 'On Callicott's Case against Pluralism' op.cit.

Such questions are difficult if not impossible to answer. Wenz suggests that 'good judgment' is needed in order to make ethical decisions where competing conclusions are derived from different approaches. One cannot help thinking that this response begs the question: if two different ethical frameworks lead to the conclusion that two different and even opposing actions are right, could it be 'bad' judgment to make one decision and not the other? How far could the specific context indicate what 'good judgment' would conclude when ethical frameworks conflict?

To pursue this question further would open up an extensive moral debate, which I do not wish to pursue here. It is clear that the moral pluralism developed (in differing ways) by Wenz, Brennan and Stone, generates substantial difficulties, rivalling those of the monistic systems which they reject. However, pluralistic approaches to environmental ethics of this sort do have the advantage of being context-sensitive, open-ended, prepared to consider the complexities, which can often be severe, of making ethical decisions. They acknowledge the impossibility of producing clear-cut answers in many ethical situations - especially when considering the difficult questions engendered by the nonhuman world. This differs from many monistic approaches which can impose inappropriate dogmatic general principles onto difficult and complex situations without engaging with the profound ethical complexities which may be involved.

How, then, would process thinking respond to this kind of pluralistic approach to ethics? In its unreformed state, process ethics is clearly monist. Stone describes ethical systems of this type as 'single value transitive systems' where 'the sole standard for evaluation is the maximization of some single value, capable of fully ranking all alternative states of distinct moral interests'.²² However, the reformed process ethics I developed above is pluralistic. There are two differing 'frameworks' which can be used for making ethical decisions: the 'richness of experience' framework and the 'variety of experience' framework; frameworks which may, on occasions, as with the cows and the wildflowers, advise conflicting ethical behaviour. This takes the first few tentative steps towards a kind of moral pluralism. It may be possible that process thinking could, by further

²² Stone, *op.cit.* p.165

reformation, take into account other ethical frameworks. What is also noticeable is that this moral pluralism has left the metaphysical structure of the process system untouched. The ultimate aim is still harmony and intensity of experience for God; God is still the 'sink' for all value, the 'all absorbant metaphysical sponge' as Colin Gunton comments rather acidly. The differing ethical frameworks would only indicate that there were different ways of achieving the most valuable experience for God.

The question which then remains is: should process thinking, in order to address more fully the problems raised for it by environmental ethics, take steps towards this kind of moral pluralism? The answer to this question depends on a more fundamental decision - whether the metaphysical structure of the process system is worth preserving at all, or whether the process interpretation of the universe through the categories of Western liberal human experience is fundamentally inappropriate in so many ways that it should be rejected.

If one were to decide to preserve the process system, then a movement towards moral pluralism, of the sort described - despite the enormous difficulties generated - does seem desirable. It would make process ethics more flexible, more sophisticated and able to deal more sensitively with the complexities of a wider variety of environmental issues. Thus, while retaining its metaphysical monism, it could branch out into ethical pluralism.

My own sympathies, while not as absolutist as Cheney's, lie with those who would reject the process metaphysical system as unduly anthropomorphic, for reasons I have already made amply clear. This does not mean that a 'richness of experience' framework, stripped of its supporting metaphysics, could not be one important framework in making ethical decisions. But, as a metaphysical structure, from an environmental point of view at least, the process system is inadequate. Having taken Paulos Mar Gregorias' advice seriously, and listened to process theology with respect, it is now possible to conclude that the 'intellectual alternative' provided by process theology to alleviate the 'eco crisis' is, ultimately, an unsatisfactory one.

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