

Beyond Environmentalism: A Study in Environmental Ethics

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IN

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BY

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STATEMENT

As required under the University ordinance OB.9.9 (iv), I state that the present thesis entitled *Beyond Environmentalism: A Study in Environmental Ethics*, is my original contribution and the same has not been submitted for any other previous occasion. To the best of my knowledge, the present study is the first comprehensive and critical work from the defined perspective in the area mentioned.

The literature related to the problem investigated has been cited and due acknowledgements have been made wherever the same have been used.

Place: Goa University

Ms. Theophila Domnica De Souza

Date: 14/12/2016

CERTIFICATE

This is to certify that the thesis entitled *Beyond Environmentalism: A Study in Environmental Ethics*, submitted by Ms. Theophila Domnica De Souza for the award of Degree of Doctor of Philosophy in Philosophy is based on her original studies and critical reflection carried out under my supervision. The thesis or any part thereof has not been previously submitted for any other degree or diploma in any university or institution.

Place: Goa University

Professor Koshy Tharakan

Date: 14/12/2016

PREFACE

That living organisms are related to the environment is well documented. Firstly, the environment is the reservoir of rich resources needed for continuation of existence of humans, animals and environment as a whole. Secondly, environment is the place in which humans and animals shelter themselves, build structures and defend themselves against any threat to their existence. Thirdly, environment is the 'dust-bin' for all the waste, both natural and artificial, created by man and animals. These relationships between environment and humans and animals have led to three types of crises: the resource crisis, the pollution crisis and crisis of self-destruction. Contemporary literature on environmental philosophy and ecology deals with problems and solutions to avoid the catastrophes resultant from the exploitation of the environment to meet the ever-expanding needs and wants of mankind. Again, technological solutions are recommended to overcome the crisis of pollution which has reached almost insurmountable proportions. And for the last fifty years or so, with the development of environmental ethics, moral recommendations are made to halt the crisis of self-destruction. What is observed, however, is that most, if not all, literature on environmental ethics, has its own crisis of identity. This literature is often seen as a mix-up of issues that are political, economic and technological; and the moral is placed at an insignificant position of concern.

The present study is an attempt to reassert the significance of the moral in the resolution of the environmental crisis. And in this effort a theoretical framework is prepared in the first chapter of the study. The second, third and fourth chapters deal with the ethical justification of the three concerns of environmental ethics, namely, man, animals (non-humans) and nature (other than man and animals). The study, presupposes the primacy of morals in all these three relationships. Consequently, the study has argued for the moral rights of humans

and more so while discussing the concept of sustainable development, which in the present socio-political context has acquired non-moral connotation. The study has also argued for moral rights of animals (non-human animals) and particularly of species closest to humans on the evolutionary ladder. And finally, the study has argued for moral right of the environment per se, on the ground that the construal Nature in economic and scientific terms fails to see alternative models of understanding non-human nature. Alternatively, attempts by moral philosophers to accord moral considerability for the biotic community per se, be taken seriously and not denied by ethical consideration of its individual members. I have put in the public domain the findings of the above three considerations by way of three papers published and/or accepted for publication: (1) “Redefining Sustainable Development: Towards an Alternate Understanding” in *Indian Philosophical Quarterly*, Vol. 40, Nos. 1-4, 2013 (published in 2015); (2) “On Ascribing Morals to Animals: A Study in Evolutionary Ethics” in *Sandhān*, Vol. IX, No.2, July-December 2009 (published in October 2012); and (3) “Nature and Moral Considerability: A Study in Environmental Ethics”, (Accepted for publication in the forthcoming Special Issue on Environmental Ethics of *Indian Philosophical Quarterly*).

I wish to acknowledge, with deep sense of gratitude, all the individuals who helped me to complete the dissertation.

First and foremost, I want to thank my guide Professor Koshy Tharakan who encouraged and guided me to complete the task. It was with his incredible help and immense knowledge that I could complete the three papers that are an outcome of the present study. I thank him greatly.

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I deeply miss my father, who is not with me to share this joy.

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CHAPTER ONE

DEFINING THE NEED FOR A STUDY IN THE CONTEXT OF EXISTING LITERATURE

Human action is dependent upon resolution of conflict of interests, desires and inclinations. Most often conflicts arise when self-interests are dominant considerations when we act. Further even when conflicts appear in relation to personal concerns, there may still be no clarity regarding the course of actions to be taken in order to ensure one's own personal interests. But in the ultimate analysis, human action seems to be centred on individual actions with individual's concerns.

Moral considerations begin to take shape with the realisation that our actions also concern others, benefit or harm others, intentionally or unintentionally. Although, actions that pursue self-interests may not always be moral actions, actions that harm the interests of others demand evaluation based on criteria of morality.

Although, traditionally moral behaviour refers primarily to behaviour that affects others, behaviour that affects self should also be included under the scope of morality, as not developing one's own talent and taking one's own life which has no consequences to others. One might disagree regarding which of one's actions affect others, or whether they have direct or indirect effect. The fact remains that some decisions are easily identifiable as morally right or wrong, there are others that are so complex that it is difficult to see moral conflict as we may not be able to understand precisely how such actions affect the interest of others.

The complexity of moral situations makes it sometimes difficult to decide what is best to promote the interest of oneself and others. Moral conflict arises when we find ourselves pulled in different directions, at times, opposite directions, and it becomes almost impossible to find resolution to a conflict situation. Again, the complexity of the moral situation makes it difficult to identify which considerations are morally more relevant compared to some others. Most of the times, individuals and societies resolve such moral conflicts on the basis of what we have learnt in the family and community which is determined most often by what we have learnt in Churches, temples, etc.

The Need of Theory

Discourse on environmental ethics by its very nature would be essentially a part of ethics but with involvement and inputs from experts in physical and life sciences, economists, political scientists, sociologists and policy makers. The interdisciplinary character of such a discourse attracts attention of moral philosophers whose critical analysis is indispensable. It is rational evaluation of normative arguments that makes the discourse part of moral philosophy.

What is however observed is that most of the environmental ethics discourse is typified by do's and don'ts, far from or devoid of reflection on ethical theory or fundamental moral principles. K. Danner Clouser while dealing with similar concerns regarding methodology in bioethics had observed: "Medical ethics is a special kind of ethics only insofar as it relates to a particular realm of facts and concerns and not because it embodies or appeals to some special moral principles or methodology. It is applied ethics. It consists of the same moral principles and rules that we would appeal

to, and argue for, in ordinary circumstances. It is just that in medical ethics these familiar moral rules are being applied to situations peculiar to the medical world. We have only to scratch the surface of medical ethics and we break through to the issues of "standard" ethics as we have always known them" ¹ Similarly, in bioethics we do not have new set of principles or manoeuvres. What we have is the same old ethics with its methodology and reasoned analysis, dealing with new areas of concern. *Mutatis mutandi*, the same thing can be said about environmental ethics discourse.

There will be objections to this view particularly in view of the fact that there are large number of economists and policy makers including legislators who depend upon democratic processes and justification based on majority opinions. The survival of policy makers in a democracy is dictated by majority concerns and not normatively defined imperatives. The most common objection is in relation to the interdisciplinary character of the environmental ethics discourse. If economic considerations and policy decisions are of prime importance while dealing with environmental ethical issues, then political expediency rather than normal considerations should be the basis of environmental ethics. In short, environmental ethics may be treated as a sub-branch of law, politics or governance, etc. rather than a part of moral philosophy. Such attempts at environmental ethics are anthropocentric or human-centered in nature. In this type of discourse, non-human world is regarded as having only instrumental value in relation to human beings. But this does not imply 'reckless exploitation' of nature, but "instead maintain that natural resources should be carefully managed for human benefit – including for the benefit of the poor and the future generations."²

Another objection is that most of the environmental issues are related to development and the major concern in this area is the exploitation of the environment by man for man's survival. Since most of the scholars dealing with these issues are developmental economists and policy makers, it may be concluded that environmental ethics is best left in the hands of economists. Moral philosophers have rarely been able to compute 'extent' impact moral or otherwise on environment, and those who are best placed to look at these problems are policy makers. Many scholars seem to believe that the methodology to be used in environmental ethics should be an interdisciplinary or multidisciplinary methodology which has inputs from social scientists with positivist/descriptivist inclinations.

Another objection is in relation to modern advances in science that have not hitherto been taken into account by moral philosophers. Of course, this is particularly so in other applied ethics disciplines such as bioethics. In case of environmental ethics, there are two issues that give rise to ambivalence: one, the massive population growth that has put great pressure on environmental sustainability (e.g. due deforestation), and second, technological advances have lead to recognition of new forms of pollution not taken cognisance of, (e.g. disposal of non biodegradable garbage). It has been argued that ethical theory was never equipped to deal with some of these new developments and hence, environmental ethics needs to be recognised as a new and emergent discipline with unique problems and its own method to deal with the same.

The above objections are indeed significant to the extent that environmental ethics is an 'interdisciplinary' field that requires inputs from natural scientists, economists, sociologists, political scientists, policy-makers *et al.* It is indeed true that theoretical

accounts and application of moral principles to real problems in life require attention to factual matters. But the consideration of factual matters should not make us forget that ultimately the moral decisions are based upon ethical considerations that form the core of the discipline. While ethics and moral philosophy may seem to represent a relatively small part of the actual work of environmental ethics, they point to a single approach and hence the methods of ethics and philosophy constitute the core of inquiry.

The second objection primarily makes a case for plurality of methods in view of the nature of the discipline and involvement of variety of disciplines. One does not deny the interdisciplinary and multidisciplinary character of the discipline, but in the ultimate analysis these disciplines come together a kind of “reasoned moral justification” that is the enduring feature of moral philosophy. Since, much of the issues begin with factual considerations based upon studies in various natural and social science disciplines, debates in environmental ethics seem to be determined by these sciences. There are two responses to this objection. One, it is true that the discussions on environmental issues are dominated by scientific (whether natural or social) inputs. But these debates must be treated as concerns of environmental studies, a new and emerging interdisciplinary endeavour. The concern of philosophers is with moral issues while dealing with emerging disciplines of applied ethics such as environmental ethics. The core of these applied ethics disciplines remains the moral concerns that require theoretical framework and methodology of ‘reasoned moral justification’ rather than reflections on factual matters.

The third objection concerns challenge to moral theory posed by the unusual and often novel issues raised in the field of environmental ethics that were not considered in the classical or traditional debate in moral philosophy. It is true that moral philosophy debates, particularly as part of normative ethics, considered centrality of the person as the object of concern. Problems arise that are due to technological advances that challenge our perception of that what was “naturally given”. These result in dilemmas, created by our increased control of the processes of reproduction and dying, population growth, decreased capacity to sustain and maintain environment. It is precisely because of this that ethical discussions have resulted in new theories such as deep ecology, shallow ecology, extension of rights to animals, etc. taking into account these changes. Although, a detailed response to such objections would require an issue-by-issue analysis of the kinds of challenges, it suffices to point out that these new developments pose threats to our ordinary ways of thinking.

The Problematical Concept of “Applied Ethics”

To recognise environmental ethics as an applied ethics discipline, one need to look at the very understanding of what means ‘applied’. Surely, one does not envisage ‘applied’ as in the case of natural science disciplines such as physics and applied physics, or mathematics and applied mathematics. In such cases, there seems to be a well recognised theory in their respective subjects which when used in practical enterprise, acquires the designation of being ‘applied’.³ But ethics seem to be from the very beginning a practical enterprise, as we observe in Aristotelian ethics which is not just to expand knowledge, but guide us and even transform our behaviour. In ethical enterprise, therefore, there seems to be no distinction between ‘pure’ theory

and 'application of theory'. The only distinction of relevance at this stage would be to recognise the fact that the applied ethics enterprise such as bioethics, environmental ethics, medical ethics are discourses of previously established and accepted methods and principles to the realm of moral experience in divergent developing disciplines and concerns thereof.

That there is no radical separation between theory and application is seen from the fact that ethical theories exist in dialogical relation to specific moral instances compelling individuals to make moral choices. The applied ethics enterprise such as that of business ethics, or environmental ethics is both theoretical and practical, in the sense that it requires theories to guide individuals understand issues and take a moral stand on the same. The new issues that come up due to the developments in science and society sometimes question the established theory, thereby leading to some form of revision to existing moral positions. Very often existing theoretical constructions do not provide resolution to the moral problems as they go against our moral intuitions in the new enterprises such bioethics, environmental ethics, etc. and hence moral philosophers engage in reformulating some of their theoretical positions giving rise to new theories. It is in this sense therefore, such new developing disciplines are to be treated as applied ethics enterprises.

It is a common belief that all new disciplines such as bioethics, environmental ethics, etc. are essentially part of moral philosophy in the sense that moral philosophy constitutes the theory and the new disciplines are applications of the same. In other words, ethics is the basic theory and environmental ethics is one of the applied ethics disciplines. In the case of bioethics which has been by now well established as a

discipline, what is observed is that most of the literature developed does not have sufficient discussions that contains self-critical moral reasoning. Instead, there seem to be statements of do's and don'ts on the basis of "accepted" principles or concepts. In the case of environmental ethics, most of the literature that passes off as environmental ethics debates constitutes discussions of economic, political and social issues relating to the environment. And at best, such debates take into account discussions in philosophy of environment or ecophilosophy. The vast literature on environment, available in print and on internet is concerning applied issues relating to environment. It has very little to do with ethical analysis. These contributions deal with very complex scientific and social concepts in relation to environment, but most often seem to mechanically apply the traditional rules to new ideas they propose. The methodological concern expressed above is precisely because of the fact that there are too many issues in so called environmental ethics literature that lack ethical reflections and are more or less factual representations of do's and don'ts in relation to the environment.

When speaking of Environmental ethics, it is relatively a new area of ethical consideration. At its heart is the question of whether things other than humans have a moral status that is independent of human beings. This would include plants, groups such as species, habitats, ecosystems, mountains, oceans, buildings, the earth, the universe amongst other things. So, for example, if we consider razing a mountain, then considerations such as it would rob people of a nice view, would not count here since they refer to duties to humans. Rather do we have a duty to the mountain as an object not to raze/destroy it? This is what is needed as some sort of criterion which gives independent moral status to objects such as mountains, etc...

There are questions that confront man in his decision making processes. For instance, should we destroy forests to make place for agriculture crops or should we exploit fossil resources such as coal, petrol and diesel which we know to be highly pollutant? Such are issues and concerns of scholars dealing with the environment. Environmental philosophy is more concerned with the place of humans in the natural environment. In Environmental ethics, we are required to think what is best for the environment, especially with respect to our own actions within the environment.

Environmental Ethics as a theoretical inquiry presupposes the nature and foundations of the process of moral reasoning and justification. This is reflected in identification and justification of moral "principles" accepted by almost all major theoretical accounts. Principles such as "autonomy", "nonmaleficence", "beneficence", "justice", "fidelity", "veracity", etc constitute the theoretical framework for the environmental ethics discourse. Discussions in this area are problematised and resolution of conflicts proposed, keeping in mind these theoretical principles. The "method" adopted in the literature in Environmental Ethics, therefore, involves essentially the application of basic "principles" of ethics to the novel problems of environment whereby illuminating the relevance and meaning of these principles for moral choice in this area. Although the pattern of such a reflection is observed in the works of many environmental ethicists, most of the publications in the area are devoid of such a focus. Although, environmental ethics works do not necessarily follow a strict method of distinguishing between various types of ethics discourses, they presuppose, the fact that ethics has these two approaches, *normative* and *nonnormative*, and further *normative* ethics includes the two domains of *general normative* inquiry and *applied*

normative ethics. Still, further that it is noted that *nonnormative ethics* comprises two sub-branches, *descriptive* ethics and *meta-ethics*.

In Applied Ethics discourse in general and Environmental Ethics in particular, questions of descriptive ethics or metaethics are secondary as against normative discussions. A non consideration of metaethical issues in such discussions has both merits and demerits. At one level one may find that metaethical discussions lead to fruitless linguistic analysis characterised by the studies of British analytical thinkers, but at another level one will find absence of serious discussion of moral issues in terms of nature and process of moral justification (the task of metaethics) detrimental to the understanding of issues of applied ethics. The absence of such a discussion may render the applied ethics discourse to moral theology rather than bioethics. More specifically, when principles are in conflict, progress in normative ethics is possible only when priorities are established on the basis of our understanding of moral reasoning and the processes involved in justification of such reasoning.

Again, there is another major conflict in normative ethics, namely, depending upon one's inclination towards utilitarian ethics or commitment to a deontological position, one will make conflicting recommendations. However, at the level of practice, rule utilitarians and rule deontologists defend the same principles of moral conduct.

Moral considerations in the applied ethics discourse cannot be confined to identifying and applying moral principles as there are questions regarding the basis, meaning, scope and justification of such principles that remain unanswered, at least in a particular context and discourse. A return to these fundamental issues is imperative in

every applied ethics programme, more so in environmental ethics, wherein there are participants of varied interdisciplinary backgrounds, but not involved or trained in normative and/or meta-ethical dialogue.

Writings in environmental ethics seem to lack methodological precision due to the fact that theoretical considerations are either ignored or just not part of the consideration. The theoretical framework is ignored due to the fact that when applied ethics began, it was at the period meta-ethics dominated the moral scene. Again, the applied ethics, particularly bioethics discourse was dominated by individuals who came from a variety of fields such as theology, law and religion. And this interdisciplinary character of applied ethics resulted in lack of theoretical commitment. This led to 'impatient' scholars from various disciplines seeking answers in terms of 'do's' and 'don'ts' to complex ethical issues even without clarifying and considering the fundamental issues at stake.⁴ For example, in bioethics, even before one could provide an adequate definition of 'death' beyond the traditional understanding, issues regarding 'euthanasia' were sought to be settled. 'Protection' of environment was sought without confronting the issue of 'for whose sake the environment needs to be protected'.

The justification for such an attitude and approach towards applied ethical issues is based upon consideration of public policy and legislation. Policy makers and legislators neither have the capacity nor inclination to involve themselves in ethical discourse that requires considerable theoretical discussion. And as a public policy enterprise, theoretical considerations are subservient to the imperatives of policy goals laid down by majority stakeholders. Such a 'moral' discourse has acquired

name of “social ethics” or “public ethics”. Although as a theory the task of “public ethics” must: (a) lay down relevant moral principles in the policy problem; (b) articulate proposed policy in the light of relevant moral principles and (c) articulate policy options in hierarchical order as alternatives.⁵ But in actual practice, the above considerations are ignored, to say the least.

Besides, the demand of policy-makers that conclusions be practical, translatable into action and based upon social arrangements, cannot be accepted by normative ethicists who seek at every stage to return to the fundamentals and whose justification has to be reasserted. The task proposed for public ethics may seem to some moral philosophers as demeaning as it makes them slavish to the policy maker’s view of the problem.

In spite of all the difficulties articulated above, environmental ethics still remains a field of ethics, and hence must be sophisticated enough to be part of ethics. The interdisciplinary character of environmental ethics shows that inputs from various fields is a necessary prerequisite of such a discourse, but this does not mean that environmental ethics is reduced to policy and legislative discourse. The method to be employed by such an enterprise has to be, *sine qua non*, the method of moral reasoning.

Our moral and other views are influenced by the views of others. This can be seen by examining our choices and actions, and even by reflecting on our thoughts regarding serious issues confronting us in day-to-day life. An example will clarify this almost self-evident truth. We condemn someone’s action as immoral, without being able to

justify why we deem it to be immoral. Very often we merely repeat what others (parents or friends or political leaders) state. Common sense tells us that we must listen to these others or read what they write as their views are often a reflection of the collective wisdom of the community or society. But to ape their views or follow them without critical reflection will be detrimental to our moral growth. It must be remembered that there have been practices in our societies/communities that were not seen as immoral during some period in history. But in due course of time, critical examination led humans to review their views and are now clear that such practices or norms are not morally justifiable. We are referring to the practice of slavery, burning 'witches' at stake, sati or denial of voting rights to women, landless or the illiterate. What is required is a self-critical attitude not only while evaluating our past moral doctrines and practices, but also our present beliefs on the basis of which we make our choices and act.

Our reflection on the history of moral growth of individuals and communities reveals important features of evolution of moral consciousness. Individuals and societies that have shown sensitivity to various human actions that are morally detrimental to other humans, to animals (non-humans) and to nature, are those that were sufficiently self-critical and that never placed individual self-interest over that of others, and that were not influenced to blindly follow the dictates of others.

What then is the alternative? Critical review of the 'givens' in our belief system about morals implies that we theorise about ethics. And to theorise about ethics involves discussing the ethical issues in an abstract manner (i.e. not with reference to specific

cases), in a coherent and consistent manner. Coherence and consistency are the hallmarks of any rational discourse, which is also the case of ethical discussions.

Hugh LaFollette⁶ in his article “Theorizing about Ethics” gives a very appropriate example of how we need to be consistent in our moral considerations. He points out how a teacher may give high grades to three different students for different reasons: to one for working very hard on the assignment; to the second for a pleasant smile and to the third student for an academically good assignment. It could be that all the three students deserved a high grade for the academic performance. But the criterion used by the teacher is improper, as the teacher is inconsistent in applying the criterion. Again, the teacher may employ an inappropriate criterion or standard while evaluating the assignments of the students, and follow the same consistently. It can also happen that the criterion used may be appropriate, but its application may be wrong for various reasons unrelated to the academic work. The teacher may be influenced by physical or mental tiredness, or the teacher may be ignorant, or simply mistaken due to oversight. There may be similar situations in the case of moral principles. Ethical principles must be applied consistently, they must be appropriate to the moral standards, and the criterion must be applied appropriately.

Further clarification is necessary to make the above example applicable to moral theorizing. The need for *consistency* in moral theorizing can be deduced from the fact that unless there is justification to treat two individuals differently because of their ‘relevant’ differences, they (individuals) should be treated equally. The consistency criterion has been used by various philosophers in their disputes with other thinkers.

Most appropriate example is debate in bioethics between pro-life and pro-choice proponents.

The pro-life advocates argue that abortion is immoral as it amounts to murder of the unborn. The pro-choice advocates argue that abortion is radically or relevantly different from murder. The pro-life advocates deride the attempts to legalise abortion, whereas, the pro-choice advocates demand that it be treated as legal. The important point is that there are no protagonists that deem abortion as murder and also as moral. Consistency criterion, therefore, demands that the disputants are consistent in their positions within the context in which argument arises.

Another example of consistency is the case of debates between protagonists of free speech and those who defend freedom of action. It is consistent to argue that since books or films should not be censored or banned exactly like we do not accept censorship works of art. In other words, pornography should be free from censorship, as it is a 'form of speech' and it does not matter whether majority of people who claim that they are voices of the society, want it to be banned. If the ban on the basis of majority opinion is accepted, then even political statements and election speeches that are objected to by majority of people should be censored, argue the free speech proponents. Those who oppose the above position, argue that pornography and other such items are 'relevantly' different forms of speech that are included in the category of 'free speech'. Both the proponents of free speech and those objecting to some forms of 'speech' and censorship try to point out inconsistencies in their opponents' argumentation.

Now, consistency has been defined as a set of statements that does not have a statement that is contradictory or entails a contradiction. Logically speaking, “all valid arguments are consistent: if it is necessary for the conclusion to be true (validity) then it must be possible for the conclusion to be true if the premises are true (constancy).”⁷ In moral reasoning such strict logical criteria/criterion is not always observed. We do not see such details because of complexity of moral reasoning. However, it is arguably true that the criterion of consistency is a standard for rejecting an argument for or against a moral position, and philosophers do decide debates taking recourse to this criterion.

The second characteristic of rational ethical discourse is application of correct principles. A reflection on ‘theorizing about ethics’ will compel philosophers to look into the principles, or appropriate guidelines or moral standards which determine our actions to be moral or not. Study of applied ethics disciplines and particularly of bioethics and medical ethics, has revealed that rules and principles play a special role in arriving at appropriate moral decisions. History of medical ethics for instance has always been beset with sets of rules, or do’s and don’ts representing certain ethical principles. The moral dilemmas that professionals faced in bioethics and medical ethics could be addressed only when the same were subsumed under certain moral principles and policies framed therefrom. There was of course the fear that some of these guidelines or principles were expressed in very rigid form, and created complex problems for those not familiar with the moral grounding of these rules. Nevertheless, these were required to facilitate decision making processes in their respective fields.

Classical moral philosophers have in their deliberations relied upon framing correct moral rules required for right moral conduct of individuals. For instance, Plato and Aristotle avers to moral rules regarding justice, truthfulness, fidelity, beneficence, etc. and that the same are deemed necessary to achieve a satisfactory life as humans. In Immanuel Kant, such moral rules are expressed in the form of maxims. In the case of J. S. Mill, moral rules are some sort of expressions of general tendencies like the utilitarian principle of 'greatest happiness to all'. In contemporary discussions, moral rules and principles assume specific meaning, i.e. they function as guidelines regarding what action is permitted or prohibited in a given moral situation. It may, however, be noted that it is difficult to make a water tight distinction between moral rules and moral principles. But, as David Solomon puts it, "principles are generally distinguished from rules by being both more general and more foundational".⁸ The most important feature of moral rules is that they guide human moral behaviour, like the general rules guide and restrict non-moral human actions. There are rules to control human activity such as language, scientific activity, religious rituals, legal procedures, games, etc. that both facilitate and restrict actions. Construction of moral rules may historically have been prior to framing of rules in other human activities. Still, the debate regarding the force of such rules continues to date and even the existence of such rules is questioned.

In bioethical discourse, there are rules with specific restrictions that are meant to control action of individuals responsible for decision-making processes. There are also rules that govern actions of large group of persons and some such rules even have the force of regulations and the action depends upon prescriptions that demand permissions (example: Rules that are framed to regulate medical termination of

pregnancies or treatment of terminally ill patients). Many of the rules have been included in the legislations by the state bodies, some others have been part of the professional code of conduct and still others have remained in the broader moral codes sometimes with religious sanctions and at times with social sanctions.

And finally, let us look at the foundation of the moral rules or guidelines. Rules enter into the moral discourse and are deemed legitimate due a general moral principle: “An action A is morally justified if it is in accord with the relevant moral rules, where these rules have been derived from a set of adequate moral principles.”⁹ When the validity and relevance of a moral rule is questioned, the issue that requires justification is the moral principle on the basis of which the concerned rule is justified. Consequently, moral action (X) is justified on the basis of moral rules (Y) which in turn is justified on the basis of the moral principle (Z). This is so because the relation of Z to Y, and Y to X is deductive. David Solomon provides an appropriate example in bioethics to justify the deductive moral reasoning seen above.¹⁰ Experimentation with humans is morally wrong as humans as subjects in the experimentation are put to risk. But, if informed consent is taken, one can conduct experimentation with human individuals as subjects. The moral principle that is violated is that no human can be treated as a means to an end. But since there are humans who can be treated as ends, there are other humans who are willing to become experimental subjects, and give informed consent, - such action is considered as morally appropriate.

There are criticisms of the above position. We may question the validity or adequacy of the moral principle that is used to justify the rules. One may overcome the criticism

by positing a higher level abstract principle that justifies the principle used to justify the rules. But such an argument could lead to infinite regress. Alternatively, one may claim that the moral principles used for justification of the rules are by themselves self-evident. But history of moral philosophy and meta-ethical discussions are replete with arguments that do not accept such self-evident moral truths. The third alternative suggested justifying the validity or adequacy of moral rules is the existentialist and non-cognitivist's criterion. Ultimate moral principles in this context are neither deemed to be self-evident nor derived from more abstract moral principles. They are chosen by the subjects and any attempt to deny this would amount to 'self-deception'. But the fact remains, that the third alternative does not provide grounds for justification of moral rules and consequently, moral principles. It merely rejects the issue as inappropriate or irrelevant.

The above criticisms have compelled some moral philosophers to revise their position regarding moral principles, rules and action. They have recommended a shift in the positions of principles, rules and action. Instead of actions being justified by rules and ultimately by principles, they suggested that it is the moral actions that justify rules and principles. In short, it is the actions that are deemed to be morally right or wrong, and directly perceived as such. Principles and rules are seen as appropriate so long as they help us to sum up the correct moral perceptions.¹¹

Some moral philosophers have opted for another strategy. Moral philosophers who have some commitment to situation ethics are afraid that if we give importance to principles and rules, then it is likely that moral decision-making will become legalistic and consequently rigid. Moral decision-making, the situation ethics moral

philosophers, is a complex process that has to consider individual situation in all its complexity, particularly in view of the fact that many of the situations give rise to moral dilemmas. These moral philosophers demand that we must consider all features of a particular moral situation, free from general rules given as part of the moral principles before a decision is made. Guided by some goals or ends we must make the moral decision with the sole concern for the welfare of others. The main problem with these situation ethics philosophers is that they have affinity with act-utilitarianism and suffer from the criticisms of the same.

How then are we to justify the existence of rules that guide us in our moral decision-making? John Rawls, in his discussion of conception of justice has reflected on how rules are related to actions they conform to. What has come to be known as '*summary conception*', it is argued that the task of rules is to summarize our understanding of what is acceptable or compulsory in relation to an action. By implication, one can argue that we are capable of performing a particular act prior to our awareness that there is or are rules governing such an action. Therefore, rules function "to regulate an activity that was possible independently of the rules, and can be said to summarize our perception of the inappropriateness"¹² of individual action. There is another conceptual device that views the relation between rules and the actions regulated by the same. This second view has come to be known as '*practice conception of rules*'. The task of rules, according to this view, is not to regulate existing actions, but to enable such 'new' moral actions that can be brought under the purview of the rules. In bio-ethics and more particularly in ethics in medicine, the presence of 'summary rules' and 'practice conception rules' is clearly evident. David Solomon cites medical confidentiality, 'truthfulness to patient', and 'fairness in allocation of medicinal

resources’, as cases of ‘practice conception rules’ and rules regulating prescription of placebos as ‘summary conception’ view. There may be disagreement regarding which view ideally expresses the nature of moral rules. What is of importance for the present discussion is the justification of moral rules that help in decision-making processes, rejecting the objections to moral rules advocated by act-utilitarians, situationists and others.

Another criterion that adequate moral theorizing demands is that there should be correct application of rules, taking into account the context and situation in which a case is morally considered. Hugh LaFollette identifies five situations due to which we may make mistakes while applying the moral rules. An individual may make a moral mistake (a) because he does *not see alternative* action; or (b) he pays *insufficient attention* to the other’s interests; or (c) he may be *biased due to self or personal interest*; or (d) in spite of all knowledge he may be *not sufficiently motivated*; or (e) does *not have necessary skill* to act morally right.¹³ Moral philosophers at one level may believe that one cannot ‘teach’ someone to be morally right. But at another level, one can, reflecting on the failures at applying moral rules appropriately; one finds that use of correct psychological tools will help to avoid the moral errors that inadvertently enter into our moral reasoning. The relevant information provided by moral philosophers, the rigours of logical analysis and the relevant distinctions between what is morally significant and what is not in the practical problems faced by individuals, will lead us to make morally right decisions and avoid morally wrong ones.

One of the objections against moral rules and moral principles is that these are subjective and the subsequent judgements are a ‘matter of opinion’. There are various debates on serious matters that need moral consideration that end up with rather bizarre conclusion of being matter of opinion. Discussions regarding capital punishment, surrogate motherhood, experimentation with animals, and destruction of biodiversity are some of the issues that create contentious arguments that are not prone to easy solutions. And consequently many scholars, decision-makers, and social scientists tend to conclude that it is a ‘matter of opinion’. However, moral judgements are not matter of opinion that deserve summary dismissal, but require serious and rigorous rational evaluation taking into account the basic moral principles man has accepted in its evolutionary growth as moral beings. It may appear that there is nothing in moral judgements that can be claimed to be absolutely right. But this does not imply that all moral positions are equally right. There are, for obvious reasons, weird purported ‘moral’ judgements based upon misinformation or lack of information that are beyond doubt to morally wrong. Hugh LaFollette likens this situation to grammar and style of writing and argues that as “no grammar book tells us specifically which ones (sentences) are best (and) we do not need a divine grammatical rulebook to distinguish the trashy or the vague from the linguistically sublime”,¹⁴ similarly we do not depend upon a moral rulebook to recognize the moral judgments from the non-moral ones.

The most important question is how do we evaluate the moral judgments given the fact that there is a quantum of disagreement regarding what is moral and what is not. One could begin with the basic premise that humans do not pass judgements without reasons, genuine or otherwise. For example, the protagonists of capital punishment

will argue that one who has taken the life of another human being has no moral right to live. On the other hand, the anti-capital punishment protagonists will argue that it is immoral to take any life whether the action is a murder or result of a judicial process. Similarly, protagonists of human experimentation argue that it is perfectly moral to conduct experiments with humans when the results of the same benefit mankind as a whole. And opponents of human experimentation argue that no human can be regarded as an instrumental value, however noble may be the cause.

LaFollette provides a very convincing analogy of film appreciation criteria¹⁵ to show how moral reasoning proceeds in providing moral justification of principles involved. When we give moral judgments, we primarily highlight the main features of the action. A movie is appreciated on the basis of (i) the strength of well-defined characters; (ii) a plot that is fascinating and keeps the audience spellbound; and (iii) and whether it leaves the viewer under a dramatic tension throughout the movie. Retrospectively viewed the above three could be looked as the defining features of a good movie. A serious movie critiques has various ways of questioning the opinion that the movie is good. One is to question the criteria used to determine a good movie. Another is to accept the criteria but question whether the movie under consideration meets the criteria. Again, another is to challenge the weightage given to each of the criteria. The defence of a movie that it is good, will have to address these challenges one by one.

The analogy between the 'film appreciation' and 'ethical issues' is very appropriate, except that dealing with ethical issues, we are at a higher theoretical plane. And what is required at every stage is a theoretical consideration of the principles used to justify

a moral action. For example, the claim whether abortion is moral or immoral will have to consider the theoretical presuppositions of the judgment. These presuppositions will depend upon what answers we give to questions such as: Is all life morally significant? When does life in pre-natal stage, become significant? Is sentience the only criterion to make life significant? Does scientific evidence of sentience, development of central nervous system and feeling sense of pain/pleasure provide significant new dimension to moral argument? It is the duty of moral philosophers, (like movie critics in the case of film appreciation) to identify moral criterion or criteria with which to judge moral right or wrong, to identify the meaning and implication of such criterion and finally ascertain whether the said moral action meets the established criterion.

There is one last feature of the above analysis of how the theoretical discussion on practical ethical issues proceeds. Like in the case of film appreciation there is no reason to believe that all individuals who subscribe to an ethical theory will be prone to make similar practical judgements. Similarly, all individuals who make similar practical judgements do not necessarily subscribe to same ethical theory. In other words, our knowledge of someone's commitment to a theory does not mean we can predict his moral action, right or wrong. As Hugh LaFollette puts it: "...moral theories do not dictate how we should action all situations, rather they offer different criteria of moral relevance."¹⁶

Towards A Secular Ethics

Discussions on environmental ethics tend to be philosophical debates based upon certain metaphysical and religious presuppositions. All religions have determined or

influenced our perception of the world and have defined the roles which individuals play in nature. To understand the influence of religion on environmental ethics, one has to read the religious texts as well as inquire into the tradition that goes on into the making of religions. There are, of course, significant differences in approaches towards nature and nature's relationship to man according to different religions.

Christian view is best reflected in the idiom of "man as the master of the universe". If man is assumed as the master of the universe, then he has forgotten the 'intrinsic' value of nature. Man is a 'conscious being' and it may be accepted that he has the ability to recognize the goodness of God's love and the desires of the world. The Old Testament based Christian position is indeed anthropocentric, whereas the New Testament position inclines towards eco-centrism. Although the Old Testament position attributes to man a dominant role in the whole creation, it does not empower man to exploit and destroy nature. Consequently, the Christian position regarding the relationship between man and environment is characterised by: (a) man's dominion over nature; (b) man's participation in nature and (c) man's stewardship of the natural environment.¹⁷ These are not exclusive positions as 'dominion' can and must be understood as caretaker, trustee, stewardship which makes it possible for man to participate in natural processes. This is possible if and only if one recognises that environment itself is a 'being' and each being has a significant role to play.

Other religious traditions have similar resonances. For instance Islam calls for a fundamental change in the way we live our lives at the personal and societal level. This is because, Islam recognises that humanity are equal partners with the rest of the creation and nature. As argued in the Quran, heaven and earth are extensions of God's

throne thereby suggesting that creation is designed to function as a whole. Hindu religious traditions¹⁸ also provide similar normative criteria for our attitude towards nature. According to *purusharthas*, *dharma* is the root of all goals and gives life a purpose. Vedic Hinduism expresses concern for nature when it lays down a thesis of metaphysical union between human and non-human beings which establishes and sustains a proper relationship between the physical nature and humans. *Rta* provides the grounds for the harmonious relationship between the cosmic and the natural order. This is reinforced by the theory of karma (i.e. every action that one performs has its effect in the world) that conceives everything in nature as causally connected with everything else. In Vedanta, the doctrine of creation in some sense provides man with dominant or privileged status. However, the fact that creation is viewed as a natural unfolding of spirit in the world, everything in nature is seen as of intrinsic spiritual worth. Again, Bhagavat Gita and other texts seem to support a form of deep ecology.

The important question at this stage is whether one has to accept an ethical pluralism based upon certain religious considerations. Understanding of ethical pluralism will compel us to review forms of pluralism that seem to influence ethical considerations, namely, *intellectual* pluralism, *religious* pluralism and *liberal political philosophy*. These are the three major constituent elements under which moral pluralism functions in various societies.

It is not the case that there were no sceptics regarding the existence of absolute truth. But postmodernist philosophies are the pioneers of intellectual pluralism that denies the existence of *objective truth*. The times that individual religions had laid the claim to objective truth based upon their respective faiths, is over. Contemporary

intellectual tradition encourages plurality of belief systems and consequently anyone that claims to have exclusive access to truth is looked upon with suspicion. It is an undeniable fact that multiple religious systems exist in any given society, even in those that politically declare themselves unreligious or theocratic countries. And these religions accept, at least overtly, that all paths lead to the same ultimate reality. Since all religions have some ethical tenets as part of their belief systems, moral pluralism has to be accepted. Democratic governments founded on the liberal political philosophy have to be not only tolerant but encourage individuals, particularly those of minority groups and their ethical belief systems.

There is a distinction between pluralism and relativism. Pluralism as an assertion, and mostly used as a description of reality – existents, religions, cultures, etc. Whereas, relativism is mostly used as a prescriptive term for asserting that there are no fixed truths, or those that can be known to us. When Aristotle in *Nicomachean Ethics*¹⁹ said that “Fire burns both in Hellas and in Persia; but men’s ideas of right and wrong vary from place to place” he was asserting the truth of relativism. Relativism logically results in pluralism, but pluralism does not lead to or imply relativism. Pluralism as term and concept expresses diversity whether religious, moral or cultural in a given society.

Pluralism has been a phenomenon observed in most contemporary societies except those that are politically governed by some authoritarian forms of government. The problematic part of the fact of pluralism is the claim that such a form of pluralism invariably leads to the belief that there is no truth, religious or otherwise. Such a claim of pluralism is fallacious to the extent that it is self contradictory as it negates

the reality of the world as it is known to us. Such forms of pluralism are also a threat to the autonomy and primacy of morals.

Reflection on the ethical theories that have been discussed by moral philosophers reveals that there are two classes of theories: *consequentialist* and *deontological*. Deontological theories are based upon the premise that moral rights are independent of consequences, which means that rightness of an action does not depend upon how it ‘promotes good consequences,’²⁰ and the consequentialist theories are based upon the premise that “we ought to do whatever maximizes the good consequences.”²¹

Deontological theories also known as non-consequentialist theories have argued that moral obligations are not dependent on consequences of their action. In other words, justification of moral rules such as ‘one should not kill’ or ‘one should not steal’ is independent of what results it produces or what pleasure or pain it gives to others. Theoretically viewed, deontological theories are logical and have been accepted by moral philosophers who argue for the autonomy of ethics. Telling lies, in general, is universally accepted as morally wrong; whatever might be the resultant ‘happiness for the greatest number’. One could put this argument more convincingly if you consider the following. One would not be morally right to kill someone even when killing would produce ‘greatest happiness for greatest number’, namely, many would benefit from the harvested organs from the dead body. Deontological theories avow that some actions are morally right and some are morally wrong by themselves. There are of course differences between the various deontologists regarding ‘how’ we ought to act.

There is also disagreement regarding the justification for their positions. For example, some deontologists like Kant would justify their claims on the basis of abstract reason. Others like W.D.Ross would claim that it is intuitions that show us how to we should act. And still others like John Rawls will argue that we depend upon and justify their 'reflective equilibrium' to discover the moral principles.

Consequentialist theories mandate that our action should be such that results in good consequences. The reasons are obvious to see. Most of our everyday decisions seem to work on the basis of similar reasoning. We evaluate or calculate different options that we have while making a decision. Given a large number of options, we decide to select that which results in greatest benefit to us. In like manner, in moral reasoning, the individual opts for that action which will bring about best moral results to him/her. The only difference being that we include not only the individual interest but the interests of other individuals. Altruism being one of the moral concerns, protection of interest of other individuals, indeed adds to the theory's distinctiveness and merit. In broadest terms, consequentialism is the most appealing of moral theories. Most commonly discussed consequentialist theory is utilitarianism expressed in the popular maxim "greatest happiness of the greatest number". To put it in precise terms, classical utilitarianism affirms "that we ought always to do whatever maximizes the balance of pleasure over pain for everyone affected by our action".²²

The most important issue for the utilitarian consequentialist theory is to decide which consequences are to be considered and what yardstick is used to measure the extent of consequences to be taken into account before an action is considered as moral. Application of utilitarian principle is not simple and straightforward. Applying this

principle involves to (a) consider the options that we have; (b) consider the extent of pleasure and estimate the consequential pain that the action may cause and (c) think about which action maximizes pleasure in order to balance it with pain that results from the action. Step (a) may be easy. But step (b) and (c) are indeed difficult unless one believes in computation of pleasure and pain which in itself is a difficult task in any field. Alternatively, one could opt for an indirect application of the utilitarian principle which involves certain heuristic devices or “moral rules” (e.g. “don’t steal”) that help to decide what action would maximize pleasure and reduce pain. Depending upon the circumstances, sometimes direct application of the utilitarian principle is beneficial, and in some cases indirect application is more appropriate.²³

Again there are moral philosophers who propose another distinction between type of utilitarian principles: act utilitarian (“we ought to do the *act* with the best consequences”) and rule utilitarian (“do what is prescribed by the *rules* with the best consequences for people in society to try to follow).”²⁴ For *act* utilitarian, therefore, moral action is determined by the circumstances that will promote ‘greatest happiness of the greatest number’. On the other hand, for *rule* utilitarian, moral action is determined by rules followed by most people to promote the ‘greatest happiness of the greatest number’. Utilitarianism has given rise to some weird or bizarre situations. *Act* utilitarian proponent may find that lying in particular circumstances results in greatest happiness to greatest number, whereas, *rule* utilitarian might argue that if everyone is deceitful, it will minimize happiness, and therefore, the best thing is to create a rule against deceit to advance ‘greatest happiness to greatest number’.

Utilitarianism seems to be the most preferred theory in social sciences and governance. Study of various ethical claims in the environmental debates tends to be dominated by utilitarianism. An action is morally right if there is no other alternative that results in better balance of pleasure over pain, is the claim of utilitarians. And this along with the claim of Jeremy Bentham that animals have moral standing as they meet the utilitarian criterion as sentient beings, seem to create an ideal framework for environmental ethics. However, the inadequacy of classical utilitarianism can be gauged from the fact that it cannot distinguish between pleasure (or pain) derived from natural environment or from artificial or manufactured environmental element such as plastic trees, astro-turf or flowers made of cloth or paper. There is no binding force that will compel us to protect the natural environment, when the sole purpose of the environment is pleasure which may be derived from synthetic objects.

An exception to the various types of utilitarianisms that suffer from inadequate defence of the environment is the utilitarianism of Peter Singer. Peter Singer,²⁵ after defending the principle that 'all humans are equal' and therefore possess interests, proceeds to show that non-human animals also suffer like we humans do. He accepts Jeremy Bentham's pleasure-pain principle and argues for 'sentience' (capacity to suffer pain) as justification why we should extend moral considerability to non-human animals.

In the clutter of opposing theories and seemingly anomalous positions taken by moral philosophers in general and environmental philosophers in particular, there is the need for a starting point from where fruitful moral debates on environmental issues could take place. Richard Sylvan while rejecting the principle of 'basic *human chauvinism*'

of Western liberal philosophy, proposes counter examples to demonstrate that “ethical principles if correct are universal and are assessed over the class of ideal situations”.²⁶ Out of the four counter examples that Sylvan provides, the first one, namely, *the last man* is the most significant for our purpose. As the last man in the universe, fully aware that there is no one else to come after you, and you yourself are suffering from an incurable disease and would soon die, would you eliminate all that exists, as it serves no purpose and no harm or pain is caused to any species in the process of elimination? Sylvan’s answer to this would be a categorical no, as “radical thinking and values have shifted in an environmental direction in advance of corresponding shifts in the formulation of fundamental evaluative principles.”²⁷ For Sylvan, the justification why the action of the last man (if he were to destroy everything around him) is impermissible as it would violate the reframed freedom principle that excludes environment and species. For our present study, the justification for an action to be morally right or wrong is principles and vice-versa. In the ultimate analysis, these general moral principles are justified on the basis of metaethical considerations discussed above.

NOTES

- ¹ K. Clouser, (1978), 'Bioethics', in *Encyclopedia of Bioethics*, Vol. I, The Free Press, New York, pp. 116.
- ² Clare Palmer, (2003) “An Overview of Environmental Ethics”, in Andrew Light and Holmes Rolston III (eds.) *Environmental Ethics: An Anthology*, Oxford: Blackwell Publishers, p. 18
- ³ Cf. James M. Brown, (1987) “On Applying Ethics” in *Moral Philosophy and Contemporary Problems*, (ed.) J. D. G. Evans, Cambridge: Cambridge University Press.
- ⁴ Ronald M. Green, (1990) “Method in Bioethics: A Troubled Assessment”, *The Journal of Medicine and Philosophy*, Vol. 15, No. 2.
- ⁵ Albert R. Jonsen and Lewis H. Butler, (1975) “Public Ethics and Policy Making”, *Hustings Center Report*.
- ⁶ Hugh LaFollette, (1997) “Theorizing about Ethics” in *Ethics in Practice: An Anthology*, Hugh LaFollette (ed.) Oxford: Blackwell Publishers, pp.3-12.

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- ⁷ Sybil Wolfram, (1989) *Philosophical Logic*, London: Routledge, p. 11
- ⁸ Wm. David Solomon, (1978) "Ethics: Rules and Principles", in *Encyclopedia of Bioethics*, Vol. I, The Free Press, New York, p.408.
- ⁹ Ibid. p. 410
- ¹⁰ Cf. Ibid.
- ¹¹ Cf. Ibid p. 411
- ¹² Ibid. pp. 411-412
- ¹³ Cf. Hugh LaFollette, (1997), p.6
- ¹⁴ Ibid. p.7
- ¹⁵ Hugh LaFollette's example of "Apollo 13" movie provides a paradigm case of 'evaluation' of both the object of appreciation, and analysis of the criteria used for evaluation. Cf. Ibid. p. 8
- ¹⁶ Ibid. p.8
- ¹⁷ Cf. Ian G. Barbour, (1978) "Environment and Man" in *Encyclopedia of Bioethics*, Vol. I, The Free Press, New York, pp. 366-374
- ¹⁸ Cf. O. P. Dwivedi, (2001) "Classical India", in *A Companion to Environmental Philosophy*, (ed.) Dale Jamieson, Oxford: Blackwell Publishers.
- ¹⁹ *Nicomachean Ethics*, Book V, Ch. 7
- ²⁰ Cf. Ibid. p. 201
- ²¹ Harry J. Gensler, (1998) *Ethics: A Contemporary Introduction*, London, Routledge, Taylor and Francis Group, p.139
- ²² Ibid. p. 141
- ²³ Cf. Ibid. p. 142-143
- ²⁴ Ibid.150
- ²⁵ Cf. Peter Singer, (1993) *Practical Ethics*, Cambridge: Cambridge University Press. Chapters 5 & 10.
- ²⁶ Richard Routley, (2003) 'Is There a Need for a New, an Environmental Ethic', *Environmental Ethics* (eds.) Andrew Light and Holmes Rolston III, Oxford: Blackwell Publishers, p.49.
- ²⁷ Ibid.

CHAPTER TWO

REDEFINING ‘SUSTAINABLE DEVELOPMENT’: TOWARDS AN ALTERNATIVE UNDERSTANDING

The Second Chapter entitled “*Ethics and Concept of ‘Sustainable Development’*” seeks to clarify ‘sustainability’ as an ethical concept without which the entire discourse on ‘sustainable development’ is conceptually inadequate. There are radical differences between various discourses of ‘sustainability’ depending upon the perspective such as social, political, economic, et al. There is, however, one overarching concern that requires consideration while dealing with the environment, that is, ethical. It is under this consideration that the primacy of ‘sustainability’ can be evaluated. In the first part of the chapter, a theoretical framework will be laid bare wherein it will be argued that all humans have equal rights vis-a-vis nature and environment. Further, the meaning of all humans have equal rights is not justified on the basis of some empirical investigation, but based upon a moral norm that has its roots in the general theory of ethics.

A brief clarification of what is the meaning of ‘human rights’ and what is the moral justification for the same will be necessary to understand what follows later on. The early Western political and philosophical tradition was engaged with the concern of ‘duties’ towards God or King. In the classical Indian, there are no references to ‘rights’, the only concerns are expressed in terms of duties. It is only in the seventeenth century that rights discourse began to appear in the philosophical scene culminating with a clear articulation of ‘human rights’ *Universal Declaration of Human Rights*.

The philosophical debate regarding what kind of rights humans have, that are natural, inalienable and beyond the scope of ordinary positive law, resulted in various types of theories regarding rights. For instance, juristic theory of rights attempts to define rights in terms of power as in the case of Spinoza and T.H. Green. For such philosophers, natural right would imply exercising 'power' over other, like sovereign exercises power over the subjects, or an individual has power to act in a particular manner. It is obvious that not all rights necessarily result in exercising of power as they may be merely hypothetical and the individual may be 'powerless' to enforce the right.

The most important feature of human rights is its relationship to moral rights. We shall try to make a case for moral foundation of human rights taking into account, first, the relationship between moral rights and natural rights, and secondly, distinguishing between legal rights and human rights. This inquiry will help us to define what constitutes human rights.

A positivist understanding of moral rights is based upon an analysis and descriptions of customs and conventions. Classic examples of Bentham and Austin both of whom understood rights as correlatives of duties. Such rights were sanctioned or enforced by community or public on the grounds that the same are given by God rather than by the legal system of the country society.¹ In contrast to the above, the idealists like T.H. Green claimed that individual morality was dependent on society's morality which in turn is the result of 'unfolding of a rational morality'.² What follows from this is that an individual's right (if any) is not recognised as right, unless the society recognises this right as a 'necessary condition' to attain some good that the society recognises as such.

Critiques of such a position will point out that it is not necessary that individual's moral right be recognized by society and acknowledged as such. It is not necessary that the society recognises such rights and legally sanctions it. The slaves in ancient Rome and in U.S.A. before civil war had moral right to freedom even though Romans did not accept it or in the USA the statutory books did not sanction it. H. L. A. Hart's argument may be the best response to overcome this anomalous situation, and argue for autonomy of right. One can argue: "to ascribe a legal right to a person is to reach a conclusion of law, but to ascribe a moral right is not to reach a conclusion about what ought to be done but only to make a relevant claim."³ Hart's article "Are There Any Natural Rights"⁴, in spite of some criticisms, is still relevant to make a case for the existence of 'natural' rights, and consequently, argue for fundamental human rights. What Hart tries to prove can be summed up in his own words: "...if there are any moral rights at all, it follows that there is at least one natural right, the equal right of all men, to be free. By saying that there is this right, I mean that in the absence, of certain special conditions which are consistent with the right being an equal right, any adult human being of choice (1) has the right to forbearance on the part of all others from the use of coercion or restraint against him save to hinder coercion or restraint and (2) is at liberty to do (i.e. is under no obligation to abstain from) any action which is not one coercing or restraining or designed to injure other persons".⁵

Hart argues *a la* classical theorist of *natural rights* that one has a right because one is capable of choice and this is the case because man as man is capable of choice. This has nothing to do with his being a member of a society or that he has a special relation to other members of a community. Again, Hart argues that such a right is *natural right* not due to some 'voluntary choice' of his, like in the case of other moral rights. The difference between classical theorists of natural rights and Hart is that, he does not ascribe absolute or unconditional right to act or to be acted upon. He justifies coercion or restraint under certain conditions. Hart has a limited conditional claim, namely, "if there are any moral rights then there must be this one

natural right”⁶ as no one denies that there are moral rights, what is denied is that there is a philosophical justification of giving “ontological status’ to these rights because of the nature of language employed.

Hart’s claim can be clarified by distinguishing between various types of human utterances – for the present purpose, the following three: tautological or analytical propositions, empirical or contingent propositions and assertions or expressions of value.⁷ Philosophical claims of natural rights seem to be the result of attempts to interpret natural rights in terms of and giving ontological status accorded to analytical and contingent propositions. An example will be useful to make this point. The *right* a slave has in a given society is dependent on the society’s conventions, as the status of ‘slave’ is an artificial one created by the society. But that he (slave) has the right to be free is dependent on his humanness, i.e. by ‘nature’. The notion of ‘humanness’ provides the necessity, which make the propositions expressing the same analytical propositions. However, the slave in ancient Rome did have ‘actual’ right but was not free, as no law provided him with guarantee of freedom. Propositions expressing the existing of right to be free are therefore, in such circumstances, contingent.

M. MacDonald arguing for ‘natural law’ cites the example of early Roman lawyers as something that is ‘ideal’ in nature to be discovered and gradually codified by men. Such an ‘ideal’ is not determined by men, but by nature, and some deemed it ‘by God’.⁸ Arguing that no existing code is perfect, M. MacDonald points out that we notice only an imperfect realisation of *natural law* in positive laws created by men. Codes do have many positive laws that regulate relations between men, between men and animals, between men and nature; and between men and associations or institutions created by men. Natural law is not an overarching regulation or an ideal realisation of all positive laws. Neither is it, like the natural

laws of nature, derived by deduction, from the observations in nature. Nevertheless, it is applicable to all men, by their very nature as men.

How then are these rights justified? When Rousseau argued that “man is born free and everywhere he is in chains”,⁹ he did not have an inductive argument based upon observations of large number of people ‘born free and in chains.’ Similarly when Cicero while arguing that the law of nature applies to all men equally said that “no one would be so like his own self as all men would be like others”, he did not observe nature’s instances to come to the conclusion.¹⁰ The justification for such conclusions lies in the understanding of reason and what status it has in moral theorizing. It is obvious that propositions about natural rights are not inductively deducted generalisations. It is not experience that justifies such statements. But they are at the same time not unrelated to natural facts. Since such facts are known due to man’s capacity to reason which is intrinsic to man as man, they are natural facts. The fact that man can deduce ‘ideal from actual’ due to his natural disposition of reason, man is different from non-moral entities.

The preamble of United Nations charter of human rights states that humans possess human rights as human persons. This is possible if and only if we recognise the ontological status of all human beings and their moral worth – as Immanuel Kant put it – “worth-in-itself” or “worth-in-themselves”. It is this moral grounding that renders human rights *universal*. And this universality is not an epistemological conclusion on the basis of empirical verification. The issue is beyond empirical discourse. The descriptiveness of this concept may depend upon some empirical facts, but its universality is normatively construed. We come across expressions such as ‘human rights are both legal and moral’ or ‘human rights are legal, moral or both’. [These are, to say the least, category mistakes. What is true is human rights are by

definition (primarily) moral and later legally enforceable. If one takes into account the foundation and objectives to be achieved, all legal codes are moral. Unfortunately, the framers of legal codes or legislations have rendered such codes morally neutral, rendering the precepts in such codes to the status of ‘rules of games’.

Justification of human rights begins with ‘right to life’, the most basic of all rights – and there is clear consensus on the need to defend and protect this right. And, in spite of, not so adequate epistemological scrutiny, the ‘right to life’ is regarded as an inalienable right. Right to life is based upon the fact that ‘human life is the highest good’ and ‘foundation of all values’. We do defend and protect the right to life and condemn any violation of this right as *crime against humanity*. This is an undisputable right in spite of aberrations like government-sponsored killings that take place in some countries and even Forty-Second Amendment to the Indian Constitution.

To sum up, moral rights distinguished from non-moral (such as legal rights) are characterised by the very origin and justification as they are natural and discovered by the act of human reason. Non-moral rights are either created by legislations or by societal conventions and are justified either by a claim to collective wisdom of the community or social customs. Again, moral rights are characterised by the unequivocal applicability. In other words, they are equal rights as they are equally distributed, thus creating no injustice in their application. Alternatively, non-moral rights can or may be unequal, as the situation demands. This leads to unequal and unjust distribution of right claims. Further, moral rights are inalienable as man cannot be deprived of the same, unless, of source, he so willingly and rationally chooses to give up the same for a greater good. Legislations can be passed to deprive individuals of their

non-moral rights. And finally, moral rights are characterised by their universal applicability as against non-moral rights which have a limited jurisdiction of space and time, geographical limitation and historical context.

One of the most important concerns of 'rights discourse' is in relation to poverty. Commonly called 'anti-poverty rights' are regarded as the most fundamental as they are subject-matter of most of the international bodies such as United Nations and other bodies that fight for the rights of the third-world countries. This is so because, the consequences of poverty are varied and are devastating to the communities suffering from deprivation that leads to malnutrition, disease and even death. Right to food, shelter, clothing, and medical care are the most subsisting rights that are guaranteed in the Universal Declaration of human rights. It is not the concern of the present study to discuss various rights and their philosophical and moral implications. However, one right seems to emerge that is not directly listed in the list of rights in the Universal Declaration of Human Rights that deserves attention. And that right is the right to development and right over the natural resources and environment. The concern of the present study and the justification of rights provided above, is to argue for the moral basis of sustainable development. And hence, a case is made for 'right to development' at this stage.

Article 1 of the Universal Declaration of Human Rights claims that "all human beings are born free and equal in dignity and rights".¹¹ If this is so, then all humans presently living on earth and all those who will be born in future have equal right on the natural resources of this planet. This implies that all individuals present or future have equal right to share the benefits

of development, and negatively, restrict the development that will not be of benefit to themselves or their future generations.

Human rights issues have been the focus of attention even before the Declaration of Human Rights. Western developmental models have been used to implement human rights, and by and large these models are deemed to be the best to promote human rights. In 1993, the Vienna Conference declared: “Democracy, development and respect for human rights and fundamental freedoms are interdependent and mutually reinforcing. The International community should support strengthening and promoting democracy, development and respect for human rights and fundamental freedoms in the entire world.”¹² What was observed was that the economic development that is the base of the declaration, instead of providing protection of human rights of all societies, gave maximum benefit to western societies, thereby depriving others of developmental benefits. This is particularly so because ‘free market economies’ that the Western developed countries propagated in the name of ‘international order’ deprived the local communities the benefits of their natural resources.

The most fundamental of rights, namely, ‘right to life’ provides us with justification to right to natural resources and a healthy environment conducive to propagate and protect life. If ‘development’, particularly the one emphasized by capitalist ‘free market economists’, means greater consumption of natural resources and material products, then it violates the right to life of those individuals and communities living and surviving on that environment, as there are always constraints in supply of such resources, and the same cannot be equitably enjoyed by all. The positivist economists, under the influence of a model of development, defend ‘hyper consumption’ in order to make profits and reap profits for their investments. It is such models of development propagated by the West that result in environmental damage.

Unfortunately, the ‘residents’ of third world countries, particularly the tribal people, are accused of overexploitation of nature and destruction of forests.¹³

Returning to the main theme of the present chapter, it may be recalled that there are radical differences between various discourses of ‘sustainability’ depending upon the perspective such as social, political, economic, et al. There is, however, one overreaching concern that requires consideration while dealing with the environment, that is, ethical. It is under this consideration that the primacy of ‘sustainability’ can be evaluated. The present paper seeks to clarify ‘sustainability’ as an ethical concept without which the entire discourse on ‘sustainable development’ is conceptually inadequate.

There are as many definitions of ‘sustainable development’ and ‘sustainability’ as there are individuals or groups trying to define them. Scholars are aware of the difficulties faced in defining the two concepts. For instance, T. O’Riordan observing the difficulty, had described the task of defining ‘sustainability’ as ‘exploration into a tangled conceptual jungle where watchful eyes lurk at every bend’.¹⁴ Spedding as early as 1996 observed that there are large number of books, chapters in books and articles that have the terms in the title, but have not defined the term/s.¹⁵ Wilson probably influenced by his ‘deep ecology’ inclination lamented: ‘The raging monster upon the land is population growth; in its presence, sustainability is but a fragile theoretical construct’.¹⁶

A reflection on various definitions of ‘sustainability’ or ‘sustainable development’ shows predilection of individual authors or groups in understanding the concepts. For instance when Brundtland¹⁷ said that ” Sustainable development is development that meets the needs of the present without compromising the needs of future generations to meet their own needs”, it

prioritises 'needs' of the poor while restricting the use of exploitation of environment to that extent that 'needs' of future generations is not affected. Harwood¹⁸ while extending the concept to apply to non-human species says: "Sustainable agriculture is a system that can evolve indefinitely toward greater human utility, greater efficiency of resource use and a balance with the environment which is favourable to humans and most other species." Pearce, Makandia & Barbier¹⁹ provide a broadest possible definition when they claim that "sustainable development involves devising a social and economic system, which ensures that these goals are sustained, i.e. that real incomes rise, that educational standards increase, that the health of the nation improves, that the general quality of life is advanced." Again, Conway & Barbier²⁰ extending the concept to agriculture defined sustainability as the ability to maintain productivity, whether as a field or farm or nation. Productivity in this context, is defined as the output of valued product per unit of resource input.

Critiques of attempts of 'precise' definitions point out not only to the fact that definitions in terms of 'economic' benefits are inadequate, but also to the fact that inherent essentialist definitions are a disservice to such a 'primitive' concept. IUCN, UNEP, WWF²¹ point out that 'sustainable development', 'sustainable growth' and 'sustainable use' have been used interchangeably as if they refer to the same concept. Nothing physical can grow indefinitely, hence 'sustainable growth' is a contradiction in terms. The expression 'sustainable use' is applicable in the case of resources renewable. And finally, 'sustainable development' is the strategy of 'improving the quality of human life whilst living within the carrying capacity of the ecosystems.' Although development implies realisation of resource potential, 'sustainable' development implies recognition of limits to the development processes even when technology can overcome some of the limitations. Holdgate²² highlighted the fact that sustainability of technology be judged by a criterion, namely, whether increase of production

retains the inherent capacity of the environment for productivity. Consequently, 'sustainable' development is concerned with the development of a society where the costs of development are not transferred to future generations or at least an attempt is made to compensate for such costs, as Pearce ²³ argues. A society that looks for 'sustainable' development tries to reconcile between the developmental needs such as higher standards of living of the recent generation and that of the future generations by protecting the environmental resources as well as enhancing their potential.

Above attempts at defining 'sustainable development' and 'sustainability' and its cognates clearly reflects both complexity and ambiguity of the concepts. This led Daly ²⁴ to argue that 'lack of a precise definition of the term 'sustainable development' is not all bad' - it allows 'a considerable consensus to evolve in support of the idea that it is both morally and economically wrong to treat the world as a business in liquidation'. Besides, as Heinen ²⁵ argues given the variety of scales inherent in different conservation programmes and different types of societies and institutional structures, no single definition of 'sustainable development' or framework is consistently useful.

An analysis of 'sustainability' as defined in various text books, primarily concerned with economic development, reveals types of 'sustainability' depending upon the resources, living or non-living, thereby leading to various types of sustainability; biological etc. Again we can categorize 'sustainability' on the basis of the conceptual association it has with community, business, agriculture, etc.; social sustainability, economic sustainability, agricultural sustainability, etc. At another level, analysis of the above definitions reveals that

(a) The processes of development are limited to the extent that 'sky is not the limit' to growth; (b) There is an inseparable connection between development, society and environment; (c) There is need of equitable distribution of resources and opportunities.

Although there is considerable difficulty in defining ‘sustainable’, ‘sustainability’ and ‘sustainable growth’, one could begin with World Commission on Environment and Development (WCED) Report²⁶ attempt at redefining the terms. The WCED defines ‘Sustainable Development’ as development that meets the needs of the present without compromising the ability of future generations to meet their needs. There are two important concepts that need clarification. First, the term ‘needs’ refers to essential needs of the world’s poor and secondly, the idea of restriction imposed on technology and political and social organisation on ‘exploitation’ of environment in view of environment’s capacity to meet the needs of future generations. Critiques of the above definition²⁷ have pointed out that ‘sustainability models’ created on the basis of the above definition tend to forget the inequity in the existing social and economic relationships, while emphasising the futuristic needs.

To highlight inadequacies of the present sustainability discourse, it is appropriate that we have a cursory glance at the theories and strategies developed by the protagonists of sustainable development.

In order to discuss the concepts and principles that are inherent in sustainability, one may have to look at the most appropriate of the definitions and easily the most accepted one by the scholars involved in the discourse on sustainability. The definition provided by The Brundtland Report that defines ‘Sustainable Development’ as development that meets the needs of the present without compromising the ability of future generations to meet their needs, be taken as starting point of our analysis. The most emphasised objectives of sustainability or sustainable development are ecological health, social equity, and economic welfare. These are manifest objectives designed to aid professionals in evaluating and

directing their activities, particularly when developing, deploying, and employing technology. The pursuit of the three above objectives grounded on ethical commitments, in sustainable development, need to be balanced so as to ensure the wellbeing of contemporary populations, at the same time not depriving opportunities for future generations. Consequently, sustainable development has to pursue both *intergenerational* and *intragenerational* benefits from within the framework of ethical values.

The credo of ‘sustainable development’ has given rise to societies and communities, professional, scientific and cultural that are not only committed but make concerted efforts at solving energy problems, waste disposal issues, development of green spaces, urban planning, development of local economies, etc. Contemporary economics literature is replete full with sustainability discourse giving rise to the belief that planet earth shall not last if we do not commit ourselves to sustainable development. A brief review of some of the ‘frameworks’ may not be out of place so that when we come to its critique, we will be able to see the deficiencies of such frameworks. What are the presuppositions of such frameworks?

The Natural Step (TNS), a framework developed by Karl Henrik Robèrt, is based upon four scientifically derived System Conditions:²⁸ (1) In order for a society to be sustainable, nature’s functions and diversity are not systematically subjected to increasing concentrations of substances extracted from the Earth's crust. (2). In order for a society to be sustainable, nature’s functions and diversity are not systematically subjected to increasing concentrations of substances produced by society. (3). In order for a society to be sustainable, nature’s functions and diversity are not systematically impoverished by overharvesting or other forms of ecosystem manipulation. (4). In a sustainable society resources are used fairly and

efficiently in order to meet basic human needs globally. The Natural Step besides laying down the 'system conditions' envisages a systematic approach to implement the framework.

In 1992 William McDonough²⁹ developed a set of foundational principles for sustainable ecological design which in fact provided a definition of *sustainable design* as the “conception and realization of ecologically, economically, and ethically responsible expression as part of the evolving matrix of nature.” These foundational principles have since come to be known as *Hannover Principles* which have the potential of ethical interpretation. The Hannover Principles are nine 'commandments' that an ecologically sustainable designer has to keep in mind: 1. Insist on the rights of humanity and nature to coexist; 2. Recognize interdependence; 3. Respect relationships between spirit and matter; 4. Accept responsibility for the consequences of design; 5. Create safe objects of long-term value; 6. Eliminate the concept of waste; 7. Rely on natural energy flows; 8. Understand the limitations of design; 9. Seek constant improvement by the sharing of knowledge.

The third 'framework' that may be reviewed is the *Three Legged Stool Interpretation* which demands that there should be balance between ecological, economic and social systems. The three legged stool of interpretation envisages equal 'value' to all the three systems. The primary objective of sustainability is a strong and healthy society in which the needs of its population, present and future, are met. For such a society, it is imperative that there should be a strong economy to meet the needs of its population, provide jobs, adequate health care and take care of needs after the productive years are over. Thirdly, both the society and the economic system must respect centrality of our planet's ecological systems on which the society and the economy are utterly dependent.

A growing consciousness among the world business establishments (who came under pressure from the non-governmental organizations to control their 'greed'), the need for sustainable development, has resulted in another framework, namely, Corporate Social Responsibility. This corporate sustainability movement at one level seems to be tokenism, but at another level there seems to be concerted effort on the part of the business world to apply sustainability to guide the behaviour of business with respect to both, society and the environment as well as its responsibility to stockholders. In this new framework, responsible financial establishments highlight their success stories not solely based upon their annual profits but also on their social and environmental performance.

The difficulties of the first framework have been highlighted by many groups. However the most prominent seems to be the fact that TNS is more of an 'educational tool' rather than an avowed practical framework for companies to use for the progress toward sustainability. The framework as a definitional paradigm suffers category mistake when condition four is fundamentally different from the first three conditions. In fact condition four is *raison d'être* for the three earlier conditions. It is precisely because a large population lacks adequate nutrition while another population has more than what it needs, that there is lack of fairness with regard to meeting basic human needs.

Hannover Principles developed a sustainable design for architects, urban planners and industrial designers wherein products and processes are seen as dependent on environmental, economic and social systems surrounding them as against purely utilitarian considerations of earlier models. The model was never meant to be a 'framework' for sustainable development. However, since the principles have been quoted in various discussions as definitional

framework of 'sustainable development' it may be pointed out that it lacks clarity regarding the first two principles when placed along with the other seven.

This model based upon common sense understanding of sustainability suffers from some inherent conflicts and contradictions. This may be due to the very structure of 'stool' which places mankind outside the environment instead of being embedded in the environment or is part thereof. It suffers from the same issues as neoclassical economic model, the fundamental obstacle to the adoption of sustainability as an international framework for decision-making. Thus humanity is embedded in the ecological system as is the economy.

Since Corporate Social Responsibility is an application of the three-legged stool model, it suffers from the inadequacies mentioned above. However, the internal contradiction between profits and social responsibility has given rise to criticisms that the corporate world at best is indulging in philanthropy rather than accept of ecological system as core in which both humanity and economic systems are embedded.

In this last section of the chapter, we shall discuss the 'rights of future generations' and extend the same to species other than humans. It is only in this context that an adequate definition of 'sustainability' is possible. There are two fundamental objections to the 'orthodox' approach to environment protection. The first objection is that while valuing environment, the values of future generations must be taken into account. Secondly, 'orthodox' approach ignores the 'intrinsic value' of environment. These objections are in fact part of the 'positivistic' economics, the official doctrine upon which all economic theories are based. An ethical definition of sustainability has to take into account these objections.

What follows is an attempt to lay the foundation of 'intergenerational equity' on the basis of which 'sustainability' is justified.

The general concerns for environment are reflected in the orthodox method of how we derive environmental value by inquiry into how much we are willing to pay to protect the environment. But how do we elicit information about values that the unborn or future generations attach to environment? It is therefore necessary that we find a method by which we can both find out the 'values' of future generations as well as what would constitute 'intrinsic' value of environment. It is true that we cannot know what value future generations will place on the environment. However, it is not unreasonable to attempt a guess based upon a philosophically relevant method. We can therefore have a fairly good idea of what would happen to the environment over a period of time, if the current trends are not reversed.

Philosophers have used 'thought experiment'³⁰ as an useful method in philosophical methodology. Imagine we are living hundred or fifty years from now. What we would wish that our previous generation had done with respect to the environment? Two answers come to mind which reveal two plausible interpretations, depending upon the level or extent of 'sustainability.

Minimum that should have been done is that the previous generation should not have left us with environmental catastrophe. If in a hundred years' time global temperatures have risen as far as currently predicted, it seems reasonable to suppose that the generation living then will not thank us for the legacy. Indigenous people in the rainforest today would surely make the same judgement of generations before the present one. People in the mining belt of developing countries would wish that something had been done to reverse the trends towards

degradation. This is the basis of intergenerational *equity* inherent in the concept of ‘sustainability’.

As we have seen in the earlier part of the discussion, the term ‘sustainability’ is used in varied senses, facing the risk becoming bland if not meaningless. But inherent to the term is a useful intuitive meaning, namely, the capacity to last or continue. The above thought experiment gives direction to accord precise meaning to the term, and at the same time justify use in the context of environmental ethics.

Secondly, we may not be satisfied with merely avoidance of catastrophe. We may like to have a high level of environmental consumption as previous generations had, if not more on the basis of advancement of technology. When one generation degrades the environment by consumption, it deprives the next generation of opportunities that the earlier generation enjoyed. The benefits enjoyed are not merely economic as exploitation of mineral resources in the process of creation of wealth, but also deprivation of aesthetic delights to the next generation. The next generation may feel great injustice done to them when the environment is irreversibly degraded due to extinction of species or loss of unique habitats or even depriving the generation of aesthetic pleasures of walking in sylvan forests. The earlier generation may not have the obligation of increasing the potential level of environmental consumption of the next generation, but cannot deprive the next generation of equal opportunity for consumption of both wealth and aesthetic delights.

The two versions of ‘sustainability’ can be summed up in the following; ‘Weak’ or ‘minimal’ ‘sustainability’ requires that all environment is sustained so that the future generations are guaranteed the avoidance of environmental catastrophe. In other words, we should act as if

there were no tomorrow. 'Strong' or 'maximal' 'sustainability' would demand that the future generations are left the opportunity to experience a level of environmental consumption at least equal to that of the present generation. Someone said, 'we do not inherit the world from our parents, we borrow it from our children'. It is imperative that we leave the world as beautiful, productive and stable as it was lent to us.

Care should be taken while defining 'environmental consumption' so that one does not exclude functions which do not fall within the range of functions that economists are concerned with. Sustainability will then be meaningful only when one decrees that the future generations are left equal opportunity of such consumption measured and defined at current levels if not at enhanced levels.

The two versions of 'sustainability', *minimal* and *maximal*, could, in theory, necessitate different courses of action. It may be quite easy to provide the *same* degree of environmental capacity when environmental resources are abundant. Whereas *maximal* sustainability would require that the number of trees or volume of soil, were held constant, the minimal version might allow quite significant degradation. It is, in this sense that the differences between the two different versions may have significantly blurred, at least in terms of course of action to be taken to ensure intergenerational equity.

The concept of sustainability has given us a means of taking into account the interests of future generations. But still it has an anthropocentric approach as it identifies value of environment in terms of interests of humans. The second objection against the orthodox approach is that environment has intrinsic value and must be sustainable. If we are to respond to this objection, a defence of 'ecocentric' view will have to be articulated in an effort to

overcome the anthropocentrism of an orthodox view of environment. There are broadly two versions of the ecocentric view. First, one can ascribe *intrinsic value*³¹ to individual members of non-human species. Second, one can locate *intrinsic value* not in individual members of non-human species in ecosystems as a whole.

The 'speciesists' or 'human chauvinists' insist on the radical difference between humans and non-humans on the ground that it is only humans that can be regarded as ends-in-themselves, whereas all other species are merely instruments for the well-being of others. This criterion is based upon the assumption that only humans are part of moral community, and that such a characteristic is not applicable to other species. And therefore it is not proper to accord moral status to anyone other than humans. Some philosophers, however, differentiate between various types of species on the basis of consciousness or sentience, i.e. ability to have experiences such as pain.

This may be intuitively justifiable. It is also part of the official doctrine that has come down through history of philosophy. But it is inadequate to act as a guide to environmental policy, since it does not apply to animals and plants lower down the evolutionary scale. Some ecocentrists have, therefore, argued that the possession of life itself is sufficient to give intrinsic value. But this leads to the problem of how to rank different life forms in the moral scale. Some 'deep ecologists' have argued for 'biotic egalitarianism in principle'. But few people will acknowledge moral equivalence between a plankton and a human being, even if this could in any way act as a basis for action. In the absence of a guide to moral ranking, ecocentrism does not provide much help in the formulation of environmental protection policy.

More importantly, locating intrinsic value in individual members of non-human species does not provide an argument for preserving species as a whole. It is doubtful that individual animals and plants can be said to have 'interest' in the reservation of number or diversity of the species as a whole; yet it is this which is often the key question at issue in environmental policy. An ethic concerned with protecting individuals offers no guarantee of protection to the ecosystems of which they are a part; indeed, to what is characteristically thought of as 'nature' itself. Imagine that a development corporation wanted to build a theme park on a wetland noted for its many and rare species. The park would be so profitable that the corporation could offer to remove (humanly) all the animals and the plants on the wetland and place them in a zoo, where they could be protected even from one another. Few ecocentrists would regard this as desirable, yet an ethic concerned solely for the welfare of individuals would have difficulty arguing against it.

Alternatively, the *second* version of ecocentrism is an attempt to locate intrinsic value not in individual members of non-human species but in the ecosystem as a whole. Aldo Leopold's Land Ethic was an attempt in this direction when he argued 'a thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise.'³² There are issues that need clarification in the case of land ethic, particularly concepts such as 'beauty', which is commonly viewed as an anthropocentric concept. Again, land ethic leads to some unacceptable moral and societal conclusions. It envisages that if human beings, like other living things, have value insofar as they contribute to integrity, stability and beauty of ecosystems, we would seem to have a justification for culling people. The difficulties of Land Ethic do not invalidate the need of assigning intrinsic value to ecosystems. There are strong intuitive grounds for wanting to extend the class of morally valuable things beyond just human beings. The attitude of 'reverence to nature' which is the

foundation of the ecocentric view is almost certainly an essential psychological and cultural element of any policy towards its protection.

In spite of the difficulty that the ecocentric view does not offer a coherent approach to environmental protection, the framing of a policy to protect the environment, is performed by the concept of sustainability as discussed above. 'Sustainability' (particularly, its strong version) provides environmental protection that would have been given by a coherent ecocentric position. In declaring that future generations should be left the opportunity to experience a level of environmental consumption equal to that of the present generation, sustainability imposes substantial constraints of all and varied economic activity. There is no doubt that sustainability is anthropocentric. It wishes to preserve the environment for the benefit of future generations. But unlike the orthodox approach it does not 'benefit' in terms of economic demands. It makes no attempt to calculate how much the future generations will value the environment in terms of their willingness to pay for it. It simply recognizes that future people probably will want the environment to be preserved, and that the current generation therefore has an obligation to give opportunity to enjoy it. This enjoyment is understood in widest terms – not just use of the resources but appreciation of nature's diversity and beauty. This emphasis on equality between generations leads to a view of environmental protection which has more in common with the ecocentric standpoint than with that of the use of the orthodox 'valuation' approach.

The discussions justifying sustainability on the basis of intergenerational equity and ecocentrism are clearly ethical in character. This is the difference between the arguments provided by the orthodox approach which are based upon positivistic methods of environmental valuation. Indeed, they appear to make sustainability a different sort of

concept from environmental evaluations. Those who defend the evaluation approach to environmental protection believe that their 'positive' approach helps them to measure objectively 'desires', 'interests' of living humans who reveal their likes or dislikes, interests or disinterestedness, through their behaviour. This methodological framework used by economists creates an environmental protection that is not based, according to them, on what 'ought' to be, but on what is. The resultant environmental valuations are empirically measured valuations and not ascriptions of interests to future generations.

The methodological framework that economists employ to deal with the environment can be understood if we reflect on the 'engineering' model in sciences. Economics as a science will use the framework of engineers "in creating technology which enables humans to transform the environment in unprecedented ways, changing radically the nature and scale of the environmental impacts of their activities"³³.

Development in technology has led to the capacity of humans to change any part of our environment to such an extent that it is irreversible. Of course, this is not a new venture on the part of humans. Right from the primitive times, man has employed his intelligence to bring about changes and exploit nature for his survival or benefit. However, development of modern science-based technology is both capable of creating irreversible changes in the nature, that may be beneficial to few individuals, not necessarily to all. Further, such benefits may be beneficial to the whole of mankind, but not necessarily to future generations. This is the most critical issue that environmentalists in general and moral philosophers in particular, are concerned. As environmentalists point out, "enhanced technological efficiency, industrialization and reliance on fossil fuels have brought about a number of environmental

problems which are potential threats not only to humans themselves but to other organisms in the biosphere, and even to preserving life on the Earth.”³⁴

Whereas the advancement of technology was seen as the natural consequence of human rationality, its use in bringing about changes in nature is frightening as some of the changes are irreversible and the present generation may not be able to see the consequences of such changes. This fear can best be expressed in words of the Christopher Stone: “there is today a widespread feeling that our technology, our capacity to alter the Earth and the relations thereon, *is outstripping our ethics, our ability to provide satisfactory answers to how that power ought to be exercised*”.³⁵

The moral predicament is reflected in the fact that on the one hand the interventions in nature by the ‘engineering’ framework were meant to enhance survival and quality of life, on the other hand, they brought about changes that resulted in unforeseen consequences for the future generations. Economists consciously or unconsciously using the ‘engineering’ model fall prey to the same moral predicament of technology experts.

A brief reflection on the type of approaches that scientists /technologists on the one hand and ethical environmentalists adopt, on the other, will clarify the issue and suggest direction of solution for the same. For the engineers and technocrats, the environment is ‘the physical surroundings, the external conditions’ within which engineers work. They have only instrumental or technical control of the environment, which has to be rationally managed, namely, manipulated, controlled and predicted. The nature of such analytical science is the production of knowledge that helps to control and predict nature. One of the inherent limitations of such an approach is that science envisages a form of dualism between the physical objects or nature and the human observing subject, the scientist or technocrat. This framework has been developed as a result of a long tradition of science dating back to

sixteenth and seventeenth century philosopher-scientists and mathematicians like Copernicus, Kepler, Francis Bacon and Isaac Newton. This has resulted in a Cartesian dualism wherein “scientists are observers who approach nature analytically, i.e. by breaking it down into (its) component parts. They study and control nature as it is, or might be, useful for their own ends.”³⁶

The engineering profession and the framework within which the engineers function is based upon the development of the modern scientific outlook. Natural scientists and technologists and engineers approach the natural environment with the framework provided by modern science, and they assume that they can apply the principles developed or acquired by modern science and manage and control nature for an assumed cause of enhancing quality of life of human beings. Implicit to this world view of classical science is a certain kind of human-environment relation that creates environmental ethics of their profession which is by and large *utilitarian*, an ethics that believes in maximising the use of natural resources, driven by commercial self-interest. Positive economics, attempting to be a science, uses the classical and modern scientific framework, whereby, the inherent dualism of the classicists is adopted while evaluating that what is good for humans. It also, like the ‘engineering model’ looks at the natural environment as that what should be controlled and managed by mankind to reap benefits for it. Environmental issues are considered solely within such a dualistic framework and narrow limitations of ‘benefits to the observer’.

The alternative vision of natural environment as a resource, to be contemplated and enjoyed by all, present and future generations as it has been done by past generations, is not part of the above framework. Issues are not addressed by considering ourselves as constituents of nature and as actually and potentially valuable resources. To consider that human needs,

wants and interests alone are the basis for a whole system of principles and norms governing our conduct in relation to the natural environment is the basic fallacy of such a paradigm.

This engineering or scientific approach, and *mutatis mutandi*, the economic approach based upon the scientific approach, considers nature as actually or potentially valuable resource to be used or exploited in terms of economic interests. The utilitarian ethics prevalent in this approach urges that we ought to preserve the environment for the sake of humans. Such an ethics therefore treats only humans as morally considerable.³⁷ Consequently, all non-humans and environment are denied intrinsic value. In other words, nature and non-human animals have only instrumental value; they are valuable so long as they satisfy human interests. Such an environmental ethics locates justification of moral duties and obligations to the natural world, in its (natural world's) capacity to satisfy human beings and protect and promote the well-being of humans. In economic terms, such an ethics "takes the form of a cost-benefit analysis in which monetary value is ascribed to the benefits which accrue to the humans balanced against the costs which fall on humans".³⁸

It is obvious that such an environmental ethics based upon utilitarian cost benefit approach satisfactorily accounts for values we attach to forest, as a living community of different species. Many environmentalists believe that biodiversity has intrinsic value, in spite of the fact that it may also have great instrumental value as it contributes to human welfare by providing new medicines, genetic strains for food, recreational enjoyment, etc. Another consequence of the above utilitarian based approach is that the type and extent of protection of the environment will be determined by the perception of benefits that humans accrue from the environment. This is clearly observed from the fact that moral duties and obligations to the natural environment are justified by utilitarian considerations. Philosophers in general and environmental ethicists in particular have rightly concluded that ethics based on the

above model is more of an ethics for the 'use of environment' rather than 'environmental ethics'.³⁹

What is the alternative? Philosophers, scientists and environmentalists have expressed alternative ways of looking at the environment and consequently tried to develop alternative environmental ethics. This is the result of the critique of dominant scientific paradigm that has been adopted by economists and that has failed to arrest the environmental degradation. It also failed to take into account the concerns of the future generations. One could label such an approach as *ethics environmentalist concept of environmental*.

Historically viewed, the new concept of environment based on 'ecology' goes back to Alexander von Humboldt's studies regarding relationships of animals and plants and his findings of 'how nature's forces act upon one another, and in what manner the geographic environment exerts its forces on animals and plants' and, more importantly, his reflections about the 'harmony of nature'.⁴⁰ In ecology, plants and animals in their habitats, form an interdependent 'community'. The dynamic interactions of the biotic organisms and a-biotic elements are the integral parts of an ecosystem, which is larger than the sum total of its parts.

The instrumentalist conception of the world, the outcome of a mechanistic, reductionist and atomistic approach to environment, has undermined the importance of environment as a whole, and gave undue importance to humans. The resultant anthropocentric ethics has led to exploitation of nature to the extent of undermining nature itself. The alternative model is an ecological and holistic conception of reality on the basis of both scientific and non-scientific reflection and understanding derived from recent developments in science.

The Gaia hypothesis for one has been a classic example of holistic organic approach to the environment that overcomes the deficiencies of the mechanistic model of science. It

considers Earth as ‘a system that operates and changes by feedback of information between its living elements (flora and fauna) and non-living components (climate and geology).’⁴¹ This Gaia insight provides a more holistic and ecological approach to the environment as an integrated organic whole rather than a world divided into parts as living beings, humans and non-humans, vegetation and inanimate objects. The idea that humans are just one of the components of the environment and not above or outside the environment became the cornerstone of deep ecologists’ perception of the environment.

Ethics based on the environmental approach as stated above, unlike the utilitarian ethics, believes that we ought to preserve the environment for the sake of the ecosphere and the appropriate behaviour of all humans should be such that we maintain the integrity of ecosphere and not dominate and conquer it. It also presupposes that humans are not only members of the human community but first and foremost members of ‘biotic community’. Animals, plants and ecosystems have intrinsic value unlike in case of anthropocentric utilitarian ethics where they have instrumental value in relation to human beings.

By contrast, sustainability is a ‘normative’ concept, that has an element of normativeness, whether positivist-oriented social scientists and economists accept it or not. This is not because ‘sustainability’ cannot be proved by an appeal to facts or its valuations cannot be empirically measured, or it involves imputing interests to future generations. The accusations that the chosen method of thought experiment is arbitrary and inevitably reflects the values of the chooser, is not a valid argument against ‘sustainability’ understood as an *ethical* concept.

To the orthodox economist this is unacceptable as it places sustainability outside the realm of economics. The belief that, economics as a positive discipline is free from value judgements, is questionable. As much as ethical choice is involved in policy decisions (since different options that affect differently, different groups of people and other living things), similarly, is the case whether society should adopt the optimal level of environmental protection. But the optimal level itself is not an ethical concept. It is not derived from value judgements about what the economist thinks should be done, but from the interests and desires of the affected people, objectively measured, as far as possible. On the other hand, sustainability does have, value judgements built into it. It is impossible to impute interests to future generations without specifying what those interests are, and the choice cannot but express the chooser's views of what level of environmental protection is morally right. In conducting thought experiment – indeed, in choosing to conduct it – ethical concepts such as ‘fairness’, ‘justice’, act as guides.

One has to accept the analysis of the ethical nature of sustainability not because it functions as a critique of general economic framework used for valuating environment, but because of the very nature of the environmental concerns. No concept of dealing with environmental protection is able to avoid value judgements. Value judgements are not accidental incursions but are necessary constituents of the environmental discourse. The very fact which made the thought experiment necessary – the impossibility of measuring future people's environmental valuations - ensures this. This impossibility leaves two options.

The recognition that the very concept of environmental protection is a moral one, therefore does not undermine the concept of sustainability. On the contrary, it corrects the false sense of objectivity created by ‘positive’ economics. The ethical understanding of sustainability

brings out the essential issue at the heart of the environmental crisis, namely the relationship between current and future generations. In evaluation approach, either the interests of future generations are ignored, or we have to accept the ethically constructed concept of sustainability. This choice too is an ethical one. We have to ask the all important question of how important are the lives of future people?

NOTES

¹ Cf. Stanley I. Benn, (1967) "Rights", in Paul Edwards (ed.) *The Encyclopedia of Philosophy*, Vol. VII, London: Collier Macmillan Publishers, pp. 196

² Quoted Stanley I. Benn, (1967) p.196

³ Ibid. p. 197

⁴ In *Theories of Rights* (ed.) Jeremy Waldron, (1984) Oxford: Oxford University Press, pp. 77-90. First published in *Philosophical Review*, Vol. LXIV, No.2, April 1955, pp.175-191.

⁵ Ibid. p.77

⁶ Ibid. p.78

⁷ For a more detailed discussion refer to Margaret MacDonald, (1984) "Natural Rights" in *Theories of Rights* (ed.) Jeremy Waldron, Oxford: Oxford University Press, pp. 21-40

⁸ Cf. Ibid. p. 24

⁹ Quoted in Margaret MacDonald, "Natural Rights" (1984) p.25

¹⁰ Quoted in Ibid.p.25

¹¹ *UDHR* Article 1

¹² "Human Rights: Vienna Declaration", 25 June 1993, *PUCL Bulletin*, August 1993, p. 27

¹³ For a detailed discussion on how West has exploited Third World Countries natural resources, fossils to forests, read Winin Pereira, (1977) *Inhuman Rights*, Goa: The Other India Press.

¹⁴ T. O'Riordan (1988) argues for maintaining a distinction between sustainable use and sustainability, where the former has been typically seen as an alternative growth and planning concept Here, sustainability is seen in a much broader sense, embracing ethical norms pertaining to the survival of life forms, the rights of future generations, and institutions responsible for ensuring that such rights are fully taken into account in policies and actions. *The Politics of Sustainability*. In R. K. Turner (1988) (ed). *Sustainable Environmental Development. Principles and Practice*. London: Belhaven Press.

¹⁵ C.R.W. Spedding, (1996) *Agriculture and the citizen*, London: Chapman & Hall.

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- ¹⁶ Edward O. Wilson, (1992), *The Diversity of Life*, New York: W.W. Norton
- ¹⁷ G. Brundtland et al (1987) *Our Common Future*: Report of the 1987 World Commission on Environment and Development, Oxford University Press.
- ¹⁸ R. R. Harwood, (1990) “A History of Sustainable Agriculture”, *Sustainable Agricultural Systems* (eds.) C. A. Edwards, R. Lal, J. P. Madden, R.H. Miller and G. House, Ankeny, IA: Soil and Water Conservation Society.
- ¹⁹ D. Pearce, A. Markandya and E. B. Barbier, (1989) *Blueprint for a Green Economy*, London: Earthscan.
- ²⁰ G. R. Conway, and E. B. Barbier, E.B. (1990) *After the green revolution: sustainable agriculture for development*, London, Earthscan.
- ²¹ IUCN/UNEP/WWF – World Conservation Union, United Nations Environment Programme, and WWF International (1991), *Caring for the Earth. A Strategy for Sustainable Living*. Gland, Switzerland.
- ²² Holdgate, M. W. (1993), The sustainable use of tropical coastal resources – a key conservation issue. *AMBIO* (22), 481-482.
- ²³ D. Pearce, (1993), *Economic Values and the Natural World*. London, Earthscan Publications Ltd.
- ²⁴ Cf. Mary Daly, (1978) *Gyn/Ecology*, Boston: Beacon, pp. 9-12
- ²⁵ J. T. Heinen, (1994), “Emerging, diverging and converging paradigms on Sustainable development”, *International Journal of Sustainable Development and World Ecology* 1, pp.22-32
- ²⁶ World Commission on Environment and Development (WCED) Report based upon *Our Common Future*, more commonly known as the Brundtland Report.
- ²⁷ Shrad M. Lele, (1988) *Sustainable Development”: A Critical Review”*, Energy Resource Group, University of California, Berkeley.
- ²⁸ The natural Step organization website www.naturalstep.org.
- ²⁹ *The Hannover Principles: Design for Sustainability*, is available at the McDonough and Partners website, www.mcdonough.com/principles.pdf
- ³⁰ Richard Sylvan proposed such ‘thought experiments’ in order to test our intuitive findings. He had used conceptual problems on the basis of *last man* or *last people* examples. Richard Sylvan, earlier known as Richard Routley, ‘Is There a Need for a New, an Environmental Ethic’, (2003) *Environmental Ethics* (eds.) Andrew Light and Holmes Rolston III, Oxford: Blackwell Publishers, pp.47 - 52.
- ³¹ A more detailed discussion on the distinction is available in Chapter III of this study.
- ³² A. Leopold, *A Sand County Almanac*, Oxford: Oxford University press, 14, 224.
- ³³ Susan B. Hodgson and Slobodan Perdan, (2002) “Engineering, Ethics and the Environment” in *Science and Technology Ethics* (ed.) Raymond E. Spier, London: Routledge, Taylor and Francis & Francis Group, p.220.
- ³⁴ *Ibid.*
- ³⁵ C.D.Stone, (1988) *Earth and Other Ethics: The Case for Moral Pluralism*, New York: Harper and Row, 1988, p. Quoted in Susan B. Hodgson and Slobodan Perdan (2002), p.220
- ³⁶ Susan B. Hodgson and Slobodan Perdan (2002), p.223

³⁷ For more detailed discussion confer R. Elliot (1994) “Environmental Ethics”, in Peter Singer (ed.) *Companion to Ethics*, Oxford: Blackwell.

³⁸ Susan B. Hodgson and Slobodan Perdan (2002), p.225

³⁹ Ibid. p.226

⁴⁰ D. Worster, (1977) *Nature's Economy: A History of Ecological Ideas*, Cambridge: Cambridge University Press.

⁴¹ For a detailed discussion on ‘Gaia Hypothesis’ see James Lovelock (1979) *Gaia: A New Look at Life on Earth*, Oxford: Oxford University Press; (1989) *Gaia: The Ages of Gaia: A Biography of Our Living Earth*, Oxford: Oxford University Press and also the Chapter IV of the present study.

CHAPTER THREE

JUSTIFYING MORAL RIGHTS OF ANIMALS

Discussions on extending ethical concerns for animals have to begin with reflections on moral theories and the possibility of extending the same to justify animal rights. *Section one* of this chapter is dedicated to making a case for animal rights justified on the basis of moral theories. In this section I shall discuss key positions taken by environmental philosophers and their effort to justify the extension of the notion of ‘intrinsic value’ to animals. Peter Singer’s position as articulated in *Animal Liberation* reflects a utilitarian position that argues for greatest happiness or pleasure to greatest number or to all. Singer has argued that ‘justice’ implies equal consideration to both humans and non-human animals alike. When Peter Singer demands that there should be equal consideration, he does not mean that the world (reality) is as he describes it. In other words, the world as we see it, is differentiated and treated differently based upon variation of intellectual capabilities, moral capacities, differences in experiences of pleasure and pain, etc. However, when it comes to the demand that all humans must have equal consideration, we go by the *prescription* that all humans must be treated equally.

Let me elaborate Peter Singer’s position in more detail. The central argument of Peter Singer in defence of animal rights is his understanding or interpretation of the principle of “equal consideration of interests”.¹ The same logic applies to non-humans, argues Peter Singer. There is, however, one defect in Peter Singer’s logic, and that is, his understanding of ‘equal consideration’ is utilitarian in character. Peter Singer begins with the consideration that as humans we differ considerably from one another, in terms of intelligence, moral capacities, capacities to experience pleasure and pain, physical parameters, etc. But the principle of

‘equal consideration’ makes it mandatory that we ignore these actual differences and treat all humans as equals. This principle is not based upon the description of the world as it is, but how the world ought to be. Philosophers, and particularly moral philosophers, have articulated the principle in various ways in their analysis of moral concepts. Peter Singer was probably the first to use the principle to go beyond its application to human beings and extend the same to other species.

Peter Singer’s quest with ‘animal rights’ begins, in his own words, with a passage from Jeremy Bentham’s 1789 ‘musings’ which deserve remembering:

The day may come when the rest of the animal creation may acquire those rights which never could have been withholden from them but by the hand of tyranny. The French have already discovered that the blackness of the skin is no reason why a human being should be abandoned without redress to the caprice of a tormentor. It may one day come to be recognised that the number of 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. What else is it that should trace the insuperable line? Is it the faculty of reason, or perhaps the faculty of discourse? But a full-grown horse or dog is beyond comparison a more rational, as well as a more conversable animal, than an infant of a day, or a week, or even a month, old. But suppose they were otherwise, what would it avail? The question is not, Can they *reason*? Nor Can they *talk*? but, *Can they suffer?*²

Although Bentham’s inspiring passage makes a case for non-Cartesian treatment of animals as they too suffer pain, his concern for animals remained utilitarian as animals “assist our labours or supply our wants.”³ In the case of Peter Singer, the above quoted passage was the starting point of his philosophy of ‘animal liberation’. He believed that if a being suffers, there cannot be any moral consideration that will ignore his/her/its suffering and allow it to continue to suffer. Singer uses the term ‘sentience’, although not very accurate, to mean

capacity to suffer pain as well experience pleasure or happiness. He goes to argue that if animals have, like humans, suffered pain and experienced happiness, they must fall in the boundary of our moral concerns. To use any other distinguishing or differencing mark between human and non-humans, is as arbitrary as Caucasians 'speciesists' used the colour of skin to practice slavery.

Singer also responds to some issues raised by philosophers regarding the application of the principle of 'equal consideration'. One of the issues is regarding differences between the felt pain of humans (for instance that of a terminal cancer patient) and felt pain of animals (like a mouse). Singer agrees that there is a difference between the intensity and awareness of pain. But there could be levels of intensity of pain as there may be different thresholds of pain between different species. But this does not take the species out of the domain of moral consideration, as the species continues to be 'sentient'. He does admit that, in practice, priority of giving relief to greater suffering does take place. Most of the arguments based on differences between human suffering and animal suffering, intensity of pain suffered, etc. are rejected by Peter Singer on the ground that neonates and infants, severely intellectually disabled like mongoloids, etc will fall in the category other than normal adult humans. And no one justifies that these be treated as animals because they do not suffer the same intensity of pain or enjoy with the same intensity the pleasures of life or are aware of their surroundings that lead to pain. Peter Singer also points out that we do not make a case for experimentation with such humans who are not normal adult humans, and but have capacity to feel pain on par with animals.

Peter Singer does recognise very difficult problems faced while dealing with speciesism in practice. He does address the issues and tries to provide a philosophical alternative on the basis of the practice observed in mostly western societies. One of the difficult issues that he

takes up for consideration is 'animals for food', the most widespread use of animals in human societies. The justification for such use is the belief that 'all things on earth' are given for the survival or/and pleasure of man. If, the argument that animals have rights, then use of animals for consumption is definitely unacceptable.

Peter Singer points out to those animals that are part of our diet not as necessity but luxury. He argues that unlike Eskimos whose survival depends upon their consumption of animal products/meats or else they would starve to death, other societies do not have such a need. In other words, our survival interest cannot and does not override that of various animals that are slaughtered for meat. In fact, Singer goes on to point out how the very method used in animal farming is so 'cruel' that it is clear that animals are treated as objects in the factory of producing luxury goods for human consumption. He points out that in no way this practice violates the principle of equal consideration as major interests of animals are sacrificed to serve minor interests of humans.⁴ Peter Singer's cultural moorings do not make him demand that we should immediately stop the practice of supporting the factory farmers' needs. Instead, he proposes alternative methods of 'animal farming' that do not inflict cruelty on animals.

One of the most important aspects of the 'principle of equal consideration' is reflected in the entire process and justification of animal experimentation. The justification provided that experiments with animals lead to discoveries that are beneficial to mankind, is not only vague but in practice mascara for the experimenters. Peter Singer's most logical response to such justification is to point out that by this principle we accept that humans and animals are similar in significant aspects, then experimentation with animals should be banned as much as such experiments with humans are not allowed. If humans would suffer stress and anguish

and extreme discomfort if such an experiment is carried out with humans, then animals too will (being similar to humans) suffer the same level of stress, anguish and pain during the experiment. Such cruelty should not be allowed as in the case of humans. Further, Singer cites Draize Test (conducted by pharmaceutical companies), U.S. Armed Forces Radiobiology Institute's experiments with rhesus monkeys (radiation studies), H. F. Harlow' (of Primate Research Centre, Winsconsin) experiments with monkeys to prove how many of such experimentation with animals are 'frivolous' experiments, that fail "to give equal consideration to the interests of all beings, irrespective of species."⁵ He further debunks the claim that saving humanity through an experiment with single animals is unconvincing as no experimenter would argue to conduct similar experiments with 'orphaned humans' or 'irreversible brain damaged' human being. This is a clear case of speciesism, according to Singer.

Peter Singer believes that the term animal is too broad, although it connotes in a restricted sense non-human animals, and requires more detailed consideration. This is so because, some non-human animals show distinct signs of rationality and self-consciousness, and some even show signs of basic moral behaviour. We shall reflect on this aspect in the next section of the chapter.

Tom Regan in *The Case of Animal Rights* makes a case for *inherent value* for non-human animals. Regan argues that we are morally obligated to treat non-human animals with respect as they have *inherent value* and consequently demands that we give up all practices such as animal husbandry, vivisection, etc. which we otherwise would not practice in the case of humans. For Regan *inherent value* is an objective property that depends upon the nature of the object, and recognised as such. It is in this sense that non-human animals have *natural*

rights. In other words, non-human animals have rights due to their very nature, and not ascribed to them due to societal needs.

Much of the discussion of Tom Regan's case for animal rights is based upon his preliminary distinction between moral *agents* and moral *patients*. Moral agents are those who have the ability to recognise what 'morally ought to be done' and consequently, do the same and be accountable for the same. As against this, moral patients are those who do not have the ability to formulate the moral principles and consequently 'cannot do what is right, nor can they do what is wrong.'⁶ Again, Regan assumed that moral patients differ from each other in different morally significant ways. There are according to him, two categories of such moral patients: one, those that are sentient and conscious, but do not have mental qualities such as rationality; and two, those that are sentient, have consciousness and also have volitional ability as well as cognitive one. Tom Regan makes a case for some animals that belong to category two, namely, are conscious, sentient and also possess capacity for volition and cognition.⁷

Before we clarify some of the key concepts of Tom Regan and how he uses these concepts to accord 'rights' to animals, let us understand the main objective of his distinction between *moral agents* and *moral patients*. His concern is with the moral status of animals in the second category, namely those animals that are sentient, conscious and possess volitional abilities and cognitive capacity.

It is pertinent to note the central argument of Regan in his own words and further analyse the same for clarity:

“Moral patients cannot do what is right or wrong ... and in this respect they differ fundamentally from moral agents. But moral patients can be at the receiving end of the right or wrong acts of moral agents, and so in this respect resemble moral agents. Unlike the case of the relationship that holds between moral agents, then, the relationship that holds between moral agents, on the one hand, and moral patients, on the other, is not reciprocal. Moral patients can do nothing right or wrong that affects or involves moral agents, but moral agents can do what is right or wrong in ways that affect or involve moral patients.”⁸

Now given the fact that moral patients can be both humans and non-humans, and that they can do no wrong or right, they cannot be treated as moral agents. Aggression on a child is wrong, although the child himself/herself cannot do any wrong. Similarly helping in the biological needs of a senile person is right, although the senile person by himself cannot do anything that is right. What Regan tries to highlight is that the relationship between moral agents and moral patients is not reciprocal as the case is between moral agents themselves.

A very crucial distinction that Regan makes requires mention here. The claim for equality of individuals demands that they have *inherent value*, a characteristic of moral agents. This (inherent value) is different from *intrinsic value* (another crucial concept in Regan). Inherent value is what we attach to the experiences that we have such as pleasure, etc. and cannot sum total of all intrinsic values. These two types of values cannot be compared with each other, and cannot be interchanged. In short, to “view moral agents as having inherent value is thus to view them as something different from, and something more than, mere receptacles of what has intrinsic value. They have value in their own right, a value that is distinct from, not reducible to, and incommensurate with the values of those experiences, which, as receptacles, they have or undergo.”⁹

Using the analogy between the cup and what is in it, Regan points out that moral agents have this unique inherent value, as against the utilitarians who accept the receptacle model, attach value to what is experienced, rather than the experience.

There is another important concept in Regan's philosophy that requires clarification, without which the notion of inherent value will remain elusive, namely *subject-of-a-life*. An individual is said to be a *subject-of-a-life*, if he possesses the following characteristics: (1) "(has) 'beliefs and desires;'"..(2) "perception, memory, and a sense of the future; ... (3) "emotional life"... (4) "preference and welfare-interests"... (5) "ability to initiate action in pursuit of (his) desires and goals"; ..(6) "a psychological identity over time"; .. (7) sense of "individual welfare" ... and (8) "logically independent of (his) being the subject of anyone else's interests".¹⁰ Regan believes that characteristics are there in all humans including most young children and the mentally weak. Humans such as those in extreme stages of Alzheimer's disease or in irreversible comatose state do not fall in this category. Further normal mammals would also fall in this category, the exceptions being similar to exceptions in the case of humans. Regan does not extend this category to include birds and other species, but surely, the *subject-of-a-life* criterion is applicable to mammals particularly those species that are close to humans in the ladder of evolution. However, *subject-of-a-life* criterion in Regan's analysis applies to both moral agents and moral patients.

Critiques of Regan point to the possibility of two interpretations of *subject-of-a-life* criterion: strong and weak interpretations. Strong interpretation would mean that all the conditions laid down should be applicable to individuals. In the case of weak interpretation, *subject-of-a-life* should possess most of the conditions – *a la* Wittgensteinian model based upon theory of family resemblances. In the case of strong interpretation of *subject-of-a-life*, the criterion

becomes set of necessary and sufficient conditions. In case of weak interpretations, the individual has to satisfy most of the conditions but not necessarily all. It looks like Tom Regan advocates a strong sense of *subject-of-a-life* criterion, although at no stage his analysis refers to this problem which arises in application of condition to individual cases.

Next, Regan discusses the *principle of respect* for individuals which, according to him, is the foundation of justice. Once one has recognised that individuals have ‘inherent value’ then these individuals have equal value and the way we treat them is a matter of justice. The principle is: “*We are to treat those individuals who have inherent value in ways that respect their inherent value*”¹¹ Consequently, our treatment of moral patients such as children, retarded humans, senile, and animals is not because we feel for them nor have “sentimental interests”. Our treatment of moral patients is grounded in their inherent value, and therefore, it is a matter of justice and not charity. Corresponding to the principle of respect is the principle of harm which can be expressed in the following: It is our duty not to harm individuals. The logic is simple. The individual who is a *subject-of-a-life* ought to be treated with respect as part of the concept of justice. The individual who is subject-of-a-life is characterised a sense of feeling of individual welfare, namely, his life experiences are seen as faring well or ill, immaterial of his being of value or interest to others. The principle of harm, according to Regan, binds us not to harm those individuals who are deemed as *subjects-of-a-life*. Of course, there are circumstances in which there could be exceptions as in the case of criminal justice system.

Having concluded that we should treat all *subjects-of-a-life* individuals with respect (justice), on the basis of the principle of justice and the principle of harm, Regan elaborates on his main claim, namely, that all who possess inherent value have moral rights. A study of his

analysis of the concept of right is necessary for us to understand his argument according moral rights to animals. To begin with, moral rights are accepted as *moral claims*, which are of two types: “valid claims-to” and “valid claims-against”. Commonly defined, “valid claims to” are claims to rights such as freedom, etc. or claims to property or commodity, and such claims are validated by a moral principle. On the other hand “valid claims-against” are claims against assignable individuals who own the commodity or are responsible for treatment, and such claims are validated by a moral principle. Both the types of claims, namely, “valid claims-to” and “valid claims-against” are considered as valid claims, all things considered, when they are validated by correct moral principles.¹² And for Tom Regan, the *respect principle* and *harm principle* are valid moral principles, and hence the claims justified under these two principles are “valid claims all things considered”. To conclude, any individual (moral agent or moral patient) who has inherent value (as pointed out in the conditions of a subject-to-a-life) has a *moral right* to be treated with respect appropriate to that value and simultaneously, moral right not to be ill-treated or harmed.

There are many issues that deserve the attention of scholars that argue against animal rights and find difficulties with Tom Regan’s case for moral rights of animals. They may not be part of the present study. However, one issue needs to be highlighted. One of the consequences of Tom Regan’s analysis is that moral rights can be asserted only against moral agents and never against moral patients, and of course, against inanimate objects. One cannot make a claim of right against nature, as no valid claims can be made against it. This argument of Regan also helps to overcome the claim of absurdity made by some commentators. For example moral rights of sheep versus moral rights of wolves wherein upholding moral rights of the first will lead to violation of moral rights of the latter. The fact of the matter is that sheep have no moral rights against wolves, as a wolf is not a moral agent.

The third ethical position that helps to make a case for animal rights is *contractualism* or *contractarianism*. Of course, there is a traditional position regarding contractualism, namely, that it is a perfect moral theory to deny any claims to ascribe rights to animals. However, there are, of late, philosophical positions that seem to provide grounds for justification for animals rights. The most common argument why contractarianism does not provide argument for the rights of animals is because animals (i.e. non-human animals) are not rational agents and consequently cannot be party to any contract. In a recent work, Mark Rowlands (*Animal Rights: Moral Theory and Practice*) makes a case of contractual moral theory that will defend moral rights of animals. Rowlands argues that contractarianism indeed is compatible with the claim that non-rational humans as well as non-human animals possess moral rights. Further, he claims that a proper understanding of contractarianism, provides a most satisfactory theoretical justification to attribute moral rights to non-human animals as it does in the case of non-rational humans.

Rowlands highlights the fact that unlike *Hobbesian contractualism*, Kantian formulation and John Rawls' interpretation of the same provides a framework that will make for feasible attribution of moral rights to non-human animals. The key to understanding this type of contractualism is to reflect on what Rawls meant by *original position* and *veil of ignorance*. The description of original position provides for Rowlands grounds for applying morality not only to humans (rational agents) but also to non-human animals. Rowlands borrows the theoretical framework and distinctions provided to justify various claims or rights. In short, Rowlands' description of Regan's understanding of 'moral rights' is: "(1) valid claims to a specific commodity, freedom, or treatment; (2) made against assignable individuals who are capable of granting or withholding the commodity, freedom, or treatment; where (3) a claim is valid if it is backed or entailed by a correct moral theory."¹³ Of course, the difference

between Regan and Rowlands is the grounding of 'moral rights' which for Regan is 'inherent value' and for Rowlands is 'form' of *contractarianism*, the subject of the present discussion. Rowland's task is, therefore, to prove that the type of contractarianism he advocates does not exclude ascription of *direct rights* (sic) moral status to animals, other than humans. The general theory of contractarianism did recognise indirect rights to non-human animals, namely, ascription of such rights was dependent on the existence of rights of other individuals, namely, humans. This distinction is exemplified by the example of one's pet dog having right not to be harmed, not because it (the dog) has the direct right not to be harmed, but because I have the right that my dog be not harmed, as this will infringe my right. There is another way of looking at this problem. Infringement of rights of a dog when cruelty is inflicted on it, may not by itself be wrong, but such an act by humans is harmful to them as it can impact their relations to other human beings. In brief, the general contractarianism view holds indirect rights to non-human animals, not because they have right per se, but their (rights of non-human animals) rights depend upon the existence of other individuals, namely, humans.

Rowland challenges this view that contractarianism has to necessarily exclude direct rights to non-human animals. He tried to disprove the universal assumption of contractarianism that non-human animals are not rational agents, and moral ascriptions are possible only in the case of rational agents, i.e. humans. Rowland's main part of the argument is to argue that there is nothing in contractarianism that compels it to restrict the contract to only rational agents, and that "*framers* of the contract must be conceived of as rational agents does not entail that the *recipients* of the protection afforded by the contract must be rational agents".¹⁴ Positively argued, the recipients of the contract must per force include both rational and non-rational agents, while granting that the framers of the contract, by the very nature of the

activity, are rational agents. The issue of the seemingly contradictory position regarding contractarianism and animal rights has been resolved by Rowlands by distinguishing between two types of contractarianism, one that rejects direct moral rights to non-human animals, and the other that justifies direct moral rights to the recipient non-rational agents.

Contractarianism as an ethical theory is based upon the fact that morality is determined by the contract that humans enter into, whereby their social interactions are regulated. In general terms, there are two types of contractarianisms: *Hobbesian* and the *Kantian*. What distinguishes the two is their *conception* of authority of contract and the *justification* or the *foundation* of such authority. The condition of *authority* of contract refers to that what binds individuals in a contract and have authority over the individuals. The second condition refers to the justification of the authority, namely, that what gives this authority a moral grounding.

Hobbesian contractarianism does not accept anything morally right or wrong – and this applies both to the goals and the means pursuing these goals. For example, there is nothing wrong in harming others or refraining from harming others. It is only ‘imprudent’ on the part of the individual to harm others, and prudent to refrain from harming others, as this would lead to mutually beneficial relationship as no one will harm each other. Hence, for *Hobbesian* contractarianism the foundation of morality is to have a contract with each other, thereby creating rules of conduct and conventions that are mutually beneficial. It is these rules and a convention that individuals in a contract have negotiated and agreed upon that is called moral code.

The above *Hobbesian* understanding of morality demands that we define what the *authority* of the contract is. The authority we have for the contract, which individuals have agreed upon

or will agree to follow, is grounded in the fact that the contracting individuals after deliberations and negotiations have contracted with each other to follow these rules. One needs to remember the fact that a contract is a hypothetical entity, and not a brute description of reality. By endorsing such a contract, contracting individuals ensure protection from harm and mutual assistance from all contracting individuals. Now such a protection can be obtained only from those who have the capacity to protect or harm, and not from those who are in no position to either protect or harm, thereby meeting the *condition of equality of power*. Individuals/entities that are not able to understand the conditions laid down in the contract, and also cannot reciprocate as per the contract terms are said to be blind to their long-term interests and hence lack the second condition of Hobbesian contractarianism, namely, *condition of rationality*. The structure of Hobbesian contractarianism can be best summed up in Rowlands' words: "... the authority of the contract is explained in terms of our tacit agreement to it; and our tacit agreement to the contract is explained in terms of our rational self-interest. But, in this context, rational self-interest makes sense only if those with whom we contract satisfy the equality of power and rationality conditions."¹⁵ The above structure and conditions laid down clearly exclude non-human animals being part of any contract.

Let us now reflect on the second version of contractarianism, primarily, Kantian contractarianism. The crucial difference between Hobbesian and Kantian contractarianism is that the latter employs the idea of contract to unearth and identify the principles that are implicit in moral codes resulting from the contract. For example, unlike Hobbesian contractarianism, Kant's conception of authority locates minimal elements of moral truth and objectivity that is both independent of the contract and unrelated to the agreements of the contracting individuals. Moral truth, moral correctness or at least approximation to the same

is the foundation or justification of contractual authority in this form of contractarianism. In short, Kantian contractarianism upholds the Kantian notion of *Moral Law*.

Rowland contrasts this second version of contractarianism as Kantian on four counts. Firstly, one observes that it relies on minimum moral truth, which is contract-independent. Secondly, there are certain moral constraints that allow arbitrary contract-driven rightness or wrongness of an action. Thirdly, unlike the prudential foundation of moral authority, this form of contractarianism is uniquely categorical or formally moral. And finally, there is emphasis on the role of intuition in deriving the moral imperatives, which is uniquely Kantian.

For Rowlands, the central issue in the contract between the two types of contractarianism is the *notion* of authority and its *source*. As pointed out earlier, the source of authority in the case of Hobbes is the feature of agreement in the contract. In the case of Kant, the source of authority is the moral principles which are revealed or made explicit in the contract. And if the moral principles are correct then we are compelled to obey or follow them as per the contract. The conditions of equality of power and rationality so central to Hobbesian contractarianism are irrelevant to the Kantian one. It may be recalled that in Kantian contractarianism, the contract does not determine Moral Law, but functions as a device to reveal the moral principles or Moral Law. In other words, "...the function of contract is ... revelatory rather than constitutive, whether or not an individual who is deficient in point of power, or in point of rationality, or both gets included under the scope of morality is dependent only on what the Moral Law says: if it says the individual is in, he's in."¹⁶ In Kant, therefore, non-rational individuals are not ends-in-themselves, and therefore are not within the scope of moral consideration. But, contract by itself does not and cannot resolve

what is to be considered morally. It is in this context that Rowland's alternate form of Kantian contractarianism comes handy.

There is another version of Kantian contractarianism namely one that is advocated by John Rawls. It is this that will, with specific adaptations and alterations that Rowlands claims defend moral rights of non-human animals. At this stage it is necessary that we state the main points of Rawls' contractarianism in order to, at a later stage, see the crucial differences between Rawls and Rowlands.

Rawls laid down two specific principles of distributive justice that constituted the basis of social justice: (1) "Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system for all"; and (2) "Social and economic inequalities are to be arranged so that they are both: (a) to the greatest benefit of the least advantaged, consistent with the just savings principle, and (b) attached to offices and positions open to all under conditions of fair equality of opportunity".¹⁷ Rawls justifies these principles by providing two arguments, one commonly called *intuitive equality argument* and the other *social contract argument*.

The 'intuitive equality' argument may be summed up in the following: If there is no action on my part to justify the merit of a certain property, then I have no moral justification to enjoy the benefits that result from the said possession of the property. In other words, as much as there is no moral justification for my possession of a particular property, there is no moral justification for enjoying the benefits accrued from the said property. This position is in consonance with the liberal equality theory which does not allow discrimination on the basis of morally arbitrary properties such as race, gender, socioeconomic status, caste etc.

Rowlands and others point out that in the case of Rawls, the morally arbitrary properties include natural talents.¹⁸

Rawls, in his social contract argument employs two devices that play a crucial role in arriving at a morally just theory of justice. His initial pre-contract position labelled as 'original position' (OP) and obscured or ignorant of the status the individual will hold in terms of class, caste, gender, socio-economic status, etc. (veil of ignorance, VI) are necessary to understand the social contract argument. OP is a theoretical device or thought experiment Rawls employs for ascertaining the fairness of principles or theoretical positions on the organization of political, social and socio-economic cooperation and institutional structures. Rawls using this hypothetical tool, hopes if individuals in discussion prior to a contract, use OP, it may lead the participants to agree on what constitutes justice. In such situations, it is assumed that individuals in OP will choose those principles that are in their best interest and this shows they act rationally or are deemed to be rational.

Rawls' social contract is neither a hypothetical construct nor a historically defined stage of human social development. It is a thought experiment that is used to test our intuitive understanding of what constitutes justice. This thought experiment begins with the pre-contract situation given in OP under a 'veil of ignorance' (VI), namely individuals do not know what their future position in society is. It is in this effort that Rawls provides us opportunity to imagine about justice free from any influences or dictated by our future situations in life. Philosophers have used the analogy of a child to explain this difficult conception of justice. Imagine a child is asked to cut a cake into parts to be distributed among children that includes the child given the task of cutting the cake. The child (in OP) does not know which part/slice of the cake would be given to it, and hence divides the cake in a most

appropriate manner thereby applying the principle of moral equality leading to a proper moral theory of justice. Rawls believes that implicit to the OP is an understanding of equality, in which there is no knowledge of the social circumstances (or for that matter even natural talents) that may be beneficial to the individuals negotiating contracts. Hence, the principles of justice that a society commits itself into social contract are derived from 'original position' (OP) under the 'veil of ignorance' (VI).

How does Rowlands apply Rawls' notion of social justice, which in Rawls' own admission applies only to rational animals (humans), to non-humans? First and foremost, Rowlands opines that there is nothing in Rawls' two arguments, intuitive equality and social contract, that stops him from extending moral status to non-human animals. When Rawls argues that no person shall benefit from morally arbitrary characteristics or properties, he cannot include rationality as part of these circumstances and properties. Rowlands labels as 'unreflective judgement' Rawls' attempt to restrict justice to 'moral persons'.¹⁹ Rationality, self-interestedness and equality of circumstances provides the principles of justice their moral justification, but this does not imply that only agents with the above circumstances are to be protected by the principles thus formulated. Rowlands points out that Rawls' altered 'moral personhood condition' from being a sufficient condition to an essential condition, thereby disqualifies non-human animals from moral consideration²⁰. Further, Rowlands points out to the fact that Rawls seems to be unsure of his position regarding the exclusion of non-humans from moral consideration. Use of expressions such as 'generally believed', 'presumed', etc. reflect in Rowlands' terms 'unreflective intuitions' (common sense intuitions) but not reflection of 'a mature conception of justice'.²¹

To conclude, what Rowlands has attempted in his version of contractarianism, while defending the use of contract, is to expound a principle of equal consideration, and not some Kantian principle of Moral Law. The principle that Rowlands expounded undermines both the equality of power and rationality conditions that Rawls has stipulated and concludes that just because framers of contract are rational and of equal power, does not necessarily entail that the recipients have to be rational and of equal power.

The *second section* of the present chapter attempts to understand grounds of possibility of ascribing moral rights to animals other than humans and how in practice this attempt is most fruitful in the case of some species of animals that are closest to humans in terms of evolutionary processes. The traditional criteria for moral considerability discussed by scholars are self-consciousness, possession of linguistic skills, and capacity for rational thought. But it is a fact that some people have greater reasoning capacities than others. So, does this mean that moral worth increases as you move up the I.Q. scale? And what about the brain damaged human infants who have no rational capacities and yet there are very few people who would be willing to deny moral considerability to the very young or senile and mentally enfeebled due to Alzheimer's disease? Again, consider the criteria based on the principle of equal consideration of like interests, i.e. all entities with capacity to suffer have an interest in avoiding suffering, and therefore merit equal moral consideration. This principle does not mean equal or identical treatment, because interests differ across living beings.

It is only in recent times that there have been some reflections that include individualistic consequentialism, individualistic deontological and holistic environmentalist ethics. Individualistic consequentialism covers a spectrum of positions broadly in the utilitarian traditions of J. Bentham and J. S. Mill. For individualistic consequentialism the unit of

ethical concern is always the individual organism rather than the ecosystem or the species as a whole. It is important to make a distinction here. While the individual organism is a unit of ethical concern it is the state of affairs within the organisms rather than the organism itself which generates value. In consequentialist ethical systems it is always states of affairs rather than things-in-themselves that are valuable. The aim of ethical behaviour is to maximize pleasure over pain; thus to be morally considerable an organism must have the capacity to feel pleasure or pain or more fundamentally to have subjective experience.

Individualist deontological focuses on individuals rather than on wholes. These environmental ethicists consider that individual organisms have value in themselves and value that is not linked with experience nor to do with states of affairs within the organism. It is the organism itself which is valuable and not what it is doing. In *The Nature and Possibility of Environmental Ethics*, Tom Regan²² suggests that all natural objects have inherent goodness, whether living or not living. In the case of animal rights, he concentrates on “rights that are possessed by those who are subjects of life”. Albert Schweitzer and Paul Taylor developed the deontological approach to environmental ethics in the books *Philosophy of Civilization, Part II: Civilization and Ethics*²³ and *Respect for Nature: Theory of Environmental Ethics*,²⁴ respectively. A consideration of these positions highlights the central divide between the deontological individualist and environmental ethicist. Some suggest that all morally considerable individuals are of equal value while there are some who argue for hierarchy of values within the individual deontological framework.

Some environmental ethicists focus on ethical considerations of ecological wholes rather than individuals. By ecological wholes we refer to ecosystems and the species of biosphere as a whole. These holistic approaches to environmental ethics tend to be consequentialist rather

than deontological aiming at the good of the whole. Aldo Leopold's *A Sand County Almanac* is often cited as a foundational work in holistic environmental ethics. Leopold's guiding principle is expressed as "a thing is right when it tends to preserve the integrity, stability of beauty of biotic community. It is wrong if it tends otherwise"²⁵. It is important to note that this is a principle of extension and not replacement, i.e. human ethics is extended to include land. Land ethics does not replace human ethics. The stress on the importance of integrity, stability and beauty of the bioethics community contrasts with both individualist deontologists and individualist consequentialists. First the community rather than the individual is the focus of moral significance. For the individual deontologist the community has moral significance as a collection of morally valuable individuals, while for the individualist consequentialist, the community is valuable only in as much as it contributes to the improvement of individual experience. Secondly, ecological qualities such as integrity and stability are of primary value. Such qualities cannot be of value in either kind of individualist systems where individual living organisms or their experiences are the whole locus of values.

The dominance of anthropocentrism in environmental ethics has been the root cause of some forms of extreme ethical considerations reflected in land ethic. Anthropocentrism has an instrumental value to nature and non-human beings as well as humans. In the case of anthropocentrism, there is an implicit denial that all members of a species are equal or that humans are superior because they realise a greater range of values through culture compared to non-human species. But such a position requires a principle of self-defence that allows humans to defend themselves from harmful aggression, to the extent that might necessitate killing or harming animals and plants. Secondly, such a position requires a principle of

human preservation that allows human actions that are necessary for meeting the basic needs of humans while harming the basic needs of animals and plants.

In human ethics when the basic needs of some are in conflict with the non-basic or luxury needs of others, the distinction between failing to meet and aggressing against basic needs seems to have little moral force. But in environmental ethics, whether we adopt an anthropocentric or a non-anthropocentric perspective we have grounds to morally distinguish between two cases – against those needs in order to meet our own non-basic needs or luxury needs, but not simply failing to meet those needs in order to meet our own non-basic needs. We shall return to these issues at a later stage after clarifying the notion of ‘intrinsic values’, as it is on the basis of such a distinction that a justification for extending ‘moral consideration’ to animals will be provided.

The notion of ‘intrinsic value’ presupposes a distinction between intrinsic and instrumental values, and consequently we must inquire into how nature is recognized as intrinsically valuable, and similarly, how animals are intrinsically valuable. John O’Neill’s²⁶ position, though not exhaustive, provides, for the present study a foundation to justify ascription of ‘values to non-humans.’ Whether the problem is finally solved will depend upon our acceptance of the distinction made by O’Neill as philosophically adequate and logically tenable or whether further refinement is possible in this analysis.

Traditionally, philosophers distinguished between intrinsic and instrumental values. And in the tradition of rationalists, philosophers of the modern period and Kant, it is only the human or man who has the intrinsic value or is an end-in-himself. All other things were regarded as means to an end, primarily, for the well-being of the human. Even in the classical philosophy

of Greeks, humans are the only entities that were regarded as of intrinsic value. Of course, there were some aberrations such as when Plato and Aristotle accepted slavery and accorded status of instrumental value to them when they argued that ‘slaves are instruments of well-being’ of citizens. However, animals and nature were never recognized as having intrinsic value.

O’Neill recognizes three different basic senses of ‘intrinsic value’:

- (1) ‘Intrinsic value’ as synonym for non-instrumental value’;
- (2) ‘Intrinsic value, to refer to an object having ‘intrinsic properties’ and
- (3) ‘Intrinsic value’ as a synonym for, objective value.

‘Intrinsic value’ as a synonym for non-instrumental value is defined in terms of whether an object is a means to an end or not. In O’Neill’s words: “Intrinsic goods are goods that other goods are good for the sake of it”²⁷. One cannot fall into the trap of infinite regress, as not everything in the universe can be of instrumental value. There must be some objects that have intrinsic value. Some environmental ethicists such as A. Naess²⁸ argue that *among these objects* that have such non-instrumental value are non-human beings and states. The second sense of intrinsic value is the one used by G.E. Moore²⁹ who uses the term with reference to ‘intrinsic properties’. Moore argues that an object has ‘intrinsic properties’ if the thing has such an ‘intrinsic nature’ that the properties are of a non-relational kind. The third sense of intrinsic value refers to ‘objective value’ that an object has independent of the observer or valuations of the observer. There are some sub-varieties of this third sense, depending upon the meaning of ‘independent’ valuation. For instance, when one claims that non-humans have ‘intrinsic value’, the claim is meta-ethical, in the sense that it attempts to reject the subjectivist view that ‘valuing’ lies in the valuers, their attitudes, preferences, likes and dislikes, etc.

O'Neill provides an extensive analysis and critical evaluation of the three different uses of 'intrinsic value'. He finds that the uses of 'intrinsic value' have been interchanged in various philosophical discussions in general and environmental ethics in particular. This is particularly so of the first and third sense of use of 'intrinsic value'.

O'Neill highlights the fact that most of the discussions in the first sense of 'intrinsic value' can be evaluated from the emotivist point of view as in the case of C. L. Stevenson who argues: "X is intrinsically good' asserts that the speaker approves of X intrinsically, and acts emotively to make the hearer or hearers likewise approve of X intrinsically."³⁰ O'Neill concludes his analysis by pointing out that while subjectivism does not rule out non-humans having non-instrumental value, objectivism does not rule it in.

O'Neill analyses the claim of 'non-relationality' of properties of an object because of which the object is intrinsically valuable. He recognizes two interpretations of 'non-relational' properties: (i) Weak interpretation assumes that non-relational properties of an object are those that persist, regardless of the existence or non-existence of other objects. (ii) Strong interpretation assumes that non-relational properties of an object are those that are characterized without reference to other objects. O'Neill points out that the argument for both the interpretations lead to the fallacy of equivocation.

The third sense of 'intrinsic value', namely, ethical objectivist position, tries to argue for nature as a non-instrumental value and at the same time not committing to an objectivist meta-ethics. It must be recalled that the ethical objectivist holds that the evaluative properties of objects are real properties of objects, that is, they are properties that objects possess independently of the valuation of valuers.

There are two interpretations of ‘independently of the valuations of valuers’: (i) weak interpretation which assumes that evaluative properties of objects are properties that exist in the absence of evaluating agents; and (ii) strong interpretation which assumes that the evaluative properties of objects can be characterized without reference to evaluating agents.

O’Neill’s analysis points out that weak objectivism fails to support objectivism about values as it serves no argument for an objectivist theory of values. It is only in the case of strong objectivism that O’Neill argues that there are uses of evaluative utterances about the natural world that provide the clearest examples of values. It is obvious from the above that O’Neill recognizes a third use of ‘intrinsic value’ and that too, in the second interpretation, namely strong objectivity, for a useful justification for recognizing values in the nonhuman or natural world.

Many philosophers who endorse an autonomous environmental ethic are uneasy with the philosophies of Peter Singer³¹ and Tom Regan. They see the central focus on animals as not much better than the traditional moralist’s obsession with humans. These critics agree that an environmental ethic will require better treatment of animals, but this concern for animals follows from a larger concern for nature. The trouble with Singer and Regan is that they have it the other way around: whatever concern they have for nature comes from their concern about animals. The pre-eminent value of nature is still not at the centre of the ethical discourse, where it belongs.

According to critics, Singer and Regan make the following mistake. They suppose that either sentience or being the subject of life is a necessary condition for moral considerability. For biocentrists, sentience and being the subject of a life are only part of the story. The rest of the story is the value of life itself.

The view that all life is morally considerable goes back to the extraordinary Nobel prize-winning humanitarian, theologian, missionary, organist, and medical doctor, Albert Schweitzer. In his 1923 book, *Philosophy of Civilization*, he wrote: “True philosophy must start from the most immediate and comprehensive fact of consciousness: ‘I am life that wants to live, in the midst of life that wants to live’.”³²

The appropriate moral response to this insight, Schweitzer thought, is reverence for all life. According to Kenneth E. Goodpaster, “nothing short of being alive seems to me to be a plausible and nonarbitrary criterion.”³³ He claimed that there are good reasons to be suspicious of the sentience criterion at the outset, and the strongest argument for it is unconvincing. Moreover, understanding why the argument is unconvincing reveals the strength of the case for the life criterion, according to Goodpaster. Finally, Goodpaster provides an explanation for why the sentience criterion seems so plausible even though it is false (this is what philosophers call an “error theory”).

Goodpaster thinks that we should be suspicious of sentience because the capacity for pleasure and pain is simply a means that some organisms use to realise their ends. It provides a way of obtaining information about the environment. More precisely, sentience is a biological adaptation that occurs in some organisms that is conducive to fulfilling their biological functions. When seen in this way, Goodpaster thinks that we should find it implausible that some particular adaptation directed towards solving some particular biological problems faced by some organisms should be seen as the criterion of moral considerability.

According to Goodpaster, the most plausible argument for the view that sentience is the criterion of moral considerability is the following:

(1) All and only beings who have interests are morally considerable.

(2) Non-sentient beings do not have interest.

(3) Therefore, Non-sentient beings are not morally considerable.

Goodpaster agrees that the argument is valid and that the first premise is true. It is the second premise, 'the capacity for experience is necessary for having interests' which he denies. In his view, there are beings that have interests that do not have the capacity for experience. Plants have interests, he observes, that are based on their needs for such things as sun and water.³⁴ Indeed, Gary Varner³⁵ has claimed that some of our interests are based on needs and are independent of the fact that we are experiencing creatures.

He cites the example of vitamin C, which it is in the interests of all humans to absorb whether they are in anyway conscious of this fact. In this respect, we are like plants: we have certain biological needs and it is in our interest to satisfy them. Robin Attfield³⁶ claims that plants, like humans, can flourish and it is in their interest to do so.

The sentience criterion seems so plausible, because we are inordinately concerned with pleasure of organisms that are like us, in this respect. According to Goodpaster, the life criterion is the only one which is not based on privileging some morally arbitrary feature, as without sentience, there is nothing for morality to take into account, for nothing happens to the organism.

Compare a well-watered plant to a well-oiled car. In both cases we can say that each is good of its kind, that they function at a very high level, and we can say that it is in the interest of trees to have adequate hydration and nutrition; and we can say that it is in the interest of cars to have their oil changed regularly and to be kept in good shape. With reference to cars, there

is no dispute that this is a non-literal use of the word 'interest'. We can speak as if cars had interest, but we don't really believe that they do. What is at issue between sentientism and biocentricism is whether the sense in which plants have interest is the same sense in which humans have interests, or whether the fact that we speak in this way regarding plants is non-literal, as it is in the case of cars.

Those who favour a life criterion say that plants have interests in the same sense as humans, those who support sentientism say that talking about interest of plants is non-literal, and as it is when we talk about interests of cars. For the sentientist, the reason a person has interest and a car does not is that what happens to the person matters to him, while nothing matters to the car. In this respect the car and the tree are similar, but a person is different; it matters to the person that his interests are respected, but not to the tree or the car. We may prefer that the car or the tree be in tiptop condition, but that is our preference, not theirs.

In reply it might be pointed out that trees and other plants have various mechanisms for responding to threats and noxious stimuli. There is a sense in which they seek to flourish, or, it might be said to satisfy their interests. But so, arguably, do many machines.

The elevator in the building shuts down rather than putting itself at risk whenever its sensors tell it that it is under some stress. But the biocentrist might say in reply that these are not really responses to the interests of the machine, but responses to those of its designers. Living things on the other hand, have interests of their own. But the question is whether this distinction can be maintained.

Imagine two organisms, duplicate in all respects. They have exactly the same requirements for nutrition, hydration, sleep, and so on. One was constructed by natural selection, the other by Haliburton Biotech Inc. While it might be reasonable to say that one is an artefact and the other is not, it seems weird to suppose that one has interest and the other does not. What the sentientist says is that nothing about a being's origin affects whether or not he/she has interest. What is essential for having interest is that it matters to the being what happens to him/her. This is what is true of humans and many other animals and what is not true of plants. Suppose one observes that plants not only respond to threats and noxious stimuli, but that they actually care what happens to them. To put the point positively, suppose that not only do plants play, grow better when you play Mozart to them, they actually like it and want you to do it. If this were the case, it would not prove biocentrism. Rather, it would show that the domain of sentience is vastly larger than we had thought.

Some philosophers and environmental theorists claim that neither sentientism nor biocentrism succeed in capturing the moral lessons of ecology. Rather than giving us a new outlook which respects the ecological insight that "everything is related to everything else" they give us nothing more than the moral episode in the long march of "moral extensionism". Starting from the traditional idea that humans are morally considerable and have rights, sentientists and biocentrists have struggled to extend these concepts to animals and the rest of the biosphere. The result is a lawyer's paradise in which every living thing has rights against every other living thing. Can a wild beast sue a lion for violating his right to life? Do elephants have rights to take acacia trees or do acacia trees have rights to be protected from elephants? This is of course, a parody that is quite unfair to both sentientists and biocentrists. Nevertheless, it makes vivid the criticisms of the ecocentrists. What is needed, they think, is a

new way of looking at morality that recognizes the moral primacy of the ecological wholes of which we are a part.

The central debate in contemporary environmental ethics is between those who defend an anthropocentric ethics (which holds humans to be holders of moral values and hence superior to nonhuman animals) and nonanthropocentric ethics (which holds that all animals have the same moral worth). James Sterba provides a pragmatic foundation for conflict resolution between the two positions as the practical requirements of the two positions are the same, and hence have the same environmental principles that achieve environmental justice.

The differences between various members of a species do not provide grounds for thinking that the members of one species are superior to the members of the other. The nonanthropocentric perspective does recognize that humans have qualities that members of other species do not have, e.g. rationality and moral agency. But members of nonhuman species also have traits that humans do not possess. For example, the speed of the cheetah, vision of the eagle.

We cannot claim without begging-the-question that distinctive human traits are superior to that of distinctive traits of nonhuman species. Humans assume that they would not be better off if they were to trade off their traits. However, the same can be said of nonhuman species. It may be that a species could be better off if it were to acquire the traits of another species.

Judged from a non-question-begging perspective, members of all species should be regarded as equal. James Sterba provides a six steps argument:

1. “We should not aggress against any living being unless there are either self-evident or non-question-begging reasons for doing so.” (equals be treated equally, unequals unequally)
2. “To treat humans as superior overall to other living beings is to aggress against them by sacrificing their basic needs to meet the nonbasic needs of humans”.
3. “Therefore, we should not treat humans as superior overall to other living beings unless we have either self-evident or non-question begging reasons for doing so.”
4. “We do not have either self-evident or non-question-begging reasons for treating humans as superior over all to other living beings.”
5. “Therefore, we should not treat humans as superior overall to other living beings.”
6. “Not to treat humans as superior overall to other living beings is to treat them as equal overall to other living beings.”
7. “Therefore, we should treat humans as equal to other living beings.”³⁷

In spite of the above argument Sterba justifies human preference on the grounds of *defence*, i.e. any action to defend oneself or other humans against injuries or dangerous aggression is justified even when this action involves killing of animals or destruction of plants – justified by the *principle of human defence*. There is another principle that justifies human preference, i.e. *principle of human preservation*. The principle can be defined in the following terms: any action that is necessary to meet one’s basic needs or that of other humans is justified even when it involves denial of the basic needs of plants or animals. However, there is the third principle, namely, *principle of disproportionality*. The principle can be defined in the following terms: any action that is carried out to meet the non-basic needs (say luxury needs) of humans is not justified if it involves denial of the basic needs of plants and animals. On the basis of this principle preference goes beyond bounds, and is compatible with the non-anthropocentric perspective.

One can analyse alternatives to nonanthropocentrism in the following: Humans are superior because (1) they realize a greater range of values than nonhumans and (2) they have unprecedented capacity to create ethical systems that impart worth to other life forms.

What will follow from this are: (a) the principle of human defence favoured by non-anthropocentrism provides adequate protection to humans. There is no need to adopt a different principle over and above the principle of human defence. (b) Again, the principle of human preservation favoured by nonanthropocentrism provides adequate protection to humans. There is no need of adopting a different principle to justify actions of human beings, over and above the principle of human preservation. (c) What deserves attention is the principle of disproportionality.

One may distinguish between two degrees of preference: (1) Preference be given to the basic needs of animals and plants over the non-basic needs of humans - otherwise it would involve aggressing against basic needs of animals and plants (by an act of *commission*). (2) Preference be given to basic needs of animals and plants over the non-basic needs of humans – otherwise it would involve simply failing to meet the basic needs of animals and plants (by an act of *omission*). In human ethics when the basic needs of some people are in conflict with the nonbasic or luxury needs of others, the distinction between *failing to meet* and *aggressing against* basic needs has little moral force. However, both ways of not meeting needs are objectionable. This theoretical distinction would have little practical force since most of the ways that we have of preferring our own nonbasic needs over the basic needs of animals and plants actually involve aggressing against their basic needs to meet our own nonbasic or luxury needs rather than simply to meet their basic needs.

The above considerations provide grounds to justify various positions. For example, the claim that humans are superior to the members of other species, if it can be justified at all, is something like the claim that a person came in first in a race where others came in second, third, fourth, and so on. It would not imply that the members of other species are without intrinsic value. In fact, it would imply just the opposite – that the members of other species are also intrinsically valuable as humans, just as the claim that a person came in first in a race implies that the persons who came in second, third, fourth, and so on are also meritorious, though not as meritorious as the person who came in first. Consider also the fact that many animals and plants are superior to humans in one respect or the other: sight of eagle, smell of wolf, speed of cheetah. So any claim of human superiority must allow for the recognition corresponding to human excellence. In fact, it demands recognition. Again, if the claim of human superiority is to have any moral force, it must rest on non-question-begging grounds. And finally, if human needs, even non-basic or luxury needs, are always preferred to even the basic needs of the members of the human species, we would not be giving any recognition to the intrinsic value of nonhuman nature.

The fourth argument to defend attribution of morals to animals is based upon an understanding of an evolutionary theory of morality. Frans de Waal in his book *Primates and Philosophers: How Morality Evolved* argues that modern-day evolutionary biology does a disservice to the natural world, reinforcing our habit of labelling the good things we do as “humane” and the less civilized as “animalistic”.³⁸

Most secular philosophers accept the standard scientific account of biological evolution as based on random natural selection. None suggests that there is any reason to suppose that

humans are different from other animals or at least none base their arguments on the idea that humans uniquely possess a transcendental soul. A second important point that de Waal makes is that moral goodness is something real about which it is possible to make truth claims. Goodness requires at a minimum level taking proper account or care of others, whereas badness, by the same token, includes the sort of selfishness that leads us to treat others improperly by ignoring their interests or treating them as mere instruments.

Evolutionary science and consequently, evolutionary morality has to deal with the origins of goodness. Religiously inclined moral philosophers believe that humans have been uniquely endowed with special attributes like moral sense, whereas moral philosophers committed to a secular interpretation argue for a rational agent theory that regards the essence of human nature as an irreducible tendency to choose selfishness over voluntary cooperation. The third type of moral philosophers such as moral relativists believe that an action can be judged as right or wrong only locally by reference to contingent and contextual considerations.

The point of departure for evolutionary moralists is based upon the fact that there are strong scientific reasons to suppose that selfishness is a primary mechanism of natural selection. How then did humans come to acquire the value of goodness? In other words, why do humans think it is good to be good and bad to be bad and not vice-versa? To provide a theological answer would amount to denying the very evolutionary basis of science and scientific growth. Hence, we need to address the question of “whence morality”.

De Waal’s aim is to argue against a set of answers to the “whence morality” question that he describes as the “Veneer theory”.³⁹ If the Veneer theory of moral goodness is based on a myth, then the phenomenon of human goodness must be explained in some other way.

Humans are, he suggests, by nature good. Our “good nature” is inherited along with much else from our nonhuman ancestors through the Darwinian process of natural selection. Now we have to look carefully at the behaviour of our closest nonhuman relatives like chimpanzees, at first instance, and then at other primates more distantly related to ourselves and finally at non-primate social animals. Relying on the methodological principle of parsimony, we may argue if our closest relatives do in fact act as if they were good, then we could suppose that ‘goodness’ is real and natural and that the morality of both humans and their evolutionary ancestors has a common source. It is obvious that human behavioural goodness is more fully developed than non-human behavioural goodness. But the simpler non-human morality must be regarded in a substantial sense, as the foundation of more complex human morality.

De Waal bases his argument on the fundamental emotional response of empathy to explain why humans act well (good behaviour as against bad behaviour) at least sometimes rather than badly all the time, and further argues that this trait has evolutionary origins as it is found in other animals. He concludes that human morality would be impossible without certain emotional building blocks that are clearly at work in chimps and monkey societies. He sees human morality as having grown out of primate sociality, but with extra levels of sophistication. De Waal concludes that morality is actually a gift from animal ancestors and that people are good not by choice but by nature.⁴⁰ The crisis for theoretical studies on morality is that scholars fail to recognize that while animals are not humans, humans are animals.

We could sum up the above study in the following. Firstly, O’Neill’s analysis of intrinsic value provided us with a notion of three different senses of intrinsic value where he

recognises the third sense, namely, that nature should be given non instrumental value, while at the same time, not falling into the trap of infinite regress that all things in the universe hold instrumental value. Secondly, Kenneth Goodpaster provides us with an argument to justify sentience as a criterion of moral considerability, i.e. as the capacity to experience pleasure or pain simply means that only beings who have interest would be morally considerable. Thirdly James Sterba, while negotiating between anthropocentric and non-anthropocentric ethic, provides an argument why humans cannot justify aggression on the grounds of the principle of human defence as well as a broad definition of the principle of human preservation. The analysis provided above when juxtaposed on the canvas of evolutionary ethics renders impossible treatment of animals as non-moral agents. And finally, de Waal using elements of evolutionary theory of morality, provides us with the answers to “where from morality comes”, namely, from certain emotional building blocks that are clearly at work in chimps and monkey societies, having grown out of primate sociality with sophistication. The framework within which morality is ascribed to animals, does not impact on religious beliefs that humans are endowed with immortal souls and that they have a unique teleological end.

NOTES

¹ Although this principle is discussed in the article entitled “Animal Liberation....” it finds echo in all his later works such as *Practical Ethics*, *Unsanctifying Animals* (edited with Kushe) and *The Expanding Circle: Ethics and Sociobiology* (Oxford: Oxford University Press, 1981).

² Jeremy Bentham, (1948) *An Introduction to the Principles of Morals and Legislation*, Laurence J. LaFleur, ed. New York: Hafner Press, p.311

³ Ibid.

⁴ Cf. pp. 39-40

⁵ Ibid. p. 41

⁶ Cf. Tom Regan, (2008) “The Case for Animal Rights”, in *The Animal Ethics Reader*, (eds.) Susan J. Armstrong and Ricahrd G. Botzler, London: Routledge, Taylor and Francis Group, p.19

⁷ Cf. Ibid. p. 20

⁸ Ibid. p. 20

⁹ Ibid. p. 21

¹⁰ Ibid. p. 22

¹¹ Ibid. p.23

¹² Cf. Ibid.

¹³ Mark Rowlands, (2009) *Animal Rights: Theory and Practice*, London: Palgrave Macmillan, p.118

¹⁴ Ibid. p. 122

¹⁵ Ibid. p.125

¹⁶ Ibid. p. 127

¹⁷ John Rawls, (1971) *Theory of Justice*, Oxford: Oxford University Press, 1971. Quoted in Mark Rowlands, “Contractarianism and Animal Rights”, *Journal of Applied Philosophy*, Vol.14, No.2, 1997, p.238.

¹⁸ Cf. Ibid. p.238ff

¹⁹ Cf. Ibid. p. 243

²⁰ Cf. Ibid

²¹ Ibid. 244

²² Tom Regan, (1981) “On the Nature and Possibility of an Environmental Ethic”, *Environmental Philosophy*, Vol. III, pp. 19-34.

²³ Albert Schweitzer, (1923) *Philosophy of Civilization*, Part II: Civilization and Ethics, trans. J. Naish, London: A and C. Black

²⁴ Paul Taylor, (1986) *Respect for Nature: Theory of Environmental Ethics*, Princeton: Princeton University Press.

²⁵ Aldo Leopold (1949) *A Sand County Almanac* Oxford: Oxford University Press, pp.224-225.

²⁶ John O’Neill, (2003) “Varieties of Intrinsic Values”, *Environmental Ethics* (eds.) Andrew Light and Holmes Rolston III, Oxford: Blackwell Publishers, pp.131-142

²⁷ Ibid. p.131

²⁸ Arne, Naess, (2005) “The Shallow and the Deep, Long-Range Ecology Movement: A Summary”, *Environmental Philosophy*, Vol. II, pp. 51-56

²⁹ G.E. Moore, (1922) “Conception of Intrinsic Value” in *Philosophical Studies*, London: Rutledge and Kegan Paul.

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- ³⁰ C. L. Stevenson, (1944) *Ethics and Language*, New Haven CT: Yale University Press, p.178.
- ³¹ Peter Singer, (1975) *Animal Liberation: A New Ethics for Treatment of Animals*, New York: Random House.
- ³² Albert Schweitzer, (1923), p. 66.
- ³³ Kenneth E. Goodpaster,(2005) “On Being Morally Considerable”, *Environmental Philosophy*, Vol. I, pp.117
- ³⁴ Cf. Ibid. p. 124
- ³⁵ Gary E. Varner,(1998) *In Nature’s Interest? Interests, Animal Rights and Environmental Ethics*, N.Y.: Oxford University Press.
- ³⁶ Robin Attfield, (2005) “The Good of Trees”, *Environmental Philosophy*, Vol. I, pp. 132-150
- ³⁷ James Sterba, (2000) “Reconciling Anthropocentric and Nonanthropocentric Environmental Ethics”, in *Ethics in Practice: An Anthology* (ed.) Hugh LaFollette, Oxford: Blackwell Publishers, pp.645.
- ³⁸ Frans de Waal, Stephen Macedo and Josiah Ober (eds.) (2006), *Primates and Philosophers: How Morality Evolved*, Princeton: Princeton University Press.
- ³⁹ Veneer theory assumes that humans are by nature bestial and therefore bad, narrowly selfish and thus should be expected to act badly, that is, to treat others improperly.
- ⁴⁰ De Waal rejects social contract theorists such as Thomas Hobbes who believe that humans are fundamentally asocial or antisocial. De Waal also does not accept the oversimplification of the principle of natural selection as exclusively based upon the instinct of ‘selfishness’.

CHAPTER FOUR

MAN VERSUS NATURE: REFLECTIONS ON PRACTICE OF ENVIRONMENTAL ETHICS

Is there a moral case for restoration of four centuries old dichotomy between man and nature on the basis of moral argument? To answer this question, we have travelled through a journey of five decades of theoretical and empirical arguments that attempt to bring about a collapse of the dichotomy. A single most significant source of dichotomy is the Cartesian metaphysical distinction between mind and body that resulted into differences on the basis of the ontological status of man on the one hand and the other species of animals, plants and inanimate beings on the other. Fourth Chapter entitled “Man versus Nature: Reflections on Practice of Environmental Ethics” has reflected on the relationship between man and nature.

Roderick Frazier Nash has entitled Chapter I of his book *The Rights of Nature*, “From Natural Rights to the Rights of Nature” whereby suggesting a distinct theoretical shift that has taken place in the history of environmental philosophy. And this shift is reflected when he quotes Theodore Roszak, an eminent historian of culture, right at the beginning of the chapter: “We are finally coming to recognize that the natural environment is the exploited proletariat, the downtrodden nigger of everybody’s industrial system ... Nature must also have its natural rights.”¹ Although, the above quotation is full of metaphors situated in the context of American history, there are philosophical insights that should be noted. Roszak equates natural environment with the proletariat exploited by the new bourgeoisie (mankind as a whole). He also compares the exploited industrial workers who were denied the natural rights with nature that has always been outside the rights discourse.

As observed in the earlier chapters, the Western concern with natural rights principles is a seventeenth/eighteenth century phenomenon, and this was a result of the return to Greco-Roman jurisprudence, which clearly distinguished between natural law from man-made codes or charters. The Greco Roman and subsequent Christian civilisations assumed that nature along with animals (excluding humans) existed as instruments of the well being of humans. These utilitarian tendencies reflected in the fact that legal principles were not justified on the basis of fundamental principles of justice meant for both humans and animals, but on the basis of human interests.

Whether this separation between the *jus naturae* and *jus commune* was justified by a metaphysics or a metaphysical justification was provided at a later stage of western thought by philosophers like Rene Descartes will have to be studied. However, the obvious fact is that Rene Descartes' dichotomy between mind and body and the resultant practices that involved research with animals unanesthetized and nailed live to wooden board, 'awaken' the conscience of mankind to review the Cartesian dictum that animals are insensible and irrational machines. The rest is history, with many modern philosophers providing cogent and irrefutable arguments to justify natural moral rights of animals.

Many environmental philosophers are not necessarily happy with the technical discussions whereby a case is made for moral rights of animals. Their concern for animals is not derived from, what they regard onerous argumentation through which rights of animals are justified. Instead they see moral treatment of animals as part of overall concern of environmentalists with nature. In other words, their concern for animals is within the realm of their concern for nature. Whereas, moral environmental philosophers' concern for nature, they argue, stems from the fact that animals have natural moral rights². For example they consider Peter Singer

and Tom Regan as advocates of biocentrism. As discussed earlier, the two most important thinkers that have brought to the centre the issue of concern for animals were Albert Schweitzer as early as 1923 and Kenneth Goodpaster in 1978. While Albert Schweitzer demanded reverence for all life when he said “I am life that wants to live, in the midst of life that wants to live”³, Goodpaster questioned the argument that accords moral consideration to only sentient beings. Goodpaster and others argued that sentience is a morally arbitrary feature, whereas the life criterion does not privilege such features.

But neither the sentientism nor biocentrism can account for our moral concern for the environment or the foundations of ecology. In the previous chapter we have made a case for moral concerns for animals by going through the classical and modern philosophical tradition and linking the same with some of the recent moral philosophers. To make a case for ecocentrism we must provide moral arguments to justify the need to protect ‘nature’⁴. Environmental philosophers or theorists by and large feel that the arguments provided by advocates of sentientism do not make a cogent case for protection of ecology. Similarly, advocates of biocentrism do not give sufficient moral justification in defence of ecology. Merely making a case on the basis of general truism such as ‘everything is related to everything else’ provides only a general argument or a heuristic device and opens up a possibility of expanding moral consideration to nature. Critiques of such ‘moral extensionism’ will point out to weird questioning common among the lawyers arguing cases that are at times beyond defence. For instance, can a lamb sue the lion for threatening its life, on the ground that it has right to life? Or, do acacia trees have rights against the elephants who feed on such trees?

The form of ecocentrism propagated by the environmental moralists will not lead to such weird form of argumentation, but concentrate on moral primacy of non-sentient non-

biological environment as ‘ecological whole’ of which humans, sentients, non-sentients, etc. are a part. “Appreciating the lessons of nature” argues Dale Jamieson, “should move us away from our traditional individualist paradigm of rights and interests, and lead us to see our moral relations with nature in an entirely new light”.⁵

The following thinkers who reflected on environmental ethics were considered for a detailed study: Peter Singer, Lynn White, Holmes Rolston III, John Passmore, James Lovelock, Aldo Leopold, Arne Naess, J. Baird Callicott and Roger J. H. King. Considering the theoretical affiliations of these authors and similarities of their contributions, the present study concentrated on four of these ‘philosophers’ in view of the fact that they have distinct moral justification for why nature ought to be protected for the sake of itself.

One of the important features of these interpreters is that they have a distinct take on the question of ‘valuing nature’. And this feature needs a brief introduction so that what is being discussed at the later stage gains clarity. It is a truism that value discourse arises from the interaction between the valuers and the contents of nature or the world at large. Values are ascribed to the world, when we speak about what ought to be valued under certain conditions or circumstances in relation to some others that do not ascribe such values. The complex of conditions and circumstances leads to equally complex ways of valuing that are labelled as ‘intrinsically valuable’ or ‘instrumentally valuable’ or that challenge our capacity of categorising as either intrinsic or instrumental.

Environmental philosophers and other thinkers seem to have been influenced by Immanuel Kant’s distinction between ‘intrinsic value’ and ‘instrumental value’. And this distinction has led many of them to consider that what is intrinsically valuable as superior to that what is

instrumentally valued. It is true that what is intrinsically valuable is in some aspect more important than what is instrumentally valuable. But this does not imply that in all possible aspects, the instrumentally valuable is inferior to that what is intrinsically valuable.⁶ It may be noted that the distinction itself cannot be accepted in absolute terms. Again, that the distinction itself is problematic may be seen from the following example provided by Dale Jamieson.

X buys a painting to place on the wall where there is a hole. This gives the painting an instrumental value. However in due course of time, X begins to value the painting *per se* thus ascribing to it intrinsic value. So much so that X places the painting in a pre-eminent place in the living room so that it is appreciated by one and all. In due course of time, X gets tired of the painting and it also reminds him of bad childhood experiences. X shifts the painting to its original place to hide the hole in the wall, as the painting no longer has intrinsic value to him. This type of change between something being of instrumental value and then of intrinsic value, and at a later stage, turning out to be of instrumental value, and so on and so forth, is a common phenomenon in ascription of values that we experience. This points out to the fact that our evaluation processes are 'dynamic' in character, and change under different conditions and circumstances.⁷

The problematic nature of distinction between 'intrinsic' and 'instrumental' value can be seen from the fact that a general glance at the 'intrinsic' value reveals at least four different senses/meanings. The first sense of 'intrinsic' value is one we refer to as the *ultimate* value contrasting it with the instrumental value which is that value which helps to realise the ultimate value. A long walk in the woods is the instrumental value that results in pleasure which is value *per se*, or ultimate value. The second sense of 'intrinsic' value is one which

we refer to as *moral considerability*. It is in this sense that we consider something/someone that has both necessary and sufficient characteristics for being considered as having moral standing or that should be morally considered. In the classical period the characteristic of rationality was deemed to be both necessary and sufficient reason for moral considerability. In recent times, those with ‘sentience’ (capacity to feel pleasure and pain) are regarded as members of moral community. And hence they should be considered while taking decisions affecting them. The third sense ‘intrinsic’ value is one which is alternatively known as ‘inherent value’. ‘Inherent value’ refers to a thing being valuable because of the objective property a thing has due to the nature of the object, and recognised as such. The fourth sense of ‘intrinsic’ value refers to that value that is independent of the valuer or observer. In other words, something has value whether there is a valuer or not.

Although these four senses have overlapping concerns, the differences among them have both conceptual validity as well as justification while dealing with various components of the world we live in. For instance, when we say we value something intrinsically in the first sense (ultimate), it may have far reaching consequences when used in the second sense (intrinsic as moral considerability). Someone may value mountains, rivers, forests, etc. in the first sense, and still may not claim to value them in the sense referred to in the other three cases. Then, there is a possibility that we may value something intrinsically and non-intrinsically at the same time as in the case of one valuing classical music, which can also be considered as instrumental value for someone who can relax after listening to some classical music. In spite of the problematic nature of the above distinctions, they provide a methodological tool for valuing nature, particularly to those not trained in philosophical discourse and analysis.

The biggest mistake that some biocentrists, ecocentrists, scientists and some philosophers make is to argue that if plants or ecosystems cannot be accorded moral considerability, (intrinsic in the second sense) they cannot be considered as having ultimate value (first sense of intrinsic value). Dale Jamieson reacts to this position by quoting John Rodman: “I need only to stand in the midst of a clear cut-forest, a strip-mined hillside, a defoliated jungle, or a dammed canyon to feel uneasy with assumptions that could yield the conclusion that no human action can make any difference to the welfare of anything but sentient animals.”⁸ It is human action that protects nature – other than humans, biosystems and ecosystems, - and such action is moral in spite of the fact that the objects of such action are not morally considerable. We can value forests, rivers, jungles etc. as much as we value justice while dealing with present and future generations of humans and other sentient animals.

I have selected, from the above, four representative theoretical explorations that attempt to overcome the radicalisation of the differences between man and nature: James E. Lovelock’s *Gaia*; John Passmore’s *Attitudinal Explorations*; Aldo Leopold’s *Land Ethic*, and Roger J. H. King’s *Contextualism*.

Gaia theory or hypothesis, whichever nomenclature the entire discourse as known to environmental philosophers, argues for a ‘single organic system’ that contains both living organisms and inorganic facets of Mother Earth.⁹ The most humble summary interpretation of the gaia hypothesis/theory is given by Peter Hay when he says that it is a “proposal that life on earth co-ordinates, regulates, and self-corrects in such a way that it is maintained even through substantial alterations to the geological and chemical conditions that sustain it.”¹⁰ There have been many different articulations and defence of *gaia hypothesis*, however, for

the present purpose, it is enough to look closely at James Lovelock's formulation as the representative of them all.

James Lovelock in his seminal work entitled *Gaia: A New Look at Life on Earth* viewed the entire world/earth as a 'single living entity' self regulating and "capable of manipulating the Earth's atmosphere to suit its overall needs, and is endowed with faculties and powers that go far beyond those of its constituent parts".¹¹ In other words, Gaia hypothesis, believes that life on earth 'regulates' and 'self-corrects' in order to maintain itself even when substantial changes take place to its (earth's) geological and chemical conditions responsible to sustain it.

Lovelock could find only one plausible explanation for Earth's highly 'improbable atmosphere' that is fine tuned to sustain life. Atmosphere was seen by Lovelock as an extension of biosphere. In other words, the entire world as a self-regulating organism as the "entire range of living matter on Earth, from whales to viruses, from oaks to algae, ... (constitute) a single living entity".¹² Further, Lovelock attributed to this single living entity, faculties and powers, over and above the powers of the parts of this living entity, to manipulate atmosphere to suit its general and specific needs.

The hypothesis that proposes a large creature (Gaia, Mother Earth,) with the capacity to homeostat the planetary environment, is doubted by many including scientists. However, methodologically, Lovelock defends himself reasonably well. Most biologists believe that a creature is alive on the basis of 'phenomenological evidence'. And the evidence in this case is, in Lovelock's words: "the persistent ability to maintain a constant temperature and a compatible chemical composition in an environment which is changing or is perturbed if

shown by a biological system would usually be accepted as evidence that it was alive”.¹³

One of the basic criticisms against such a theory or hypothesis is that anthropomorphizing a regulatory mechanism of atmosphere as a living organism having its own ‘mind’ or ‘will’ so to say, is taking literally true the metaphorical expressions used in our discourse. The criticisms are indeed serious. But there is another aspect that we should not ignore. Use of metaphors is a significant method for advancement of knowledge, whether in natural or social sciences. A phenomenon that cannot be described by the existing terms and by the meaning/s ascribed to them, metaphors do play a significant role in generating new knowledge by providing a definitive description of such a phenomenon. Advances in physics, computer sciences and even in biology have shown considerable use of metaphors in order to extend meanings of existing terms and create new knowledge.¹⁴

There have been many criticisms against Gaia hypothesis, particularly the ones that accuse Lovelock of ‘collaborating’ with thinkers committed to philosophical holism¹⁵ rather than being committed to a scientific hypothesis. Lovelock’s initial collaborator, Lynn Margulis¹⁶ was one of the first to criticize Lovelock’s attempt to see the Earth as a ‘living organism’. The most significant criticism against Lovelock’s ‘Gaia hypothesis’ is that it is ‘teleological’ in nature. As a reaction to this criticism, Edward Goldsmith went to such an extent that he argued that ‘gaian processes are teleological’. Edward Goldsmith proposed sixty-seven principles of ‘gaian worldview’, the twenty-second of which clearly asserts that reductionist scientists are incapable of accepting such a proposition because it is, for them (scientists) that only man is capable of intelligence, consciousness and reasoning.

It would be great injustice to evaluate the ‘Gaian worldview’ if we restrict ourselves to Lovelock’s contribution alone. Again, for the present study, the technical literature that has developed for the last fifty years or so may not be of great help to the present ethico-philosophical study for two reasons: one, I am not competent (given the scientific nature of discourse) to scrutinize the arguments for or against, and two, there is an unsettled question of methodological superiority of the mechanistic model vis-à-vis the biological model of understanding sciences. In such a situation, we have restricted our evaluation to a general understanding of ‘Gaian’ hypothesis. James W. Kirchner, a sympathetic critique of ‘Gaian hypothesis’ has been a major contributor to the debate and has written extensively on the subject. I shall, for the present study, depend on his works, particularly, his article “The Gaia Hypothesis: Fact, Theory, and Wishful Thinking”¹⁷ wherein he has evaluated the entire debate in the light of some of the recent developments in biosciences and justly concludes there are, in ‘gaia hypothesis’ elements of fact and theory, metaphors, and of course, some wishful thinking.

Kirchner begins his study of ‘Gaia hypothesis’ by looking at the extent of application, namely two forms of hypothesis: *weak* forms and *strong* forms. Weak forms of Gaia hypothesis argue that life as a whole has influence on the environment. This therefore leads us to believe that the two evolutions, namely, evolution of life and evolution of environment, are so entangled, that they affect each other. The strong forms of Gaia hypothesis assume “that the biosphere can be modeled as a single giant organism ... or that life optimizes the physical and chemical environment to best meet the biosphere’s needs”.¹⁸ The claims made by strong forms, according to Kirchner, cannot be falsified and hence unscientific. They should be treated as metaphors. However, there is one area between the strong forms and weak forms of ‘Gaian hypothesis’ that need a relook as they are capable of justifying the

study of ‘Gaian hypothesis’, i.e. ‘Homeostatic Gaia’ which believes that “atmosphere-biosphere interactions are dominated by negative feedback, and that this feedback helps to stabilize the global environment.”¹⁹

What Kirchner refers to elements of ‘fact’ and ‘theory’ in ‘Gaian hypothesis’ is overwhelming research and evidence for the last fifty years or so regarding organisms’ effect on physical and chemical environment. Kirchner cites large number of studies to prove his point, i.e. “many important chemical constituents of the atmosphere and oceans are neither biogenic or biologically controlled, and many important fluxes of the Earth’s surface are biologically mediated ...”²⁰ Again, the ‘Gaian hypothesis’ according to many biologists seem to be justified by the fact that organisms and environment (physical) ‘form a coupled system’, in Kirchner’s words: “the biota affect their physical and chemical environment, which in turn shapes their further evolution ... (and) Earth’s environment and life co-evolve through geologic time.”²¹ The theoretical element of the ‘Gaian hypothesis’ is observed from the following. As any complex ‘coupled system’ shows ‘emergent characteristics’ so also atmosphere/biosphere as a coupled system will develop emergent behaviour. This theoretical element is comparable to social sciences phenomenon, where a social whole is not a sum total of its corresponding parts, or society is not equal to a sum total of individuals of the society. Natural sciences seem to recognize, in their methodological framework, a form of emergentism which was hitherto not accepted in natural science methodology.

Why does Kirchner think that ‘Gaian hypothesis’ is a ‘wishful thinking’? This is because there are claims in this hypothesis that there is something in this process more than ‘co-evolution of biosphere and environment. Further, there is a belief that in such processes there is not only system-level behaviours but also some form of evolutionary teleology. From the

fact that a coupled system of biosphere and environment may give rise to two types of feedback, namely, negative feedback that leads to stabilizing and positive feedback that leads to destabilizing – resulting in either beneficial or non-beneficial (detrimental) conditions for the survival of organisms. But what Gaian hypothesis or its propagators accept is only negative feedbacks that are beneficial to the organisms. The positive feedbacks that are detrimental are not recognized as ‘Gaian’. There is, therefore, an explicit claim that these feedbacks (biologically mediated) create stability in the environment which results in changes more appropriate or suitable for life or evolution of the organisms. Kirchner points out that although such a claim of ‘Gaian hypothesis’ that “organisms stabilize the global environment and make it more suitable for life” is not “consistent with the available data” and “difficult to test against data”.²²

Two issues arising from the above discussion need further elaboration to understand the ‘Gaian hypothesis’ and its contribution to protection of nature. Kirchner labels as ‘Homeostatic Gaia’ the negative feedbacks (biologically mediated) that stabilize the environment. Secondly, he qualifies the consequential changes in the environment that are appropriate for life as ‘Optimizing Gaia’. That both negative and positive feedbacks (biological) play a stabilizing or destabilizing role in the environment (physical) has been proved by biogeochemists and other scientists. Kirchner has listed eight cases of such negative and positive feedbacks in this study to highlight the biosphere-atmosphere connection leading to phenomena such as ‘global warming’, ‘green house emissions’ etc.²³ What is clear from these studies is the fact that there are both positive and negative feedbacks and hence it is not true that biologically mediated feedbacks do not necessarily lead to stabilizing the physical environment.

The second issue that requires reflection is the Gaia hypothesis' claim that biota alters the environment (physical) to benefit itself. Empirical evidence has not corroborated this claim, alternatively it has been proved that there are both positive and negative feedbacks – in fact Kitchner has cited more positive feedbacks than negative ones - which shows that biologically mediated homeostasis to a great extent has detrimental/destabilizing effect. But there is another aspect of our natural experiences. Our belief that the natural environment is most suitable for survival of living organisms, even under most devastating or strenuous conditions is something we are so convinced about that there is not even an iota of doubt. And since the natural environment has biological feedbacks, it becomes equally natural to believe that these mechanisms make our environment an ideal place for survival and growth of all living organisms. It is but natural to believe that absence of biological processes would disrupt the natural environment as much as their presence enhances the world we live in.

But, Kirchner, as critique of 'Gaian hypothesis', argues that it is one thing to accept that 'environmental services' are important for the ecosystems to survive and thrive, but another thing to conclude that the environment is so designed that it meets the needs of the organisms. Biogeochemists and other scientists have accepted the fact that organisms affect the environment, and that there are organisms which are best suited to thrive under such environmental conditions because of their natural propensity or evolutionary traits. It is also true that some of the conditions or environmental services have been created/enhanced by the same organisms or their co-occurring species.

Kirchner describes a hypothetical case which almost satisfies the requirement of 'Gaian hypothesis'. Rainforests remain wet in drought conditions (when there is intense heat) because water is recycled by the process of 'transpiration' from thick vegetation. This would

not be possible in places where there is sparse vegetation. However, there are different type of problems for the rainforest vegetation, namely lack of nutrition and light as the thick vegetation creates overcrowding or ‘parasitism’ by pathogens that grow under such wet conditions. Organisms in such situation will have to be so evolved that they can survive under these new changed wet conditions, which would not be possible if ‘transpiration’ was not to take place or was disrupted. Can one treat this case as ‘rainforest influencing its climate for its own benefit’?²⁴

Kirchner takes a realistic position on this issue when he points out that an ‘yes’ answer would be ‘semantically true’ but ‘mechanistically misleading’ as it would be appropriate to conclude “that natural selection has made rainforest organisms dependent on rainforest conditions, which are partly of their own making”.²⁵ Kirchner claims that there is not only semantic confusion ‘for its own benefit’ and ‘to its own benefit’ but the expression ‘for its own benefit’ suggests vegetation somehow makes changes in the physical environment (with an ‘express wish’) ‘to reap benefits’ from such changes. It is not surprising that evolutionary scientists have, knowingly or unknowingly, fallen in the trap of ‘teleology’ in their discussions, although, as scientists, they have been committed to a mechanistic framework in understanding nature. Alternatively, one may inquire into the fact whether the seemingly ‘teleological’ expressions of Gaia proponents are justified as metaphorical uses of expressing phenomena that hitherto could not be expressed in ordinary mechanistic (expressions) model of explanation.

John Passmore’s *Attitudinal Explorations* is based upon two axioms (1) that “that natural processes go on in their own way, in a manner indifferent to human interests,” and (2) “if we can bring ourselves to fully admit the independence of nature...we are likely to feel more

respect for the ways in which they go on.”²⁶ Passmore proposes a ‘new metaphysics’ that does not see nature as human dependent and ‘created’ for the survival of mankind. Passmore believes that it is proper to assume that animals have their own ‘interests’ unless the meaning of interests is ‘needs’. The new metaphysics proposed by Passmore is not reductionist²⁷ but naturalistic²⁸. The clarion call given by some for a new environmental ethics, Passmore believes is unjustified as the existing ethical principles are adequate enough to ‘protect’ nature. What is proposed is a ‘new attitude to nature’ that overcomes the age old ‘prejudices’ that nature has only instrumental value and that exploitation of nature is moral wrong only when it affects human interests.

A critical reflection on Passmore’s contribution to ‘nature protection’ as envisaged in this chapter would take us to his seminal work *Man’s Responsibility to Nature*, a summary of the same has been published as article in various anthologies on environmental ethics. Passmore has used the term ‘nature’ in a very restricted sense to refer to “only that which, setting aside the supernatural is human neither in itself nor in its origins”.²⁹ But when he refers to ‘attitude towards nature’ he refers to a much more restricted sense of the term nature whereby referring to that part of nature that man can change or has the power to modify. The assumption here is that man has the power over ‘nature’ to change or modify it.

Passmore says that his concern here is to look at the relationship between man and nature comprising of ‘strange’ life of animals and plants, - ‘strange’ in the sense used by existentialist theologian, Karl Barth, unfamiliar, foreign, alien. This characteristic of nature has not always been part of man’s awareness. Man has, in the course of history, viewed nature differently as having mind of its own, capable of being entreated to as humans would, and even being prayed to as we do to gods and deities. But with the beginnings of Greek and

Roman civilizations and the subsequent Western Renaissance, the official scientific position became dominant and natural processes were viewed differently from animals. Passmore highlights the fact that there were still residual elements in many societies that viewed nature as having its own mind, or took literally the metaphors used such as 'nature will have its revenge'.

For Passmore the Stoic-Christian tradition has accorded man a higher status, and nature (animals and plants) a status of being instruments of well-being of human beings. Passmore rightly points out that this attitude is not necessarily the entire Biblical tradition. Quoting the *Book of Job*, God 'causes it to rain on the earth, where no man is; on the wilderness, wherein there is no man; to satisfy the desolate and the waste ground; and to cause bud of the tender herb to spring forth',³⁰ Passmore insists that the Old Testament did not give man total dominion on nature.

Strangely, it was from the Stoicism that Christian philosophers like Origen emphasized the mandate from the Book of Genesis that all creation exists for the benefit of God's unique creation, namely, man. Contrary to the above view, Passmore points out that for long time the Christian tradition emphasized the doctrine that what God has created is the best possible creation, and that "sinful corrupt men ought not to attempt to reshape the world in their own image."³¹ Passmore goes on to cite Heideggerian etymology of 'mechanical' derived as *moecha* (an adulteress) that tempted man to change the world against the will of God, when God himself had so perfectly provided for all men in his creation.

But the fact remains that Christian theology under the influence of Greeks and Stoics has reduced nature to instrumental value, namely to be used for the 'pleasure' of man. In

spite of the fact that some objects of nature were treated as sacred by Christianity, there was no uneasiness at the 'destruction' of plants and animals for the sake of man, who, in Biblical parlance, is the only one created in the 'image of God'. In short, Christians, by and large, believed that the advancement in science and technology is the result of the development of Christian civilization and that modifying and exploiting nature to suit human needs is justified.

After clarifying the Christian metaphysics of nature, Passmore proceeds to analyse Christian ethical approach to nature. Their attitude towards nature can be summed from the fact that the relationship between man and nature (natural objects) is not mediated by any moral considerations. In other words, so long as such an action of the individual does not affect another person, like destruction of another person's property or animals, the action is not immoral. Again so long as such actions which seemingly destroy property or inflict cruelty on animals lead to encouragement of such attitudes in others, there is no moral sanction on the same.

Two important philosophers of Christian tradition, Augustine and Aquinas, may theologically vary from each other, but ethically seem to agree when they claim that there is no moral wrong in perpetuating cruelty on animals. It is wrong to be cruel to animals, if it leads to harm to fellow human beings. Passmore highlights the fact that even Immanuel Kant maintains a similar position and goes to argue that what is said about animals, *mutatis mutandi*, applied to all non-human entities such as trees and plants.

The issue of cruelty to animals is central to the discourse on ecology. Passmore does admit that Kant and many other philosophers have looked at the problem only in

terms of moral discourse of human beings that is related to relations between humans. And the relationship between humans and the non-human world is kept outside the moral discourse. The non-human world would enter into the moral discourse in so far as the actions of the human against the non-human world impinge on the interest of humans. The issue whether there is any intrinsic value in animals and plants (non-human world) is central to the contemporary discussion in ecology. But such a matter was set aside during the seventeenth and eighteenth centuries under the influence of the Cartesian doctrine of radical differentiation between man and animals. Animals were not only denied the capacity to suffer pain and pleasure, but were treated as machines. Under the Cartesian influence even the human body was treated as part of the non-human world, but retrieved from this category only because Descartes had deemed that there is a connection between consciousness (mind) and body because of which the body was seen as 'united' with the consciousness. Consequently, the Cartesian dichotomy between mind and body was used by the Western Christian world to keep the relationship between man and nature out of bounds of moral obligations.

If Francis Bacon gave the methodological framework of Western science, Descartes provided the philosophical justification for science to transform nature and exploit it to the benefit of man. In this regard, Descartes was different from Stoic-Greco influenced Christianity that believed the world has been created by God in all its perfection and to interfere and modify nature would constitute sin against the Creator. This sentiment finds resonance even today in the ethical reflections of the Christian world, particularly of Roman Catholicism. Descartes identified that man has "to make himself master and possessor of nature' the proper attitude to the world ... is exploitative".³² Passmore believes that this type of

understanding of science and technology is the essential part of man's 'attitude to nature,' an attitude to nature dictated by an understanding of science which presumes physics as the ideal form of science. Of course, there have been critics of this 'ideal form' of science within and outside the scientific world.

Unhappy with the Cartesian view of man and world which did not allow even an aesthetic appreciation of natural beauty let alone a moral evaluation of man-nature relationships, the ecological critics of the Western Christian civilization's attitude to nature, seek to articulate a new ethics based upon a new metaphysics and a new aesthetics. Passmore emphasizes the fact that Western metaphysics along with ethics have encouraged exploitation of non-human nature. This does not imply that the community of thinkers have to opt for a new metaphysics and ethics or declare nature as sacred in order to protect it from the exploitation by science and technology. Science has indeed enhanced our understanding of nature, got communities out of superstitious beliefs and put us on the path of rational application of scientific laws and theories in order to improve the condition of our life. Passmore seeks to lay down a proper framework for a 'philosophy of nature' free from the 'reactionary and mystical overtones' that have often surfaced in the discourse of ecological movements.

Passmore lays down three prerequisites for an adequately formulated 'philosophy of nature': We must accept the fact (1) that nature functions in its own way, without any connection or 'concern' with human interests; (2) that human action impacts nature in an unpredictable manner; and (3) that 'natural' laws in the case of nature are radically different from the laws of physics, but they advance the understanding of the phenomenon of nature. There is need of greater clarity regarding what these three prerequisites are.

Passmore believes that natural phenomena or processes are such that human interests are not part of their consequences or impact. They are such that there is nowhere even an iota of 'concern' for the survival of mankind. Secondly, man's action impacts nature in a very strong manner, even to the extent that they change the quality of substance setting about new processes. One is incapable of predicting the outcome of such processes or interactions. And finally, the general 'laws' formulated in understanding 'nature' are quite ill-formulated compared to the ideal laws of physics. In spite of the fact that the laws of 'nature' like that of biology and sociology are inferior to that of physical sciences, they provide detailed understanding of their functions and *inter se* relationships.

The conditions or prerequisites laid down above suggest that we require a new metaphysics that is non-anthropocentric as nature does not (is indifferent to) care for the existence or survival of man. But, Passmore immediately adds that this is not a new metaphysics, as naturalistic philosophies have always supported such nature driven philosophies. Indeed, the objective of such philosophies was to 'naturalize' man rather than to 'spiritualize' nature. The difference between Passmore's 'nature' and that of naturalistic philosophies like Darwinian biology, is that in the case of the former, 'nature' is posited *apart* from man, whereas in the case of the latter, man is *part* of nature. Passmore's insistence of 'nature philosophy' on the basis of the meaning he attaches to nature is important in relation to the uniqueness of men, who according to him, have special ways of relating to one another and to the world around them, and also distinctive in their concern for the future.³³

Naturalistic Philosophies such as Darwinian biology would accept that in the normal biological struggle of the survival of the fittest, man as dominant species is prone to destroy other species. Man's survival under these conditions is at the cost of other species. However,

Passmore specifically points out that the difference between men and other species is that men can visualize the results of their action and observe the resultant extinction of species. Man can change his behavior in order to preserve the species or refrain from destroying it. At one level men may not be unique for the naturalistic philosophy, but at another level that men have the capacity to visualize and change their behavior in the evolutionary processes, compels us to look for a 'new metaphysics' which is naturalistic but not reductionist.

Secondly, man has to recognize that he along with animals, plants, and biosphere constitute a 'community' and that all these constituent parts have a right to live/survive and a right to be treated with 'respect'. This is particularly directed against the Stoics who gave men a unique place in the civilizational scheme, that gave licence to men to destroy other members of the community for their own survival.

Where does Passmore differ from other philosophers while dealing with 'right' and 'respect' to all members of the 'community? What type of 'new ethics' can Passmore propose that will vary from the traditional one? Taking a cue from the primitivists who resent men acting unjustly and against nature, Passmore rejects Stoics' free for all exploitation of nature. He takes a cue from Hume who distinguishes between 'acting *humanely* towards animals' and 'acting *justly* towards animals', to reject the primitivist position. Acting *humanely* towards animals implies theory of sentience, namely, animals, like humans suffer pain. Acting *justly* towards animals, according to Passmore, implies animals have interests (like humans) and hence come under the purview of the theory of justice. Passmore does not accept that non-humans have 'interests' in any sense other than 'needs', and therefore cannot have 'rights'. "It is one thing to say that it is wrong to treat plants and animals in a certain manner, quite another thing to say that they have a

right to be treated differently”,³⁴ argues Passmore. He concludes saying that humans, animals, plants and biosphere form a single community. But this community does not create rights, duties and obligations on the part of its constituent members and there is no network of responsibilities that accords *rights* to the members.

Passmore proceeds to deny the need of ‘new ethics’ as there are already enough principles in the traditional ethics that allows condemnation or punitive action on those who destroy ecology. Passmore says that it is only in the cases where specific human interests are not identified or involved, that one may call for a ‘new ethics’ to deal with such eventualities. Passmore seems to fall prey to ethical reductionism when he cites the example of protection and preservation of wild species and wilderness on the basis of some form of utilitarianism.

Passmore cannot accept the theologically enunciated Augustinian doctrine that human actions against animals are not within the scope of moral criticisms, except when it comes to conflict with human interests. This is universally recognized ‘moral blindness’. However, Passmore questions whether the same moral blindness continues while dealing with non-sentient entities, just because they do not suffer.

Passmore points out that destruction of natural objects is far more serious than the vandalism of property such as works of arts and artifacts that implicitly affects human interests. Citing the often quoted thought experiment of ‘last man on earth’, Passmore argues that the last man is condemnable for the ‘orgy destruction’ even when it affects no human interest.³⁵

Passmore’s conclusion of his argument is refreshingly ‘prescriptive’ when he says that when

we recognize the independence of nature and the complexity of natural phenomena we shall develop a sense of admiration of nature, appreciate it aesthetically and study its very complex workings, instead of just manipulating it for our personal benefits. This is what Passmore calls, 'new moral attitude' to nature, which is inextricably linked to a more realistic philosophy of nature.

Roger J. H. King's studies have a rather controversial response to nature in general and animals in particular in the 'context' of *hunting*. His reflections take him to find fault with animal liberation protagonists, land ethic interpreters, defenders of primitivism and even ecofeminists. His differences with animal liberation protagonists is based upon the fact that animal liberationists do not distinguish between domestic and wild animals, which could be treated differently. He finds fault with Aldo Leopold and other land ethic interpreters on the ground that if they were to take into account 'self-domestication by humans', the attitude towards humans would be radically different. He is against the primitivists' (such as Paul Shepard and Ortega y Gasset) claim that 'hunting is essential part of human nature'.

A more detailed study of King's position reveals that he attempts to answer the question 'does Nature have moral value?' in a manner that the answer remains unfinished. He begins his analysis by highlighting the fact that there are two ways of approaching the question: (1) study the properties that nature has, that make nature a moral value; (2) study the context under which Nature is 'construed' which makes it to possess or not to possess moral value in our discourse. The first approach is a traditional approach adopted by philosophers in the history of philosophy. The second approach depends upon the context under which non-human entities are accorded moral status within our 'human cultural understanding'. This

'contextualist' environmental ethics³⁶ depends upon our social, political, economic, etc. factors that help us to construct our conception of Nature.

King believes that contemporary environmental ethics is substantially foundationalist, in the sense that nature of the object/s determine whether they have moral value or not. Foundationalist approach to moral value is directly opposed to value based on cultural interpretations. King opts for a contextualist approach in which Nature is construal of human cultural life. In other words, our conception of Nature is based upon our interpretation of Nature which is dependent upon our intellectual, emotional, artistic and scientific experiences. King calls the complex of resources as the matrix or context within which our interpretation of the world occurs. In the words of King: "...the inquiry into Nature's moral status proceeds against the background of a prior interpretation and understanding of just what Nature is....and this understanding itself presupposes the historically specific matrix from within which we begin our interpretative effort."³⁷ It is but natural to conclude that we cannot have abstract discussion on the moral value of Nature, as the question regarding the moral value of nature presupposes the epistemic exercise of how we know nature and what is the end result of such knowledge.

King exemplifies his position by citing the example of 'wilderness' and how it was valued by various communities/societies. Referring to the study of Peter N. Carroll³⁸, King shows how Puritans in New England viewed wilderness as the domain of Satan that was sought to be destroyed and converted into arable land. The religious context of Puritans determined the view of one constituent of Nature in this case. With the advent of Romanticism wilderness gained a special status due to the artistic enterprise of painting 'beautiful' images of wilderness and that led to the development of aesthetic value. King cites Mark Sagoff³⁹ who

gave a moral argument on the basis of aesthetic value for the preservation of the wilderness. Contemporary society views wilderness purely from the economic point of view. Wilderness is seen as a source of economic resources such as raw material for industries in terms of timber, hunting for wild animals, space for recreational tourism and other activities that bring in economic benefits to the community. In return, it is obvious, that there is great amount of degradation of wilderness. That the three above cited examples are used by King to argue that any “inquiry into the moral status of Nature must inevitably return to a moral and political investigation of the social context within which Nature is constructed”.⁴⁰

The most significant criticism King forwards against the foundationalist environmental ethical position is that ‘Nature is incapable of playing an independent justificatory role.’ Let us see King’s argument closely. King believes that the traditional environmental moral philosophers presuppose that Nature is a victim of human vandalism. At the same time Nature shows humans a way for proper behaviour by which humans can restore Nature’s stability. Now, all such foundationalist positions agree to two things: for one, the treatment humans mete out to Nature depends upon the objective characteristics of Nature, and recognised as such by the moral community; secondly, the objective of environmental ethics is to restore our ‘harmony with nature’ by overcoming the alienations suffered by humans due to its destructive behaviour. The two points mentioned above make sense, according to King, only if our understanding of Nature is the result of unmediated access to Nature as it is. Or else, all that Nature tells us to follow and the moral do’s and don’ts that humans lay down are dictated by the type of environmental ethics we construct.

King analyses four different moral theories that have implicit to them the idea that Nature is a ‘moral guide’ to humans in their relationship to the non-human world. Immanuel Kant,

according to King, clearly meets the requirement of Nature being not capable of providing moral guidance for the behaviour of humans. It is indeed without any doubt that Kant in *Lectures on Ethics*, does recognize animals as participants in the moral community as they lack the capacity of reason and free will. Kant accepts that humans have obligations towards animals. Animal liberation philosophers do not accept the Kantian position. However, they, like Peter Singer, depend upon specific property of *sentience* to argue for inclusion of animals in the moral community. As we have seen in our earlier discussion, some species of animals, particularly those nearest to humans in the evolutionary process, demand moral respect. For King, animal liberation philosophers are also foundationalists who will not be able to attribute to Nature moral guidance for human action. Aldo Leopold, as we observed in the present chapter, does not accept animal liberation moral theory as the same is limited to individual animals. Instead, he in *A Sand County Almanac* where he propounded his deep ecological theory, wants to go beyond the domestic animals and look at the entire biotic community as a whole. So long as the entire biotic community contributes towards the integrity, stability and beauty of the ecosystem, it has moral value. Leopold recognizes the whole of Nature in all its aspects as of moral value. King is quick enough to point out that 'land ethics' is so restrictive that the moral claim of Nature is limited to that extent that it contributes to the stability of the ecosystem, otherwise, it would be outside the scope of moral protection. King even points out that some of the 'land ethic' proponents justify hunting of animals on the moral grounds that it contributes towards integrity, stability and beauty of ecological wholes⁴¹.

So far there have been only critical comments on environmental theories that have been propagated by various philosophers. As part of his own contribution to the formulation of a proper environmental ethics, King attempts to lay down a framework by means of which he will be able to provide direction for an adequate moral theory. King begins by asserting

certain 'truisms', first of which is that to treat Nature as a 'guide' for our moral behaviour, we must understand what Nature is. And this task is the most problematic and one that has created divisions among the environmental philosophers. King further believes that our present conception of Nature is the result of cultural components that both institutions and variety of interpretations, whether religious, scientific, economic or political, make available to us. King further points out that before we translate Nature into a moral guide, we must look at how we have constructed the conception of nature that we have that has led us to destroy Nature. The radical shift that King proposed is in the following questions: "...ask *not*, how Nature is *really* constructed? ask what understanding of Nature would support and sustain life which is morally responsible both towards the environment and towards other human beings?"⁴² King points out that many of the philosophies of Nature that have been around are recognised by their proponents as 'interpretative frameworks' and consequently the cultural foundations or origins of these philosophies are ignored. For example, King traces the origins of the Deep Ecology movement in their critique of radical anthropocentrism. King traces the origins of Eco-feminism in patriarchal institutions and the cultural experience of women that see the exploitative and dominating impulse inherent in men. Without these and other interpretative frameworks, the understanding of Nature provided by environmental philosophies will be devoid of meaning.

What is the alternative? King observes two distinct ways of construing the notion of Nature based upon the cultural categories. The first way is to view Nature as a commodity of economic production. In a society that is overly obsessed by economic growth, it looks for more and more resources for the fulfilment of the economic project. The second way is to view Nature on par with humans who are objectified as participants in the project of capitalism. King attempts to provide an interpretation of Nature (a construal of Nature) that

will enable and sustain the capitalist economic activity. An interpretation of Nature that views the nonhuman world as spiritual or that has claims and interests, will be contrary to the economic viewing of nature as natural resources or raw material for economic activity. King observes an alternative view or construction of Nature that natural sciences provide. The view of Nature provided by natural sciences justifies the use of nature as a commodity for economic production, thereby legitimising socio-political and other interests of the community. This view is clearly in conflict with the alternative construction of Nature that wants to highlight moral and aesthetic values.

It is a common feature of economic activity and mass production that it is at its efficient best when Nature is 'invisible' to humans and is seen as only a natural resource in the economic processes. This 'invisible' property is noticeable in cases where the communities do not live in harmony with nature or depend for their survival directly on nature. Nature is 'invisible' for the urban communities who are engaged in exploitation of Nature as natural resources of their economic activities and mass production. It is only through artistic activity of landscaping, or photography, television documentaries, etc. that Nature becomes 'visible' to urban communities, opines King. King identifies two features that result from the urban view of Nature: one, Nature is seen endowed with aesthetic value. It is external to the everyday life of the urban communities; secondly, humans in this artistic or leisure industry become passive consumers with passing and purely external relationship with Nature. This construction of Nature also enables a new form of exploitation of nature for the benefit of the leisure industry and allows preservation of few selected areas that too because it gives economic returns. King, based on his experiences, points out that not all communities may indulge in such efforts to make Nature invisible so that it can be economically exploited. There are communities and individuals who resist this temptation at the cost of being blamed

for their lack of understanding of modern of economic development and public facilities that go with urbanization.

The construal of Nature in scientific and economic terms whether correct or wrong is the result of our way of knowing and thinking and has become a part of contemporary societies. King, *a la* Michael Foucault, inquires into “who is empowered and who is subjugated by construing Nature in economic and scientific terms?”⁴³ And the answer is: The construal Nature in economic and scientific terms fails to see alternative models of understanding non-human nature. The traditional dominance of science and contemporary power of economic authorities, suppress alternative ways to perceive Nature and the proponents of such theories. However, it going to be difficult for the environmental philosophers and activists to argue that Nature has moral intrinsic value in a culture that is dominated by and dictated by economic values. King doubts whether an alternative construction of Nature exists at present. He sees a direction for such an alternative in the writings of what he calls ‘literary naturalists’ such as Thoreau, Abbe Muir, and others. The writings of these authors do not provide abstract arguments for constructing a notion of Nature that has intrinsic moral value, but offer the possibility of a ‘moral and philosophical association’ beyond the self-interestedness of economic and moral ideologies. In his words, these writings “re-introduce(s) subjectivity and moral connectedness into landscape.”⁴⁴

According to King, the language of these ‘literary naturalists’ by the use of figures of speech such as metonymies, etc. creates close connection and affinity between land and experiences and values. This in turn leads to incorporation of the physical ‘aspects’ of the nature into the moral and social milieu, and which consequently leads to Nature being visible in every day affairs of human beings. Normative questions regarding nature cannot be asked and

meaningfully answered from the standpoint of ‘philosophical absolutes’ and ‘indubitable certainties’, but by construing Nature from the cultural conditions that create desires and needs of the social communities, opines King.

Aldo Leopold’s “Land Ethic” provides one of the most holistic approaches towards understanding the environment, defending against gross anthropocentrism and challenges the traditional understanding of moral philosophy. He makes his argument on the basis of a synoptic review of history and representation of origin and growth of moral development understood in evolutionary terms. Leopold depends upon his insights into the development and growth of moral consciousness in the last three thousand years (from theological origins to justification based upon human reason) and shows how new outlook on civil rights, human rights, abolition of slavery, rights of women etc. have become part of the moral consciousness of our society. Even anthropological evidence suggests that there are similarities between moral concerns and boundaries of communities with that of societal concerns. However, there seems to be a wide gap between the practice of morality and the history of growth of moral consciousness. It is obvious for the reason that morality is not a descriptive phenomenon, but normative – whatever may be its origins and growth.

Treated as the Bible of the ecological conservation movement, Leopold’s *A Sand County Almanac* was treated dismissively by the philosophical community, particularly those who dealt with moral arguments for the preservation of flora and fauna. Among these there were respectable environmental moral philosophers such John Passmore, H. J. McCloskey, and Robin Attfield. J. Baird Callicott, one of the first sympathizers of Leopold’s Land Ethic identified three reasons why academic philosophers did not take seriously Leopold’s arguments. For one the language is condensed prose style by which complex arguments are

attempted to be expressed in few sentences or phrases. Secondly, Leopold deviated from the traditional ethical discourse and the familiar assumptions of contemporary ethical theories. Thirdly, Leopold's conclusions had possibility of disturbing implications which hurt the sensibilities of some societies that had historically suffered from genocide, etc.

What is the justification to regard Land Ethic as a moral theory? Leopold begins his exposition of Land Ethic by conducting a review of moral development in the three thousand years – from ancient Greek and Egypt to the modern Western world. Morals during the days of Odysseus (As depicted by Homer) applied to his wife but not to the human chattels.⁴⁵ In other words, slaves were excluded from the purview of morals. And it took the Western world centuries before slaves (mostly Africans) were included in the category of humans. In spite of this, the review of moral development makes Leopold believe that there is steady moral growth. This is because more and more human activities and relationships between humans have come under the guidance of moral principles. And this is so in spite of the fact that there are many moral aberrations that continued for long period of time and are even present today. One may recall, history of morality as it is in practice, is not same thing as history of moral consciousness.

J. Baird Callicott supports Leopold's observation by citing examples (a) expansion of human rights based upon moral principles in Africa, South America and Asia, (b) adoption of legislations for overcoming injustices against women, children, migrants etc., and (c) expansion of movements for women's liberation, animal liberation, protection of environment; as an expression of growing ethical consciousness (different from practice).⁴⁶

Leopold's notion of ethics from the evolutionary point of view is significant for his construction of Land Ethic. Leopold believes that the conception of ethics dominating the moral theory is framed by philosophers and is not satisfactory as the conception does not take

into account its evolutionary character. From the evolutionary point of view, Land Ethic for Leopold is “a limitation of freedom of action in the struggle for existence”.⁴⁷ Here we depend upon Callicott’s interpretation of Leopold’s understanding of ethics. The expression “struggle for existence’ is obviously a reference to the Darwinian evolutionary framework within which the evolution of ethics is located. It is however paradoxical that in the “struggle for existence” there would be “limitations of freedom of action”. An answer to this lies in e Leopold’s analysis of origin and growth of ethics that can be understood from the sociobiological point of view.⁴⁸

Leopold locates the beginnings of moral history to origins of religions. And the most specific one is the Ten Commandments given by Moses recorded in the Old Testament. This moral code is commended to humans along with sanctions for moral disobedience and rewards for following them. The development of ethics in the West began when attempts were made to locate the origins of ethics in human experience and/or human reason. Human reason features in almost all the historical periods of Western history of moral philosophy, from ancient to modern and contemporary.

For any evolutionary natural historian, the idea that God created ethical theories is somehow difficult to accept, as *prima facie*, the evolutionary theory itself does not accept God’s intervention in nature.⁴⁹ Again, human reason as the sole foundation of morality is also questionable. As Callicott, arguing on behalf of Leopold points out, “reason appears to be a delicate and recently emerged faculty. It cannot, under any circumstances, be supposed to have evolved in the absence of complex linguistic capabilities which depend, in turn, for their evolution upon a highly developed social matrix.”⁵⁰ Hence, to be social beings, there must be, in the language of Leopold, “limitations on freedom of action in the struggle for

existence.”⁵¹ It is obvious from the above that we acquire ethical properties before reasoning as a capacity develops in us.

The evolutionary portrayal of the Darwinian understanding of ethics begins with the world of animals that are motivated by sentiments and feelings, which in the case of humans are ‘amplified’ and ‘informed’ by reason. “Land Ethic’ of Leopold would be developed on the basis of the Darwinian thesis that the beginning of ethics is the filial and paternal relationship (sic. affection) common to all mammals. This filial and paternal affection leads to the formation of the primary social group (family). When such feelings and affections are extended to other individuals closely related, then the family groups get enlarged, which when further extended becomes a community. In this extension at every stage, on the one hand the formation of groups and its extension helps in protection of individuals in the group and providing for their existence and survival. On the other hand, the filial bonds get diffused the more the group is extended leading to community. Evolutionist scholars label the feelings among the individuals of these enlarged groups as “social sentiments”.

Darwin’s evolutionary ethics begins with ‘social sentiments’ ‘beneficial’ to the community, rendered as such by man’s ‘intellectual powers’ (which can recall the past and speculate the future), with ‘the power of language’ (that can convey ‘common opinion’). The resultant behaviour is deemed by common opinion as socially acceptable and beneficial.⁵² It is obvious from the above that Darwin and other evolutionary philosophers, treated moral feelings on par with physical faculties. Leopold, accepting Darwinian model believes that ethics originates in the individuals’ or groups’ tendency to create patterns of cooperative behaviour.

Studies conducted by anthropologists have shown a correlation (not in the statistical sense) between what constitutes moral limits and what constitutes limits of a society. Using an anecdotal example from Darwin, Callicott provides us a lucid discussion to prove how we perceive moral right and moral wrong differently. Darwin's example: "A savage will risk his life to save that of a member of the same community, but will be wholly indifferent about a stranger.....Tribes people are at once paragons of virtue "within the limits of the same tribe" and enthusiastic thieves, man slaughterers, and torturers without."⁵³ Changing strategies to defend themselves against enemies, or to overcome the problems of increased populations, or anything that threatened their existence which may be even science and technology, human societies changed their value structures as they changed their societal boundaries. Callicott so succinctly expresses this view when he says:"The moral community expanded to become co-extensive with the newly drawn boundaries of societies and the representation of virtue and vice, right or wrong, good and evil, changed to accommodate, foster, and preserve the economic and institutional organization of emergent social orders".⁵⁴

With the arrival of the 'global village' concept, there are radical institutional/societal changes and corresponding changes in value structures. But even when there are the conflicting societal and institutional changes, there seems to be a direction towards the construction of a global value system of human ethic. The articulation of 'human rights' at all levels of national and international forums is an example of evolution of such a global ethic. The next step of evolution is the formation of one society worldwide, one 'community' with common value structures generally agreed upon as envisaged by Darwin.

Leopold agrees with Darwin's analysis of origin and growth of ethics. He, however, enlarges the concept of global community, which according to him (Leopold), is the next logical step in the evolutionary process. For him the ethic of universal humanity is incomplete unless it "enlarges the boundary of the community to include soils, waters, plants, and animals or collectively: the land".⁵⁵ Leopold throughout his work *The Sand County Almanac* concentrates on transforming the 'community' into the 'land community' which is the 'biotic community' comprising of soils, waters, plants, and animals collectively. 'Land Ethic' is the new ethics of ecology that will emerge in the cultural consciousness.

Human society, according to Leopold, exists on the basis of mutual security. Further, this society is based upon economic inter-dependence. However, it continues to exist only because of 'limitations of freedom of action in the struggle for existence. Leopold further argues that both human society and the biotic community are essentially similar in their functional structure – the former is preserved by 'limitations of freedom of action in the struggle for existence', the latter by 'limitations of freedom of action by land ethic'. This moral response to the environment proves that Land Ethic is not only 'an ecological necessity' but also an 'evolutionary possibility'. What requires to render this possibility into a necessity is 'universal ecological literacy', opines Leopold.⁵⁶

J.Baird Callicott who is an advocate of a moral theory that provides protection to the biotic community, provides the best study of Leopold's Land Ethic. Callicott begins by pointing out that Land Ethic rests on three scientific concepts: evolution, ecological biology and Copernican astronomy. With the help of the evolutionary theory, Land Ethic seeks to connect ethics with structures of society and their development. Evolutionary theory creates both a diachronic link between humans and non-human nature as well as a synchronic link between

the two. While diachronic connection helps us to observe the evolutionary changes occurring between human societies from primitive times to modern complex societies and the changes that occur in their moral or value systems, the synchronic connection provides us with the concept of 'biotic community', namely, an integration of human beings, animals, plants, waters, soils etc. "all interlocked in one humming community of co-operations and competitions, one biota."⁵⁷

Leopold, according to Callicott, seem to see the earth as a small planet in an unbounded hostile universe full of large planets. Earth is no longer the centre of the universe and the most significant of all planets and stars etc. in the Copernican astronomy. Callicott believes that this may have contributed, though not consciously, to a sense of community living, dependence on each other and development of kinship among the inhabitants of the earth. It may be noted that there is no direct reference in Leopold's writings regarding the influence of Copernican astronomy. This seems to be Callicott's reading of Leopold's 'Land Ethic'.

Callicott summarises, in the following, what he sees as the most important elements that went into the making of Land Ethic: (1) Copernican cosmology that has contributed to a sense of community living, dependence on each other and development of kinship among the inhabitants of earth, a planet in a rather hostile universe; (2) Darwin's natural history of ethics that showed how from the first moral pronouncements that were attributed to gods to ethics based on reason, is the result of evolution in natural history; (3) Darwin's understanding of kinship that illustrated that 'kinship' is prevalent amongst all forms of life; (4) Charles Elton's conception of an "economy of nature" that demonstrated how the natural world is like corporate society in which individual animals and plants have their own spaces or 'niches' in the 'economy of nature'. This biotic community, like the old feudal

societies, does not allow any mobility or change in one's "roles" or "professions"; and (4) Hume's moral psychology which explained that ethics is the result of sentiments or feelings which may or may not be strengthened by reason.⁵⁸

The logic of Land Ethic is that natural selection recognizes the implicit nature of humans that they are capable of a moral response in a situation where kinship, identity and community are present. Hence, natural environment is recognized as biotic community which gives rise to an ethics that Leopold labeled 'Land Ethic', a variety of environmental ethics. Given the contemporary conditions of growth of human knowledge, the level of environmental awareness or education, land ethic is possible, according to Leopold. Again, given the fact that humans have the capacity to destroy the basic features of environment, namely, stability, diversity and integrity, it is necessary that we accept such an ethic.

There is one important feature of Land Ethic that needs to be reflected upon. Kenneth Goodpaster, another advocate of Land Ethic, claims that there is implicit to Leopold's Land Ethic "moral considerability"⁵⁹ for the biotic community. First and foremost, human being's role as conqueror is changed to being part of land community on par with other fellow members such animals, plants, soil, water and other members of the biotic community. There are in this both the individualistic and holistic claims to "moral considerability" as the moral concerns change from the individual members of the biotic community, to the biotic community as a whole. Callicott highlights this by pointing out that in *The Outlook*, humans are mentioned as members of the biotic community in the beginning of the discussion, but later on simply referred to as 'species'. The gravity of this change is reflected in the summary statement when Leopold declares: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it

tends otherwise".⁶⁰

The moral right or wrong in the above moral maxim would give rise to serious consequences. A farmer would be morally wrong to clear the wood to arrange for a larger farming plot if the slope of the area is seventy five percent. It would be wrong on the part of the government to allow increase in inhabitants of wild plant eating animals, as it would affect the biotic community. In other words, whatever is allowed unchecked to increase or expand that threatens 'the stability', 'integrity' or 'beauty' of the biotic community, is morally wrong. In the words of Callicott: "land ethic not only provides moral considerability for the biotic community per se, but ethical consideration of its individual members is preempted by concern for the preservation of the integrity, stability, and beauty of the biotic community".⁶¹ This position gives rise to serious difficulties for which there has been strong social reaction in some academic circles. Will the ever increasing population of human beings be restricted or humans as members of biotic community be culled because they threaten 'the stability', 'integrity' or 'beauty' of the biotic community?

The debate concerning man's relationship with nature in this chapter calls for an analysis on the basis of the metaphilosophical claims made by the proponents. Depending upon the type of attitude taken by the authors, whether defensive or offensive, there are two types of positions that can be taken regarding the natural world: *subjective* or *objective*. The objective is the framework that scientists employ regards the publicly verifying descriptions of external phenomena that can be observed and measured. It is not only natural scientists, but also some social scientists (with positivist inclinations) attempt such observations/studies. Whereas, the subjectivist methodological framework depends upon the internal

characteristics of the observer. Humanities and arts as disciplines that depend upon such subjective interpretations (sic. observations) of the phenomena.

At another level, studies regarding relationship of man to the natural world may be distinguished as *reductionist* or *holistic*. The reductionist approach assumes that understanding complex reality would imply understanding behaviour or function of its constituent parts. In natural sciences, reductionist approach is used when we claim that the nature of biological cells is understood if we investigate molecules. In social sciences, methodological individualism is a similar case. On the other hand, the *holistic* approach accepts or recognizes whole as subject of investigation and that study of parts cannot account for behaviour/function of the whole. In the holistic approach, there is the assumption of 'emergence' of qualities in the whole which otherwise would not be observed in the parts separately.

Employing I.G. Simmons'⁶² types of constructions analysis, the following conclusions could be drawn.

A more rigorous analysis of the views of the above four representative thinkers who have contributed to our understanding of man-nature relationship, reflects their commitments to their research methodology and their original disciplines. First, it is not surprising that James E. Lovelock's interest and training in natural sciences particularly chemistry, led him to believe in laying down objective criteria while arguing for 'Gaia concept'. But his holistic approach, which was his extension of this concept beyond, was unacceptable as evolutionists believe that evolution occurs at the level of individuals. Secondly, Aldo Leopold's closeness to nature/forests/wilderness in his capacity as forester and later on as conservator, led him to

constantly reflect on history of societies in general, and history of mankind as a whole. It is these reflections that led him to believe in a theory of origin, growth and development of morality in evolutionary terms. At one level these are at best subjective reflections, but at another level they reflect the societal or community concerns. It is in this sense, they are holistic in nature. Thirdly, John Passmore's attitudinal explorations, by their very nature are subjective. The new metaphysics proposed by Passmore is not holistic in an exact sense, but non-reductionist as it is reflective of nature as it is. And finally, Roger J. H. King's critique of animal liberation protagonists, land ethic interpreters, defenders of primitivism and ecofeminists, is objective in the sense that he has contextualised their positions whereby showing how their theoretical positions would be inadequate when generalised to a larger whole.

NOTES

¹ Quoted in R. F. Nash, (1989) *The Rights of Nature*, Wisconsin: The University of Wisconsin University Press, p. 13.

² Kenneth Goodpaster and Paul Taylor in particular argue in this direction.

³ Ethics of Reverence for Life" <www1.chapman.edu/Schweitzer/sch.reading1.html> p.

⁴ 'Nature' here refers to part of the environment that is neither humans nor non-human animals.

⁵ Dale Jamieson, (2010) *Ethics and Environment*, Cambridge: Cambridge University Press, p.149

⁶ Dale Jamieson gives example of value of rope one is holding while hanging from a cliff is superior although the man holds the rope with instrumental value, in comparison with the stamp collection he has at home is of intrinsic value.

⁷ Dale Jamieson, (2010) p.154

⁸ John Rodnam, "Liberation of Nature", *Inquiry*, Spring 1977, p.89. Quoted in Dale Jemieson,(2010), pp.154-155

⁹ Use of the term Gaia, the great mother of Greek mythology, Goddess of Mother Earth represents a philosophical tradition that goes back to Hindu Ancient India, Taoism, Buddhism, native North American belief systems, that 'deified' nature in order to protect the nature. Gaia hypothesis is a modern scientific attempt to project nature as the 'ultimate', 'single' reality that consists of everything. Although such an interpretation has been explicitly denied by the proponents of Gaia hypothesis, what is significant is that it echoes the old methodology of spiritual concerns.

¹⁰ Peter Hay, (2002) *A Companion to Environmental Thought*, Edinburgh: Edinburgh University Press, p.136

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- ¹¹ James Lovelock, (1979) *Gaia: A New Look at Life on Earth*, Oxford: Oxford University Press, p.9
- ¹² Ibid.
- ¹³ James E. Lovelock, (2010) “Gaia As Seen Through the Atmosphere”, in David R. Keller, (Ed.) *Environmental Ethics: The Big Questions*, Sussex, U.K.: Willey-Blackwell, p.211.
- ¹⁴ Max Black in a classical article entitled “More about Metaphor”, (in *Metaphor and Thought*, (ed.) Andrew Ortony, (1979) Cambridge : Cambridge University Press) has given an insightful analysis of how metaphors are constitutive of advances in science.
- ¹⁵ ‘Philosophical holism’ is a term used to describe a position that environmentalists and ecologists use to refer to nature as whole, that includes plants, earth, animals, humans and biosphere.
- ¹⁶ Lynn Margulis felt that such a position, belief that Earth is a ‘living organism’ will alienate natural scientists who have been studying various phenomena that help to understand ‘Gaian hypothesis’. In ‘James Lovelock’s Gaia’ Margulis provides an alternative understanding of ‘gaia’ when he labels it as “an extremely complex system with identifiable regulatory properties which are very specific to the lower atmosphere”. Quoted in Peter Hay (2002) p. 136.
- ¹⁷ James W. Kirchner, (2002) “The Gaia Hypothesis: Fact, Theory, and Wishful Thinking”, *Climatic Change*, 52, pp.391-408
- ¹⁸ Ibid. p. 393
- ¹⁹ Ibid
- ²⁰ Ibid. pp. 393-394
- ²¹ Ibid. p. 394
- ²² Ibid. p. 395
- ²³ Three cases are reproduced here to show that there is both negative and positive feedback in biosphere-atmosphere linkage: (i) “Warmer temperatures increase fire frequency, leading to net replacement of older, larger trees with younger, smaller ones, resulting in net release of carbon from forest biomass (positive feedback)”. (ii) “Warming may lead to drying, and thus sparser vegetation and increased desertification, in mid-latitudes, increasing planetary albedo and atmospheric dust concentration (negative feedback)”. (iii) Warmer temperatures lead to release of CO₂ and methane from high-altitude peatlands (positive feedback). (Ibid. p. 396)
- ²⁴ Cf. Ibid. pp. 398-399
- ²⁵ Ibid. p. 399
- ²⁶ John Passmore,(2010) “Attitudes to Nature”, in David R. Keller,(Ed.) *Environmental Ethics: The Big Questions*, Sussex, U.K.: Willey-Blackwell, p. 107.
- ²⁷ By reductionist (synonymous with reductivist) I mean that Passmore does not believe that human behaviour is reduced to or interpreted in terms of physical laws controlling the behaviour or functioning of inanimate matter.
- ²⁸ By naturalistic, I mean that Passmore accepts natural science methods and negatively does not accept that there exists or could exist beings/entities or phenomenon/phenomena which are beyond the scope of scientific explanations.

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- ²⁹ Ibid. p.103
- ³⁰ Ibid. p. 104
- ³¹ Ibid. p. 105
- ³² Ibid. p. 106
- ³³ Cf. Ibid. p. 108
- ³⁴ Ibid
- ³⁵ Cf. Ibid. p. 109
- ³⁶ Cf. Roger J. H. King, (2010) “How to Construe Nature: Environmental Ethics and the Interpretation of Nature” in David R. Keller,(Ed.) *Environmental Ethics: The Big Questions*, Sussex, U.K.: Willey-Blackwell, p. 352
- ³⁷ Ibid. p. 353
- ³⁸ Peter N. Carroll, (1969) *Puritanism and the Wilderness: The Intellectual Significance of the New England Frontier*, New York: Columbia University Press.
- ³⁹ Mark Sagoff, (1974) “On Preserving the Natural Environment “, *Yale Law Review* 84, pp.245-252
- ⁴⁰ Roger J. H. King (2010), p. 353
- ⁴¹ King was referring to J. Baird Callicott’s essay on “Animal Liberation: A Triangular Affair”, in (1989) *In Defense of the Land Ethic*, Albany: State University of New York Press.
- ⁴² Roger J. H. King (2010), p. 355
- ⁴³ Ibid. p. 356
- ⁴⁴ Ibid. p.357
- ⁴⁵ Cf. Aldo Leopold, (2010) “The Land Ethic”, in David R. Keller,(Ed.) *Environmental Ethics: The Big Questions*, Sussex, U.K.: Willey-Blackwell, p. 193. (The article is selections from *A Sand County Almanac*, New York: Oxford University Press, 1960)
- ⁴⁶ Cf. J.Baird Callicott, (2010) “The Conceptual Foundations of Land Ethic”, in David R. Keller,(Ed.) *Environmental Ethics: The Big Questions*, Sussex, U.K.: Willey-Blackwell, p. 202.
- ⁴⁷ Aldo Leopold, (2010) p. 193
- ⁴⁸ J.Baird Callicott, (2010), p. 202
- ⁴⁹ The reference here is to the mainstream evolutionary scientific theories of Darwin and his followers. One does accept that there are alternative models such as that of Pierre de Chardin and Sri Aurobindo who tried to use the evolutionary theories for deriving spiritual teleological conclusions.
- ⁵⁰ J.Baird Callicott, (2010), p. 203
- ⁵¹ Aldo Leopold, (2010) p. 193

⁵² Cf. Charles Darwin, (2010) *The Descent of Man and Selection in Relation to Sex*, summarised in J.Baird Callicott, p. 203

⁵³ Cf. J.Baird Callicott, (2010), p. 204

⁵⁴ Ibid

⁵⁵ Aldo Leopold, (2010) p. 194

⁵⁶ Cf. Ibid

⁵⁷ Aldo Leopold, (1953) *Round River*, New York: Oxford University Press. Quoted in J.Baird Callicott, (2010), p. 205

⁵⁸ J.Baird Callicott, (2010), p. 205

⁵⁹ Cf. Kenneth Goodpaster, (2005) "On Being Morally Considerable", *Environmental Philosophy*, Vol. I, pp.115-131

⁶⁰ Quoted in J.Baird Callicott, (2010), p. 206

⁶¹ J.Baird Callicott, (2010), p. 206

⁶² I.G. Simmons, (1993) *Interpreting Nature*, London: Routledge.

“Redefining ‘Sustainable Development’: Towards an Alternate Understanding”

Theophila Domnica de Souza

Koshy Tharakan

There are radical differences between various discourses of ‘sustainability’ depending upon the perspective such as social, political, economic, et al. There is, however, one overreaching concern that requires consideration while dealing with environment, that is, ethical. It is under this consideration that the primacy of ‘sustainability’ can be evaluated. The present paper seeks to clarify ‘sustainability’ as an ethical concept without which the entire discourse on ‘sustainable development’ is conceptually inadequate.

I

There are as many definitions of ‘sustainable development’ and ‘sustainability’ as there are individuals or groups trying to define them. Scholars are aware of the difficulties faced in defining the two concepts. For instance, T. O’Riorden (1985), observing the difficulty, had described the task of defining ‘sustainability’ as ‘exploration into a tangled conceptual jungle where watchful eyes lurk at every bend’.¹ Spedding as early as 1996 observed that there are large number of books, chapters in books and articles that have the terms in the title, but have not defined the term/s.² Wilson (1992) probably influenced by his ‘deep ecology’ inclination lamented: ‘The raging monster upon the land is population growth, in its presence, sustainability is but a fragile theoretical construct’.³

A reflection on various definitions of ‘sustainability’ or ‘sustainable development’ shows predilection of individual authors or groups in understanding the concepts. For instance, when Brundtland (1987)⁴ said that “Sustainable development is development that meets the needs of the present without compromising the needs of future generations to meet their own needs”, it prioritises ‘needs’ of the poor while restricting the use of exploitation of environment to that extent that ‘needs’ of future generations is not affected. Harwood (1990)⁵ while extending the concept to apply to non-human species says: “Sustainable agriculture is a system that can evolve indefinitely toward greater human utility, greater efficiency of

resource use and a balance with the environment which is favourable to humans and most other species.” Pearce, Makandia & Barbier (1989)⁶ provides a broadest possible definition when he claims that “sustainable development involves devising a social and economic system, which ensures that these goals are sustained, i.e. that real incomes rise, that educational standards increase that the health of the nation improves, and that the general quality of life is advanced.” Again, Conway & Barbier (1990)⁷ extending the concept to agriculture defined sustainability as the ability to maintain productivity, whether as a field or farm or nation. Productivity in this context is defined as the output of valued product per unit of resource input.

Critiques of attempts of ‘precise’ definitions point out not only to the fact that definitions in terms of ‘economic’ benefits are inadequate, but also to the fact that inherent essentialist definitions are disservice to such ‘primitive’ concept. IUCN, UNEP, WWF (1991)⁸ points out that ‘sustainable development’, ‘sustainable growth’ and ‘sustainable use’ have been used interchangeably as if they refer to the same concept. Nothing physical can grow indefinitely, hence ‘sustainable growth’ is a contradiction in terms. The expression ‘sustainable use’ is applicable in case of resources renewable. And finally, ‘sustainable development’ is the strategy of ‘improving the quality of human life whilst living within the carrying capacity of the ecosystems.’ Although development implies realisation of resource potential, ‘sustainable’ development implies recognition of limits to the development processes even when technology can overcome some of the limitations. Holdgate (1993)⁹ highlighted the fact that sustainability of technology be judged by a criterion, namely, whether increase of production retains the inherent capacity of environment for productivity. Consequently, ‘sustainable’ development is concerned with the development of a society where the costs of development are not transferred to future generations or at least an attempt is made to compensate for such costs, as Pearce (1993)¹⁰ argues. A society that looks for ‘sustainable’ development tries to reconcile between the developmental needs such as higher standards of living of the recent generation and that of the future generations by protecting the environmental resources as well as enhancing their potential.

Above attempts at defining ‘sustainable development’ and ‘sustainability’ and its cognates clearly reflects both complexity and ambiguity of the concepts. This led Daly (1991)¹¹ to argue that ‘lack of a precise definition of the term 'sustainable development' is not all bad’ - it

allows 'a considerable consensus to evolve in support of the idea that it is both morally and economically wrong to treat the world as a business in liquidation'. Besides, as Heinen (1994)¹² argues, given the variety of scales inherent in different conservation programmes and different types of societies and institutional structures, no single definition of 'sustainable development' or framework is consistently useful.

An analysis of 'sustainability' as defined in various text books, primarily concerned with economic development, reveals types of 'sustainability' depending upon the resources, living or non-living, thereby leading to various types of sustainability; biological, etc. Again we can categorize 'sustainability' on the basis of the conceptual association it has with community, business, agriculture, etc.; social sustainability, economic sustainability, agricultural sustainability, etc. At another level, analysis of the above definitions reveals that (a) The processes of development are limited to the extent that 'sky is not the limit' to growth; (b) There is an inseparable connection between development, society and environment; (c) There is need of equitable distribution of resources and opportunities.

II

Although there is considerable difficulty in defining 'sustainable', 'sustainability' and 'sustainable growth', one could begin with World Commission on Environment and Development (WCED) Report¹³ attempt at redefining the terms. The WCED defines 'Sustainable Development' as development that meets the needs of the present without compromising the ability of future generations to meet their needs. There are two important concepts that need clarification. First, the term 'needs' refers to essential needs of world's poor and secondly, the idea of restriction imposed on technology and political and social organisation on 'exploitation' of environment in view of environment's capacity to meet the needs of future generations. Critiques of the above definition¹⁴ have pointed out that 'sustainability models' created on the basis of the above definition tend to forget the inequity in the existing social and economic relationships, while emphasising the futuristic needs.

To highlight inadequacies of the present sustainability discourse, it is appropriate that we have a cursory glance at the theories and strategies developed by the protagonists of sustainable development.

In order to discuss the concepts and principles that are inherent in sustainability, one may have to look at the most appropriate of the definitions and easily the most accepted one by the scholars involved in the discourse on sustainability. The definition provided by The Brundtland Report that defines 'Sustainable Development' as development that meets the needs of the present without compromising the ability of future generations to meet their needs, be taken as the point of our analysis. The most emphasised objectives of sustainability or sustainable development are ecological health, social equity, and economic welfare. These are manifest objectives designed to aid professionals in evaluating and directing their activities, particularly when developing, deploying, and employing technology. The pursuit of three above objectives grounded on ethical commitments, in sustainable development, need to be balanced so as to ensure wellbeing of contemporary populations at the same time not depriving opportunities for future generations. Consequently, sustainable development has to pursue both *intergenerational* and *intragenerational* benefits from within the framework of ethical values.

The credo of 'sustainable development' has given rise to societies and communities, professional, scientific and cultural that are not only committed but make concerted efforts at solving energy problems, waste disposal issues, development of green spaces, urban planning, development of local economies, etc. Contemporary economics literature is full of references to 'sustainability discourse' making us believe that the planet earth shall not survive, if we commit ourselves to sustainable development.

A brief review of some of the 'frameworks' may not be out of place so that when we come to its critique, we will be able to see the deficiencies of such frameworks. What are the presuppositions of such frameworks?

The Natural Step (TNS), a framework developed by Karl Henrik Robèrt, oncologist based upon four scientifically derived System Conditions:¹⁵ (1) In order for a society to be sustainable, nature's functions and diversity are not systematically subjected to increasing concentrations of substances extracted from the Earth's crust. (2). In order for a society to be sustainable, nature's functions and diversity are not systematically subjected to increasing concentrations of substances produced by society. (3). In order for a society to be sustainable, nature's functions and diversity are not systematically impoverished by overharvesting or

other forms of ecosystem manipulation. (4). In a sustainable society resources are used fairly and efficiently in order to meet basic human needs globally. The Natural Step besides laying down the 'system conditions' envisages a systematic approach to implement the framework.

In 1992 William McDonough¹⁶ developed a set of foundational principles for sustainable ecological design which in fact provided a definition of *sustainable design* as the “conception and realization of ecologically, economically, and ethically responsible expression as part of the evolving matrix of nature.” These foundational principles have since come to be known as *Hannover Principles* which have the potential of ethical interpretation. The Hannover Principles are nine 'commandments' that an ecologically sustainable designer has to keep in mind: 1. Insist on the rights of humanity and nature to coexist; 2. Recognize interdependence; 3. Respect relationships between spirit and matter; 4. Accept responsibility for the consequences of design ;5. Create safe objects of long-term value; 6. Eliminate the concept of waste; 7. Rely on natural energy flows; 8. Understand the limitations of design; 9. Seek constant improvement by the sharing of knowledge.

The third 'framework' that may be reviewed is *Three Legged Stool Interpretation* which demands that there should be balance between ecological, economic and social systems. The three legged stool of interpretation envisages equal 'value' to all the three systems. The primary objective of sustainability is a strong and healthy society in which the needs of its population, present and future, are met. For such a society, it is imperative that there should be a strong economy to meet the needs of its population, provide jobs, adequate health care and take care of needs after the productive years are over. Thirdly, both the society and the economic system must respect centrality of our planet's ecological systems on which the society and the economy are utterly dependent.

A growing consciousness among the world business establishments, who came under pressure from the non-governmental organizations to control their 'greed', the need for sustainable development, has resulted in another framework, namely, Corporate Social Responsibility. This corporate sustainability movement at one level seems to be tokenism, but at another level there seems to be concerted efforts on the part of the business world to apply sustainability to guide the behaviour of business with respect to society and the environment as well as its responsibility to stakeholders. In this new framework, responsible

financial establishments highlight their success stories not solely based upon its annual profits but also on their social and environmental performance.

The difficulties of the first framework have been highlighted by many groups. However the most prominent seems to be the fact that TNS is more of an ‘educational tool’ rather than an avowed practical framework for companies to use for the progress toward sustainability. The framework as a definitional paradigm suffers category mistake when condition four is fundamentally different from the first three conditions. In fact condition four is *raison d’être* for the three earlier conditions. It is precisely because a large population lacks adequate nutrition while another population have more than what they need, there is lack of fairness with regard to meeting basic human needs.

Hannover Principles developed a sustainable design for architects, urban planners and industrial designers wherein products and processes are seen as dependent on environmental, economic and social systems surrounding them as against purely utilitarian considerations of earlier models. The model was never meant to be a ‘framework’ for sustainable development. However, since the principles have been quoted in various discussions as definitional framework of ‘sustainable development’ it may be pointed out that it lacks clarity regarding the first two principles when placed along the other seven.

This model based upon common sense understanding of sustainability suffers from some inherent conflicts and contradictions. This may be due to the very structure of ‘stool’ which places mankind outside the environment instead of being embedded in environment or is part thereof. It suffers from same issues as the neoclassical economic model, the fundamental obstacle to the adoption of sustainability as an international framework for decision making. Thus humanity is embedded in the ecological system as is the economy.

Since Corporate Social Responsibility is an application of three-legged stool model, it suffers from the inadequacies mentioned above. However, the internal contradictions between profits and social responsibility has given rise to criticisms that corporate world at best is indulging in philanthropy rather than accept ethical commitment to protect ecological system as core in which both humanity and economic systems are embedded.

III

In this section of the paper, we shall discuss the ‘rights of future generations’ and argue that it is only in this context that an adequate definition of ‘sustainability’ is possible. There are two fundamental objections to the ‘orthodox’ approach to environment protection. The first objection is that while valuing environment, the values of future generations must be taken into account. Secondly, ‘orthodox’ approach ignores the ‘intrinsic value’ of environment. These objections are in fact part of the ‘positivistic’ economics, the official doctrine upon which all economic theories are based. An ethical definition of sustainability has to take into account these objections. What follows is an attempt to lay the foundation of ‘intergenerational equity’ on the basis of which ‘sustainability’ is justified.

The general concerns for environment are reflected in the orthodox method of how we derive environmental value by inquiry into how much we are willing to pay to protect the environment. But how do we elicit information about values that the unborn or future generations attach to environment? It is therefore necessary that we find a method by which we can both find out the ‘values’ of future generations as well as what would constitute ‘intrinsic’ value of environment. It is true that we cannot know what value future generations will place on environment. However, it is not unreasonable to attempt a guess based upon a philosophically relevant method. We can therefore have a fairly good idea of what would happen to the environment over a period of time, if the current trends are not reversed.

Philosophers have used ‘thought experiment’¹⁷ as a useful method in philosophical methodology. Imagine we are living hundred or fifty years from now. What would we wish that our previous generation had done with respect to the environment? Two answers come to mind which reveal two plausible interpretations, depending upon the level or extent of ‘sustainability’.

Minimum that should have been done is that the previous generation should not have left us with environmental catastrophe. If in a hundred years’ time global temperatures have risen as far as currently predicted, it seems reasonable to suppose that the generation living then will not thank us for the legacy. Indigenous people in the rainforest today would surely make the same judgement of generations before the present one. People in the mining belt of developing countries would wish that something had been done to reverse the trends towards

degradation. This is the basis of intergenerational *equity* inherent in the concept of ‘sustainability’.

As we have seen in the first section of this paper, the term ‘sustainability’ is used in varied senses, facing the risks of becoming bland if not meaningless. But inherent to the term is a useful intuitive meaning, namely, the capacity to last or continue. The above thought experiment gives direction to accord precise meaning to the term, and at the same time justify the use in context of environmental ethics.

Secondly, we may not be satisfied with merely avoidance of catastrophe. We may like to have a high level of environmental consumption as previous generations had, if not more on the basis of advancement of technology. When one generation degrades the environment by consumption, it deprives the next generation of opportunities that the earlier generation enjoyed. The benefits enjoyed are not merely economic as exploitation of mineral resources in the process of creation of wealth, but also deprivation of aesthetic delights to the next generation. The next generation may feel great injustice done to them when the environment is irreversibly degraded due to extinction of species or loss of unique habitats or even depriving the generation of aesthetic pleasures of walk in sylvan forests. The earlier generation may not have the obligation of increasing the potential level of environmental consumption of the next generation, but cannot deprive the next generation of equal opportunity for consumption of both wealth and aesthetic delights.

The two versions of ‘sustainability’ can be summed up in the following; ‘Weak’ or ‘minimal’ ‘sustainability’ requires that all environment is sustained so that the future generations are guaranteed the avoidance of environmental catastrophe. In other words, we should not act as if there were no tomorrow. ‘Strong’ or ‘maximal’ ‘sustainability’ would demand that the future generations are left the opportunity to experience a level of environmental consumption at least equal to that of the present generation. Someone said, ‘we do not inherit the world from our parents, we borrow it from our children’. It is imperative that we leave the world as beautiful, productive and stable as it was lent to us.

Care should be taken while defining ‘environmental consumption’ so that one does not exclude functions which do not fall within the range of functions that economists are

concerned with. Sustainability will then be meaningful only when one decrees that the future generations are left equal opportunity of such consumption measured and defined at current levels if not at enhanced levels.

The two versions of 'sustainability', *minimal* and *maximal*, could, in theory, necessitate different courses of action. It may be quite easy to provide the *same* degree of environmental capacity when environmental resources are abundant... Whereas *maximal* sustainability would require that the number of trees or volume of soil, were held constant, the minimal version might allow quite significant degradation. It is, in this sense that the differences between the two different versions may have significantly blurred, at least in terms of course of action to be taken to ensure intergenerational equity.

The concept of sustainability has given us a means of taking into account the interests of future generations. But still it has an anthropocentric approach as it identifies value of environment in terms of interests of humans. The second objection against the orthodox approach is that environment has intrinsic value and must be sustainable. If we are to respond to this objection, a defence of 'ecocentric' view will have to be articulated in an effort to overcome the anthropocentrism of orthodox view of environment. There are broadly two versions of ecocentric view. First, one can ascribe *intrinsic value*¹⁸ to individual members of non-human species. Second, one can locate *intrinsic value* not in individual members of non-human species in ecosystems as a whole.

The 'speciesists' or 'human chauvinists' insist on the radical difference between humans and non-humans on the ground that it is only humans that can be regarded as ends-in-themselves. All other species are merely instruments for the well-being of humans. This criterion is based upon the assumption that only humans are part of moral community, and that such a characteristic is not applicable to other species. And therefore it is not proper to accord moral status to anyone other than humans. Some philosophers, however, differentiate between various types of species on the basis of consciousness or sentience, i.e. ability to have experiences such as pain.

This may be intuitively justifiable. It is also part of the official doctrine that has come down through history of philosophy. But it is inadequate to act as a guide to environmental policy,

since it does not apply to animals and plants lower down the evolutionary scale. Some ecocentrists have, therefore, argued that the possession of life itself is sufficient to give intrinsic value. But this leads to the problem of how to rank different life forms in the moral scale. Some 'deep ecologists' have argued for 'biotic egalitarianism in principle'. But few people will acknowledge moral equivalence between plankton and a human being, even if this could in any way act as a basis for action. In the absence of a guide to moral ranking, ecocentrism does not provide much help in the formulation of environmental protection policy.

More importantly, locating intrinsic value in individual members of non-human species does not provide an argument for preserving species as a whole. It is doubtful that individual animals and plants can be said to have 'interest' in the reservation of number or diversity of the species as a whole; yet it is this which is often the key question at issue in environmental policy. An ethic concerned with protecting individuals offers no guarantee of protection to the ecosystems of which they are a part; indeed, to what is characteristically thought of as 'nature' itself. Imagine that a development corporation wanted to build a theme park on a wetland noted for its many and rare species. The park would be so profitable that the corporation could offer to remove (humanly) all the animals and the plants on the wetland and place them in a zoo, where they could be protected even from one another. Few ecocentrists would regard this as desirable, yet an ethic concerned solely for the welfare of individuals would have difficulty arguing against it.

Alternatively, the *second* version of ecocentrism is an attempt to locate intrinsic value not in individual members of non-human species but in the ecosystem as a whole. Aldo Leopold's Land Ethic was an attempt in this direction when he argued 'a thing is right when it tends to preserve the integrity, stability and beauty of biotic community. It is wrong when it tends otherwise.'¹⁹ There are issues that need clarification in case of land ethic, particularly concepts such as 'beauty', which is commonly viewed as an anthropocentric concept. Again, land ethic leads to some unacceptable moral and societal conclusions. It envisages that if human beings, like other living things, have value insofar as they contribute to integrity, stability and beauty of ecosystems, we would seem to have a justification for culling people. The difficulties of Land Ethic does not invalidate the need of assigning intrinsic value to ecosystems. There are strong intuitive grounds for wanting to extend the class of morally

valuable things beyond just human beings. The attitude of ‘reverence to nature’ which is the foundation of the ecocentric view is almost certainly an essential psychological and cultural element of any policy towards its protection.

In spite of the difficulty that the ecocentric view does not offer a coherent approach to environmental protection, the framing of a policy to protect environment, is performed by the concept of sustainability as discussed above. ‘Sustainability’ (particularly, its strong version) provides environmental protection that would have been given by a coherent ecocentric position. In declaring that future generations should be left the opportunity to experience a level of environmental consumption equal to that of the present generation, sustainability imposes substantial constraints of all and varied economic activity. There is no doubt that sustainability is anthropocentric. It wishes to preserve the environment for the benefit of future generations. But unlike the orthodox approach it does not ‘benefit’ in terms of economic demands. It makes no attempt to calculate how much future generations will value environment in terms of their willingness to pay for it. It simply recognizes that future people probably will want the environment to be preserved, and that the current generation therefore has an obligation to give opportunity to enjoy it. This enjoyment is understood in widest terms – not just use of the resources but appreciation of nature’s diversity and beauty. This emphasis on equality between generations leads to a view of environmental protection which has more in common with the ecocentric standpoint than with that of the use of orthodox ‘valuation’ approach.

IV

The discussions justifying sustainability on the basis of intergenerational equity and ecocentrism are clearly ethical in character. This is the difference between the arguments provided by the orthodox approach which are based upon positivistic methods of environmental valuation. Such evaluations render sustainability a different sort of concept from one dealing with environmental evaluations that sustainability ought to be. Those who defend evaluation approach to environmental protection believe that their ‘positive’ approach helps them to measure objectively ‘desires’, ‘interests’ of living humans who reveal their likes or dislikes, interests or disinterestedness, through their behaviour. This methodological framework used by economists creates an environmental protection that is not based, according to them, on what ‘ought’ to be, but on what is. The resultant environmental valuations are empirically measured valuations and not ascriptions of interests to future generations.

On the other hand, sustainability as an ethical concept has an element of normativeness whether positivist-orientated social scientists and economists accept it or not. Admittedly, the general concept of sustainability can be proved by appeal to facts or can be empirically measured. However, as an ethical concept, 'sustainability' argument based upon the method of thought experiment is neither arbitrary nor subjective based upon the values of the chooser. It is the nature of ethical concepts that the same are justified or measured in terms of statistics or matters of fact. Similarly is the concept of 'sustainability' as an ethical concept.

An orthodox economist will not accept a position that defines 'sustainability' as an ethical concept and will always place ethical considerations outside the realm of economics. There are two reasons why such a position is untenable. One, 'sustainability' in the present context, cannot but be an ethical concept otherwise it will suffer from the same criticisms that 'gross utilitarianism' suffers from. Secondly, the belief that economics as a 'positivist' science is free from value judgements is unacceptable. One must remember that every policy decision involves ethical choice as the same is based upon perceived choice of different groups with regard to other people or living things. But this does not mean the choices are purely subjective. These choices can and are measured by interests and desires of the people in the given context. In short, value judgements are necessary constituents of 'sustainability' and to impute interests of future generations does require reflection on specifying what interests taking into account what level of environmental protection is morally right.

One has to accept analysis of ethical nature of sustainability not because it functions as a critique of general economic framework used for valuating environment, but because of the very nature of the environmental concerns. One cannot avoid value judgements while dealing with environmental protection, for that matter, dealing with any aspect of the environment. Value judgements are not accidental incursions but are necessary constituents of environmental discourse.

To assert that the task of environmental protection is a moral one does not belittle the concept of sustainability. In fact it enhances it and corrects the false sense of 'objectivity' projected by the positivist economics. Ensuring that sustainability is essentially an ethical concept renders a proper understanding of environmental crisis and allows a rational inquiry into the

relationship and conflict between the rights of present and future generations. In evaluation approach, either the interests of future generations are ignored, or we have to accept the ethically constructed concept of sustainability. This choice too is an ethical one. We have to ask the all important question of how important are the lives of future people?

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¹ T. O'Riordan (1988) argues for maintaining a distinction between sustainable use and sustainability, where the former has been typically seen as an alternative growth and planning concept Here, sustainability is seen in a much broader sense, embracing ethical norms pertaining to the survival of life forms, the rights of future generations, and institutions responsible for ensuring that such rights are fully taken into account in policies and actions. *The Politics of Sustainability*. In R. K. Turner (1988) (Ed). *Sustainable Environmental Development. Principles and Practice*. London: Belhaven Press.

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¹⁶ *The Hannover Principles: Design for Sustainability*, is available at the McDonough and Partners website, www.mcdonough.com/principles.pdf

¹⁷ Richard Sylvan proposed such ‘thought experiments’ in order to test our intuitive findings. He had used conceptual problems on the basis of *last man* or *last people* examples. Richard Sylvan, earlier known as Richard Routley, ‘Is There a Need for a New, an Environmental Ethic?’ *Environmental Ethics* (eds.) Andrew Light and Holmes Rolston III, Oxford: Blackwell Publishers, pp.47 - 52.

¹⁸ For a more detailed discussion on this issue refer to my article ‘On Ascribing Morals to Animals: A Study in Evolutionary Ethics’, *Sandhan*, Vol .IX, No. 2, July-December, 2009, pp.121-136.

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Nature and Moral Considerability: A Study in Environmental Ethics

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Is there a moral case for eradication of four centuries old dichotomy between man and nature on the basis of moral argument? To answer this question, we shall have to travel through a journey of five decades of theoretical and empirical arguments that attempt to bring about the collapse of the dichotomy. The single most significant source of dichotomy is the Cartesian metaphysical distinction between mind and body that resulted into differences between man and the other species of animals, plants and inanimate beings. The present paper reflects on the debate 'Man versus Nature' and looks at the underlying theoretical and practical presuppositions from the perspective of environmental ethics.

I

Roderick Frazier Nash has entitled Chapter I of his book *The Rights of Nature*, "From Natural Rights to the Rights of Nature" whereby suggesting a distinct theoretical shift that has taken place in the history of environmental philosophy. And this shift is reflected when he quotes Theodore Roszak, an eminent historian of culture, right at the beginning of the chapter: "We are finally coming to recognize that the natural environment is the exploited proletariat, the downtrodden nigger of everybody's industrial system ... Nature must also have its natural rights."¹ Although, the above quotation is full of metaphors situated in the context of American history, there are philosophical insights that should be noted. Roszak equates natural environment with the proletariat exploited by the new bourgeoisie (mankind as a whole). He also compares the exploited industrial workers who were denied the natural rights with nature that has always been outside the rights discourse.

Western concern with natural rights principles is a seventeenth/eighteenth century phenomenon, and this was a result of the return to Greco-Roman jurisprudence, which clearly distinguished between natural law from man-made codes or charters. The Greco Roman and subsequent Christian civilisations assumed that nature along with animals (excluding humans) existed as instruments of the well being of humans. These utilitarian tendencies reflected in the fact that legal principles were not justified on the basis of fundamental principles of justice meant for both humans and animals, but on the basis of human interests.

Whether this separation between the *jus naturae* and *jus commune* was justified by a metaphysics or a metaphysical justification was provided at a later stage of western thought by philosophers like Rene Descartes will have to be studied. However, the obvious fact is

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that Rene Descartes' dichotomy between mind and body and the resultant practices that involved research with animals unanesthetized and nailed alive to wooden board, 'awakened' the conscience of mankind to review the Cartesian dictum that animals are insensible and irrational machines. The rest is history, with many modern philosophers providing cogent and irrefutable arguments to justify natural moral rights of animals.

Many environmental philosophers are not necessarily happy with the technical discussions whereby a case is made for moral rights of animals. Their concern for animals is not derived from, what they regard onerous argumentation through which rights of animals are justified. Instead they see moral treatment of animals as part of overall concern of environmentalists with nature. In other words, their concern for animals is within the realm of their concern for nature. Whereas, moral environmental philosophers' concern for nature, they argue, stems from the fact that animals have natural moral rights². For example they consider Peter Singer and Tom Regan as advocates of biocentrism. The two most important thinkers who have brought to the centre the issue of concern for animals were Albert Schweitzer as early as 1923 and Kenneth Goodpaster in 1978. While Albert Schweitzer demanded reverence for all life when he said "I am life which wills to live, and I exist in the midst of life which wills to live."³, Goodpaster questioned the argument that accords moral consideration only to sentient beings. Goodpaster and others argued that sentience is a morally arbitrary feature, whereas the life criterion does not privilege such features.

But neither the sentientism nor biocentrism can account for our moral concern for the environment or the foundations of ecology. To make a case for ecocentrism we must provide moral arguments to justify the need to protect 'nature'⁴. Environmental philosophers or theorists by and large feel that the arguments provided by advocates of sentientism do not make a cogent case for protection of ecology. Similarly, advocates of biocentrism do not give sufficient moral justification in defence of ecology. Merely making a case on the basis of general truism such as 'everything is related to everything else' provides only a general argument or a heuristic device and opens up a possibility of expanding moral consideration to nature. Critiques of such 'moral extensionism' will point out to weird questioning common among the lawyers arguing cases that are at times beyond defence. For instance, can a lamb sue the lion for threatening its life, on the ground that it has right to life? Or, do acacia trees have rights against the elephants who feed on such trees?

The form of ecocentrism propagated by the environmental moralists will not lead to such weird form of argumentation, but concentrate on moral primacy of non-sentient non-biological environment as 'ecological whole' of which humans, sentients, non-sentients, etc. are a part. "Appreciating the lessons of nature" argues Dale Jamieson, "should move us away from our traditional individualist paradigm of rights and interests, and lead us to see our moral relations with nature in an entirely new light".⁵

There are many environmental philosophers and moral philosophers who dealt questions regarding moral status of nature and/or intrinsic value of nature, notable among them are Peter Singer, Lynn White, Holmes Rolston III, John Passmore, James Lovelock, Aldo Leopold, Arne Naess, J. Baird Callicott and Roger J. H. King. Considering the theoretical affiliations of these authors and similarities of their contributions, we focus on four thinkers in view of the fact that they have distinct moral justification for why nature ought to be protected for the sake of itself.

One of the important features of these interpreters is that they have a distinct take on the question of 'valuing nature'. And this feature needs a brief introduction so that what is being discussed at a later stage gains clarity. It is a truism that value discourse arises from the interaction between the valuers and the contents of nature or the world at large. Values are ascribed to the world, when we speak about what ought to be valued under certain conditions or circumstances in relation to some others that do not ascribe such values. The complex of conditions and circumstances leads to equally complex ways of valuing that are labelled as 'intrinsically valuable' or 'instrumentally valuable' or that challenge our capacity of categorising as either intrinsic or instrumental.

Environmental philosophers and other thinkers seem to have been influenced by Immanuel Kant's distinction between 'intrinsic value' and 'instrumental value'. And this distinction has led many of them to consider that what is intrinsically valuable as superior to that what is instrumentally valued. It is true that what is intrinsically valuable is in some aspect more important than what is instrumentally valuable. But this does not imply that in all possible aspects, the instrumentally valuable is inferior to that which is intrinsically valuable.⁶ It may be noted that the distinction itself cannot be accepted in absolute terms. Again, that the distinction itself is problematic may be seen from Dale Jamieson's example of painting.⁷

The problematic nature of distinction between 'intrinsic' and 'instrumental' value can be seen from the fact that a general glance at the 'intrinsic' value reveals at least four different senses/meanings. The first sense of 'intrinsic' value is one we refer to as the *ultimate* value contrasting it with the instrumental value which is that value which helps to realise the ultimate value. A long walk in the woods is the instrumental value that results in pleasure which is value *per se*, or ultimate value. The second sense of 'intrinsic' value is one which we refer to as *moral considerability*. It is in this sense that we consider something/someone that has both necessary and sufficient characteristics for being considered as having moral standing or that should be morally considered. In the classical period the characteristic of rationality was deemed to be both necessary and sufficient reason for moral considerability. In recent times, those with 'sentience' (capacity to feel pleasure and pain) are regarded as members of moral community. And hence they should be considered while taking decisions affecting them. The third sense of 'intrinsic' value is one which is alternatively known as 'inherent value'. 'Inherent value' refers to a thing being valuable because of the objective property a thing has due to the nature of the object, and recognised as such. The fourth sense of 'intrinsic' value refers to that value that is independent of the valuer or observer. In other words, something has value whether there is a valuer or not⁸.

Although these four senses have overlapping concerns, the differences among them have both conceptual validity as well as justification while dealing with various components of the world we live in. For instance, when we say we value something intrinsically in the first sense (ultimate), it may have far reaching consequences when used in the second sense (intrinsic as moral considerability). Someone may value mountains, rivers, forests, etc. in the first sense, and still may not claim to value them in the sense referred to in the other three cases. Then, there is a possibility that we may value something intrinsically and non-intrinsically at the same time as in the case of one valuing classical music, which can also be considered as instrumental value for someone who can relax after listening to some classical music. In spite of the problematic nature of the above distinctions, they provide a methodological tool for valuing nature, particularly to those not trained in philosophical discourse and analysis.

The biggest mistake that some biocentrists, ecocentrists, scientists and some philosophers make is to argue that if plants or ecosystems cannot be accorded moral considerability, (intrinsic in the second sense) they cannot be considered as having ultimate value (first sense of intrinsic value). Consider the following statement of John Rodman: “I need only to stand in the midst of a clear cut-forest, a strip-mined hillside, a defoliated jungle, or a dammed canyon to feel uneasy with assumptions that could yield the conclusion that no human action can make any difference to the welfare of anything but sentient animals.”⁹ It is obvious, from the above, that human action that protects nature – other than humans, biosystems and ecosystems, - and such action are moral in spite of the fact that the objects of such action are not morally considerable. We can value forests, rivers, jungles etc. as much as we value justice while dealing with present and future generations of humans and other sentient animals. We have selected the following four representative theoretical explorations, namely: *The Gaia Hypothesis*, *Attitudinal Explorations*, *Cultural Construal of Nature* and *Land Ethic* that attempt to overcome the radicalisation of the differences between man and nature for a more detailed analysis in the present paper.

II

Gaia theory or hypothesis, whichever nomenclature the entire discourse as known to environmental philosophers, argues for a ‘single organic system’ that contains both living organisms and inorganic facets of Mother Earth.¹⁰ The most humble summary interpretation of the Gaia hypothesis/theory is given by Peter Hay when he says that it is a “proposal that life on earth co-ordinates, regulates, and self-corrects in such a way that it is maintained even through substantial alterations to the geological and chemical conditions that sustain it.”¹¹ There have been many different articulations and defence of *Gaia hypothesis*, however, for the present purpose, it is enough to look closely at James Lovelock’s formulation as the representative of them all.

James Lovelock in his seminal work entitled *Gaia: A New Look at Life on Earth* viewed the entire world/earth as a ‘single living entity’ self regulating and “capable of manipulating the Earth’s atmosphere to suit its overall needs, and is endowed with faculties and powers that go far beyond those of its constituent parts”.¹² In other words, Gaia hypothesis, believes that life on earth ‘regulates’ and ‘self-corrects’ in order to maintain itself even when substantial changes take place to its (earth’s) geological and chemical conditions responsible to sustain it. Lovelock could find only one plausible explanation for Earth’s highly ‘improbable atmosphere’ that is fine-tuned to sustain life. Atmosphere was seen by Lovelock as an extension of biosphere. In other words, the entire world as a self-regulating organism as the “entire range of living matter on Earth, from whales to viruses, from oaks to algae, ... [constitute] a single living entity”.¹³ Further, Lovelock attributed to this single living entity, faculties and powers, over and above the powers of the parts of this living entity, to manipulate atmosphere to suit its general and specific needs.

The hypothesis that proposes a large creature (Gaia, Mother Earth,) with the capacity to homeostat the planetary environment, is doubted by many including scientists. However, methodologically, Lovelock defends himself reasonably well. Most biologists believe that a creature is alive on the basis of ‘phenomenological evidence’. And the evidence in this case is, in Lovelock’s words: “the persistent ability to maintain a constant temperature and a compatible chemical composition in an environment which is changing or is perturbed if shown by a biological system would usually be accepted as evidence that it was alive”.¹⁴

One of the basic criticisms against such a theory or hypothesis is that anthropomorphizing a regulatory mechanism of atmosphere as a living organism having its own ‘mind’ or ‘will’ so to say, is taking literally true the metaphorical expressions used in our discourse. The criticisms are indeed serious. But there is another aspect that we should not ignore. Use of metaphors is a significant method for advancement of knowledge, whether in natural or social sciences. A phenomenon that cannot be described by the existing terms and by the meaning/s ascribed to them, metaphors do play a significant role in generating new knowledge by providing a definitive description of such a phenomenon. Advances in physics, computer sciences and even in biology have shown considerable use of metaphors in order to extend meanings of existing terms and create new knowledge.¹⁵

There have been many criticisms against Gaia hypothesis, particularly the ones that accuse Lovelock of ‘collaborating’ with thinkers committed to philosophical holism¹⁶ rather than being committed to a scientific hypothesis. Lovelock’s initial collaborator, Lynn Margulis¹⁷ was one of the first to criticize Lovelock’s attempt to see the Earth as a ‘living organism’. The most significant criticism against Lovelock’s ‘Gaia hypothesis’ is that it is ‘teleological’ in nature. As a reaction to this criticism, Edward Goldsmith went to such an extent that he argued that ‘Gaian processes are teleological’. Edward Goldsmith proposed sixty-seven principles of ‘Gaian worldview’, the twenty-second of which clearly asserts that reductionist scientists are incapable of accepting such a proposition because for them (scientists) it is only man that is capable of intelligence, consciousness and reasoning.

It would be great injustice to evaluate the ‘Gaian worldview’ if we restrict ourselves to Lovelock’s contribution alone. Again, for the present study, the technical literature that has developed for the last fifty years or so may not be of great help to the present ethico-philosophical study for two reasons: one, we are not competent (given the scientific nature of discourse) to scrutinize the arguments for or against, and two, there is an unsettled question of methodological superiority of the mechanistic model vis-à-vis the biological model of understanding sciences. In such a situation, we have restricted our evaluation to a general understanding of ‘Gaian’ hypothesis. James W. Kirchner, a sympathetic critique of ‘Gaian hypothesis’ has been a major contributor to the debate and has written extensively on the subject. We shall, for the present study, depend on his works, particularly, his article “The Gaia Hypothesis: Fact, Theory, and Wishful Thinking”¹⁸ wherein he has evaluated the entire debate in the light of some of the recent developments in biosciences and justly concludes there are, in ‘Gaia hypothesis’ elements of fact and theory, metaphors, and of course, some wishful thinking.

Kirchner begins his study of ‘Gaia hypothesis’ by looking at the extent of application, namely two forms of hypothesis: *weak* forms and *strong* forms. Weak forms of Gaia hypothesis argue that life as a whole has influence on the environment. This therefore leads us to believe that the two evolutions, namely, evolution of life and evolution of environment, are so entangled, that they affect each other. The strong forms of Gaia hypothesis assume “that the biosphere can be modeled as a single giant organism ... or that life optimizes the physical and chemical environment to best meet the biosphere’s needs”.¹⁹ The claims made by strong forms, according to Kirchner, cannot be falsified and hence unscientific. They should be treated as metaphors. However, there is one area between the strong forms and weak forms of ‘Gaian hypothesis’ that need a relook as they are capable of justifying the study of ‘Gaian hypothesis’, i.e. ‘Homeostatic Gaia’ which believes that “atmosphere-

biosphere interactions are dominated by negative feedback, and that this feedback helps to stabilize the global environment.”²⁰

What Kirchner refers to elements of ‘fact’ and ‘theory’ in ‘Gaian hypothesis’ is overwhelming research and evidence for the last fifty years or so regarding organisms’ effect on physical and chemical environment. Kirchner cites large number of studies to prove his point, i.e. “many important chemical constituents of the atmosphere and oceans are neither biogenic or biologically controlled, and many important fluxes of the Earth’s surface are biologically mediated ...”²¹ Again, the ‘Gaian hypothesis’ according to many biologists seem to be justified by the fact that organisms and environment (physical) ‘form a coupled system’, in Kirchner’s words: “the biota affect their physical and chemical environment, which in turn shapes their further evolution ... (and) Earth’s environment and life co-evolve through geologic time.”²² The theoretical element of the ‘Gaian hypothesis’ is observed from the following. As any complex ‘coupled system’ shows ‘emergent characteristics’ so also atmosphere/biosphere as a coupled system will develop emergent behaviour. This theoretical element is comparable to the phenomenon, where a social whole is not a sum total of its corresponding parts, or society is not equal to a sum total of individuals of the society. Natural sciences seem to recognize, in their methodological framework, a form of emergentism which was hitherto not accepted in natural science methodology.

Why does Kirchner think that ‘Gaian hypothesis’ is a ‘wishful thinking’? This is because there are claims in this hypothesis that there is something in this process more than ‘co-evolution’ of biosphere and environment. Further, there is a belief that in such processes there is not only system-level behaviours but also some form of evolutionary teleology. From the fact that a coupled system of biosphere and environment may give rise to two types of feedback, namely, negative feedback that leads to stabilizing and positive feedback that leads to destabilizing – resulting in either beneficial or non-beneficial (detrimental) conditions for the survival of organisms. But what Gaian hypothesis or its propagators accept is only negative feedbacks that are beneficial to the organisms. The positive feedbacks that are detrimental are not recognized as ‘Gaian’. There is, therefore, an explicit claim that these feedbacks (biologically mediated) create stability in the environment which results in changes more appropriate or suitable for life or evolution of the organisms. Kirchner points out that although such a claim of ‘Gaian hypothesis’ that “organisms stabilize the global environment and make it more suitable for life” is not “consistent with the available data” and “difficult to test against data”.²³

Two issues arising from the above discussion need further elaboration to understand the ‘Gaian hypothesis’ and its contribution to protection of nature. Kirchner labels as ‘Homeostatic Gaia’ the negative feedbacks (biologically mediated) that stabilize the environment. Secondly, he qualifies the consequential changes in the environment that are appropriate for life as ‘Optimizing Gaia’. That both negative and positive feedbacks (biological) play a stabilizing or destabilizing role in the environment (physical) has been proved by biogeochemists and other scientists. Kirchner has listed eight cases of such negative and positive feedbacks in this study to highlight the biosphere-atmosphere connection leading to phenomena such as ‘global warming’, ‘green house emissions’ etc.²⁴ What is clear from these studies is the fact that there are both positive and negative feedbacks and hence it is not true that biologically mediated feedbacks do not necessarily lead to stabilizing the physical environment.

The second issue that requires reflection is the Gaia hypothesis' claim that biota alters the environment (physical) to benefit itself. Empirical evidence has not corroborated this claim, alternatively it has been proved that there are both positive and negative feedbacks – in fact Kitchner has cited more positive feedbacks than negative ones - which shows that biologically mediated homeostasis to a great extent has detrimental/destabilizing effect. But there is another aspect of our natural experiences. Our belief that the natural environment is most suitable for survival of living organisms, even under most devastating or strenuous conditions is something we are so convinced about that there is not even an iota of doubt. And since the natural environment has biological feedbacks, it becomes equally natural to believe that these mechanisms make our environment an ideal place for survival and growth of all living organisms. It is but natural to believe that absence of biological processes would disrupt the natural environment as much as their presence enhances the world we live in.

But, Kirchner, as critique of 'Gaian hypothesis', argues that it is one thing to accept that 'environmental services' are important for the ecosystems to survive and thrive, but another thing to conclude that the environment is so designed that it meets the needs of the organisms. Biogeochemists and other scientists have accepted the fact that organisms affect the environment, and that there are organisms which are best suited to thrive under such environmental conditions because of their natural propensity or evolutionary traits. It is also true that some of the conditions or environmental services have been created/enhanced by the same organisms or their co-occurring species.

Kirchner describes a hypothetical case which almost satisfies the requirement of 'Gaian hypothesis'. Rainforests remain wet in drought conditions (when there is intense heat) because water is recycled by the process of 'transpiration' from thick vegetation. This would not be possible in places where there is sparse vegetation. However, there are different type of problems for the rainforest vegetation, namely lack of nutrition and light as the thick vegetation creates overcrowding or 'parasitism' by pathogens that grow under such wet conditions. Organisms in such situation will have to be so evolved that they can survive under these new changed wet conditions, which would not be possible if 'transpiration' was not to take place or was disrupted. Can one treat this case as 'rainforest influencing its climate for its own benefit'?²⁵

Kirchner takes a realistic position on this issue when he points out that an 'yes' answer would be 'semantically true' but 'mechanistically misleading' as it would be appropriate to conclude "that natural selection has made rainforest organisms dependent on rainforest conditions, which are partly of their own making".²⁶ Kirchner claims that there is not only semantic confusion '*for* its own benefit' and '*to* its own benefit' but the expression '*for* its own benefit' suggests vegetation somehow makes changes in the physical environment (with an 'express wish') '*to* reap benefits' from such changes. It is not surprising that evolutionary scientists have, knowingly or unknowingly, fallen in the trap of 'teleology' in their discussions, although, as scientists, they have been committed to a mechanistic framework in understanding nature. Alternatively, one may inquire into the fact whether the seemingly 'teleological' expressions of Gaia proponents are justified as metaphorical uses of expressing phenomena that hitherto could not be expressed in ordinary mechanistic (expressions) model of explanation.

III

John Passmore's *Attitudinal Explorations* is based upon two axioms (1) "that natural processes go on in their own way, in a manner indifferent to human interests," and (2) "if we can bring ourselves to fully admit the independence of nature...we are likely to feel more respect for the ways in which they go on."²⁷ Passmore proposes a 'new metaphysics' that does not see nature as human dependent and 'created' for the survival of mankind. Passmore believes that it is proper to assume that animals have their own 'interests' unless the meaning of interests is 'needs'. The new metaphysics proposed by Passmore is not reductionist but naturalistic. The clarion call given by some for a new environmental ethics, Passmore believes, is unjustified as the existing ethical principles are adequate enough to 'protect' nature. What is proposed is a 'new attitude to nature' that overcomes the age old 'prejudices' that nature has only instrumental value and that exploitation of nature is morally wrong only when it affects human interests.

A critical reflection on Passmore's contribution to 'nature protection' as envisaged in this paper would take us to his seminal work *Man's Responsibility to Nature*, a summary of the same has been published as article in various anthologies on environmental ethics. Passmore has used the term 'nature' in a very restricted sense to refer to "only that which, setting aside the supernatural, is human neither in itself nor in its origins".²⁸ But when he refers to 'attitude towards nature' he refers to a much more restricted sense of the term nature whereby referring to that part of nature that man can change or has the power to modify. The assumption here is that man has the power over 'nature' to change or modify it.

Passmore says that his concern is to look at the relationship between man and nature comprising of 'strange' life of animals and plants, - 'strange' in the sense used by existentialist theologian, Karl Barth, unfamiliar, foreign, alien. This characteristic of nature has not always been part of man's awareness. Man has, in the course of history, viewed nature differently as having mind of its own, capable of being entreated to as humans would, and even being prayed to as we do to gods and deities. But with the beginnings of Greek and Roman civilizations and the subsequent Western Renaissance, the official scientific position became dominant and natural processes were viewed differently from that of animals. Passmore highlights the fact that there were still residual elements in many societies that viewed nature as having its own mind, or took literally the metaphors used such as 'nature will have its revenge'.

Christian metaphysics of nature which is the result of a long Stoic-Christian tradition has accorded man a higher status, and nature (animals and plants) a status of being instruments of well-being of humans. Passmore believes that is because for long time the Christian tradition emphasized the doctrine that what God has created is the best possible creation, and that "sinful corrupt men ought not to attempt to reshape the world in their own image."²⁹ Further, Christians, by and large, believed that the advancement in science and technology is the result of the development of Christian civilization and that modifying and exploiting nature to suit human needs is justified.

Passmore believes that Christian ethical approach to nature is reflected from the fact that the relationship between man and nature (natural objects) is not mediated by any moral considerations. In other words, so long as such an action of the individual does not affect another person, like destruction of another person's property or animals, the action is not immoral. Again so long as such actions which seemingly destroy

property or inflict cruelty on animals do not lead to encouragement of such attitudes in others, there is no moral sanction on the same. In short, it is wrong to be cruel to animals, if it leads to harm to fellow human beings. Two important philosophers of Christian tradition, Augustine and Aquinas, may theologically vary from each other, but ethically seem to agree when they claim that there is no moral wrong in perpetuating cruelty on animals. Even Immanuel Kant maintains a similar position and goes to argue that what is said about animals, *mutatis mutandi*, applied to all non-human entities such as trees and plants.

The issue of cruelty to animals is central to the discourse on ecology. Passmore does admit that Kant and many other philosophers have looked at the problem only in terms of moral discourse of human beings and as related to the interactions between humans. And the relationship between humans and the non-human world is kept outside the moral discourse. The non-human world would enter into the moral discourse in so far as the actions of the human against the non-human world impinge on the interest of humans. The issue whether there is any intrinsic value in animals and plants (non-human world) is central to the contemporary discussion in ecology. But such a matter was set aside during the seventeenth and eighteenth centuries under the influence of the Cartesian doctrine of radical differentiation between man and animals. Animals were not only denied the capacity to suffer pain and pleasure, but were treated as machines. Under the Cartesian influence even the human body was treated as part of the non-human world, but retrieved from this category only because Descartes had deemed that there is a connection between consciousness (mind) and body because of which the body was seen as 'united' with the consciousness. Consequently, the Cartesian dichotomy between mind and body was used by the Western Christian world to keep the relationship between man and nature out of bounds of moral obligations.

Unhappy with the Cartesian view of man and world which did not allow even an aesthetic appreciation of natural beauty let alone a moral evaluation of man-nature relationships, the ecological critics of the Western Christian civilization's attitude to nature, seek to articulate a new ethics based upon a new metaphysics and a new aesthetics. Passmore emphasizes the fact that Western metaphysics along with ethics have encouraged exploitation of non-human nature. This does not imply that the community of thinkers have to opt for a new metaphysics and ethics or declare nature as sacred in order to protect it from the exploitation by science and technology. Science has indeed enhanced our understanding of nature, got communities out of superstitious beliefs and put us on the path of rational application of scientific laws and theories in order to improve the condition of our life. Passmore seeks to lay down a proper framework for a 'philosophy of nature' free from the 'reactionary and mystical overtones' that have often surfaced in the discourse of ecological movements.

Passmore lays down three prerequisites for an adequately formulated 'philosophy of nature': We must accept the fact (1) that nature functions in its own way, without any connection or 'concern' with human interests; (2) that human action impacts nature in an unpredictable manner; and (3) that 'natural' laws in the case of nature are radically different from the laws of physics, but they advance the understanding of the phenomenon of nature. There is need of greater clarity regarding what these three prerequisites are.

Passmore believes that natural phenomena or processes are such that human interests are not part of their consequences or impact. They are such that there is nowhere even an iota of

'concern' for the survival of mankind. Secondly, man's action impacts nature in a very strong manner, even to the extent that they change the quality of substance setting about new processes. One is incapable of predicting the outcome of such processes or interactions. And finally, the general 'laws' formulated in understanding 'nature' are quite ill-formulated compared to the ideal laws of physics. In spite of the fact that the laws of 'nature' like that of biology and sociology are inferior to that of physical sciences, they provide detailed understanding of their functions and *inter se* relationships.

The conditions or prerequisites laid down above suggest that we require a new metaphysics that is non-anthropocentric as nature does not (is indifferent to) care for the existence or survival of man. But, Passmore immediately adds that this is not a new metaphysics, as naturalistic philosophies have always supported such nature driven philosophies. Indeed, the objective of such philosophies was to 'naturalize' man rather than to 'spiritualize' nature. The difference between Passmore's 'nature' and that of naturalistic philosophies like Darwinian biology, is that in the case of the former, 'nature' is posited *apart* from man, whereas in the case of the latter, man is *part* of nature. Passmore's insistence of 'nature philosophy' on the basis of the meaning he attaches to nature is important in relation to the uniqueness of men, who according to him, have special ways of relating to one another and to the world around them, and also distinctive in their concern for the future.³⁰

Naturalistic Philosophies such as Darwinian biology would accept that in the normal biological struggle of the survival of the fittest, man as dominant species is prone to destroy other species. Man's survival under these conditions is at the cost of other species. However, Passmore specifically points out that the difference between men and other species is that men can visualize the results of their action and observe the resultant extinction of species. Man can change his behavior in order to preserve the species or refrain from destroying it. At one level men may not be unique for the naturalistic philosophy, but at another level that men have the capacity to visualize and change their behavior in the evolutionary processes, compels us to look for a 'new metaphysics' which is naturalistic but not reductionist.

Secondly, man has to recognize that he along with animals, plants, and biosphere constitute a 'community' and that all these constituent parts have a right to live/survive and a right to be treated with 'respect'. This is particularly directed against the Stoics who gave men a unique place in the civilizational scheme that gave licence to men to destroy other members of the community for their own survival.

Where does Passmore differ from other philosophers while dealing with 'right' and 'respect' to all members of the 'community'? What type of 'new ethics' can Passmore propose that will vary from the traditional one? Taking a cue from the primitivists who resent men acting unjustly and against nature, Passmore rejects Stoics' free for all exploitation of nature. He takes a cue from Hume who distinguishes between 'acting *humanely* towards animals' and 'acting *justly* towards animals', to reject the primitivist position. Acting *humanely* towards animals implies theory of sentience, namely, animals, like humans suffer pain. Acting *justly* towards animals, according to Passmore, implies animals have interests (like humans) and hence come under the purview of the theory of justice. Passmore does not accept that non-humans have 'interests' in any sense other than 'needs', and therefore cannot have 'rights'. "It is one thing to say that it is wrong to treat plants and animals in a certain manner, quite another thing to say that they have a *right* to be treated differently",³¹ argues Passmore. He concludes saying that humans,

animals, plants and biosphere form a single community. But this community does not create rights, duties and obligations on the part of its constituent members and there is no network of responsibilities that accords *rights* to the members.

Passmore proceeds to deny the need of 'new ethics' as there are already enough principles in the traditional ethics that allows condemnation or punitive action on those who destroy ecology. Passmore says that it is only in the cases where specific human interests are not identified or involved, that one may call for a 'new ethics' to deal with such eventualities. Passmore seems to fall prey to ethical reductionism when he cites the example of protection and preservation of wild species and wilderness on the basis of some form of utilitarianism.

Passmore cannot accept the theologically enunciated Augustinian doctrine that human actions against animals are not within the scope of moral criticisms, except when it comes to conflict with human interests. This is universally recognized 'moral blindness'. However, Passmore questions whether the same moral blindness continues while dealing with non-sentient entities, just because they do not suffer.

Passmore points out that destruction of natural objects is far more serious than the vandalism of property such as works of arts and artifacts that implicitly affects human interests. Citing the often quoted thought experiment of 'last man on earth', Passmore argues that the last man is condemnable for the 'orgy destruction' even when it affects no human interest.³²

Passmore's conclusion of his argument is refreshingly 'prescriptive' when he says that when we recognize the independence of nature and the complexity of natural phenomena we shall develop a sense of admiration of nature, appreciate it aesthetically and study its very complex workings, instead of just manipulating it for our personal benefits. This is what Passmore calls, 'new moral attitude' to nature, which is inextricably linked to a more realistic philosophy of nature.

IV

Roger J. H. King's studies have a rather controversial response to nature in general and animals in particular in the 'context' of *hunting*. His reflections take him to find fault with animal liberation protagonists, land ethic interpreters, defenders of primitivism and even ecofeminists. His differences with animal liberation protagonists are based upon the fact that animal liberationists do not distinguish between domestic and wild animals, which could be treated differently. He finds fault with Aldo Leopold and other land ethic interpreters on the ground that if they were to take into account 'self-domestication by humans', the attitude towards humans would be radically different. He is against the primitivists' (such as Paul Shepard and Ortega y Gasset) claim that 'hunting is essential part of human nature'.

A more detailed study of King's position reveals that he attempts to answer the question 'does Nature have moral value?' in a manner that the answer remains incomplete. He begins his analysis by highlighting the fact that there are two ways of approaching the question: (1) study the properties that nature has, that make nature a moral value; (2) study the context under which Nature is 'construed' which makes it to possess or not to possess moral value in our discourse. The first approach is a traditional approach adopted by philosophers in the history of philosophy. The second approach depends upon the context under which non-human entities are accorded moral status within our 'human cultural understanding'. This

'contextualist' environmental ethics³³ depends upon our social, political, economic, etc. factors that help us to construct our conception of Nature.

King believes that contemporary environmental ethics is substantially foundationalist, in the sense that nature of the object/s determine whether they have moral value or not. Foundationalist approach to moral value is directly opposed to value based on cultural interpretations. King opts for a *contextualist* approach in which Nature is a construal of human cultural life. In other words, our conception of Nature is based upon our interpretation of Nature which is dependent upon our intellectual, emotional, artistic and scientific experiences. King calls the complex of resources as the matrix or context within which our interpretation of the world occurs. In the words of King: "...the inquiry into Nature's moral status proceeds against the background of a prior interpretation and understanding of just what Nature is...and this understanding itself presupposes the historically specific matrix from within which we begin our interpretative effort."³⁴ It is but natural to conclude that we cannot have abstract discussion on the moral value of Nature, as the question regarding the moral value of nature presupposes the epistemic exercise of how we know nature and what is the end result of such knowledge.

King exemplifies his position by citing the example of 'wilderness' and how it was valued by various communities/societies. Referring to the study of Peter N. Carroll³⁵, King shows how Puritans in New England viewed wilderness as the domain of Satan that was sought to be destroyed and converted into arable land. The religious context of Puritans determined the view of one constituent of Nature in this case. With the advent of Romanticism wilderness gained a special status due to the artistic enterprise of painting 'beautiful' images of wilderness and that led to the development of aesthetic value. King cites Mark Sagoff³⁶ who gave a moral argument on the basis of aesthetic value for the preservation of the wilderness. Contemporary society views wilderness purely from the economic point of view. Wilderness is seen as a source of economic resources such as raw material for industries in terms of timber, hunting for wild animals, space for recreational tourism and other activities that bring in economic benefits to the community. In return, it is obvious, that there is great amount of degradation of wilderness. That the three above cited examples are used by King to argue that any "inquiry into the moral status of Nature must inevitably return to a moral and political investigation of the social context within which Nature is constructed"³⁷.

The most significant criticism King forwards against the foundationalist environmental ethical position is that 'Nature is incapable of playing an independent justificatory role.' Let us see King's argument closely. King believes that the traditional environmental moral philosophers presuppose that Nature is a victim of human vandalism. At the same time Nature shows humans a way for proper behaviour by which humans can restore Nature's stability. Now, all such foundationalist positions agree to two things: for one, the treatment humans mete out to Nature depends upon the objective characteristics of Nature, and recognised as such by the moral community; secondly, the objective of environmental ethics is to restore our 'harmony with nature' by overcoming the alienations suffered by humans due to its destructive behaviour. The two points mentioned above make sense, according to King, only if our understanding of Nature is the result of unmediated access to Nature as it is. Or else, all that Nature tells us to follow and the moral do's and don'ts that humans lay down are dictated by the type of environmental ethics we construct.

King analyses different moral theories that have implicit to them the idea that Nature is a 'moral guide' to humans in their relationship to the non-human world. Immanuel Kant, according to King, in *Lectures on Ethics*, does not recognize animals as participants in the moral community as they lack the capacity of reason and free will and hence Nature is not capable of providing moral guidance for the behaviour of humans. Animal liberation philosophers (like Peter Singer) are also foundationalists as they depend upon specific property of *sentience* to argue for inclusion of animals in the moral community. In the case of Aldo Leopold, King observes that 'land ethics' is so restrictive that the moral claim of Nature is limited to that extent that it contributes to the stability of the ecosystem, otherwise, it would be outside the scope of moral protection. King even points out that some of the 'land ethic' proponents justify hunting of animals on the moral grounds that it contributes towards integrity, stability and beauty of ecological wholes³⁸.

King's most significant contribution to the formulation of a proper environmental ethics is to provide a framework by means of which he will be able to provide direction for an adequate moral theory. King begins by asserting certain 'truisms', first of which is that to treat Nature as a 'guide' for our moral behaviour, we must understand what Nature is. And this task is the most problematic and one that has created divisions among the environmental philosophers. King further believes that our present conception of Nature is the result of cultural components that both institutions and variety of interpretations, whether religious, scientific, economic or political, make available to us. King further points out that before we translate Nature into a moral guide, we must look at how we have constructed the conception of nature that we have that has led us to destroy Nature. The radical shift that King proposed is in the following questions: "...ask *not*, how Nature is *really* constructed? ask what understanding of Nature would support and sustain life which is morally responsible both towards the environment and towards other human beings?"³⁹ King points out that many of the philosophies of Nature that have been around are recognised by their proponents as 'interpretative frameworks' and consequently the cultural foundations or origins of these philosophies are ignored. For example, King traces the origins of the Deep Ecology movement in their critique of radical anthropocentrism. King traces the origins of Eco-feminism in patriarchal institutions and the cultural experience of women that see the exploitative and dominating impulse inherent in men. Without these and other interpretative frameworks, the understanding of Nature provided by environmental philosophies will be devoid of meaning.

What is the alternative? King observes two distinct ways of construing the notion of Nature based upon the cultural categories. The first way is to view Nature as a commodity of economic production. In a society that is overly obsessed by economic growth, it looks for more and more resources for the fulfilment of the economic project. The second way is to view Nature on par with humans who are objectified as participants in the project of capitalism. King attempts to provide an interpretation of Nature (a construal of Nature) that will enable and sustain the capitalist economic activity. An interpretation of Nature that views the nonhuman world as spiritual or that has claims and interests, will be contrary to the economic viewing of nature as natural resources or raw material for economic activity. King observes an alternative view or construction of Nature that natural sciences provide. The view of Nature provided by natural sciences justifies the use of nature as a commodity for economic production, thereby legitimising socio-political and other interests of the

community. This view is clearly in conflict with the alternative construction of Nature that wants to highlight moral and aesthetic values.

It is a common feature of economic activity and mass production that it is at its efficient best when Nature is 'invisible' to humans and is seen as only a natural resource in the economic processes. This 'invisible' property is noticeable in cases where the communities do not live in harmony with nature or depend for their survival directly on nature. Nature is 'invisible' for the urban communities who are engaged in exploitation of Nature as natural resources of their economic activities and mass production. It is only through artistic activity of landscaping, or photography, television documentaries, etc. that Nature becomes 'visible' to urban communities, opines King. King identifies two features that result from the urban view of Nature: one, Nature is seen endowed with aesthetic value; secondly, humans in this artistic or leisure industry become passive consumers with passing and purely external relationship with Nature. This construction of Nature also enables a new form of exploitation of nature for the benefit of the leisure industry and allows preservation of few selected areas that too because it gives economic returns. King, based on his experiences, points out that not all communities may indulge in such efforts to make Nature invisible so that it can be economically exploited. There are communities and individuals who resist this temptation at the cost of being blamed for their lack of understanding of modern economic development and public facilities that go with urbanization.

The construal of Nature in scientific and economic terms whether correct or wrong is the result of our way of knowing and thinking and has become a part of contemporary societies. King, *a la* Michael Foucault, inquires into "who is empowered and who is subjugated by construing Nature in economic and scientific terms?"⁴⁰ And the answer is: The construal of Nature in economic and scientific terms fails to see alternative models of understanding non-human nature. The traditional dominance of science and contemporary power of economic authorities, suppress alternative ways to perceive Nature and the proponents of such theories. However, it is going to be difficult for the environmental philosophers and activists to argue that Nature has moral intrinsic value in a culture that is dominated by and dictated by economic values. King doubts whether an alternative construction of Nature exists at present. He sees a direction for such an alternative in the writings of what he calls 'literary naturalists' such as Thoreau, Abbey, Muir, and others. The writings of these authors do not provide abstract arguments for constructing a notion of Nature that has intrinsic moral value, but offer the possibility of a 'moral and philosophical association' beyond the self-interestedness of economic and moral ideologies. In his words, these writings "re-introduce(s) subjectivity and moral connectedness into landscape."⁴¹

According to King, the language of these 'literary naturalists' by the use of figures of speech such as metonymies, etc. creates close connection and affinity between land, and experiences and values. This in turn leads to incorporation of the physical 'aspects' of the nature into the moral and social milieu, and which consequently leads to Nature being visible in every day affairs of human beings. Normative questions regarding nature cannot be asked and meaningfully answered from the standpoint of 'philosophical absolutes' and 'indubitable certainties', but by construing Nature from the cultural conditions that create desires and needs of the social communities, opines King.

V

Aldo Leopold's "Land Ethic" provides one of the most holistic approaches towards understanding the environment. Arguing against gross anthropocentrism, he challenges the traditional understanding of moral philosophy. He makes his argument on the basis of a synoptic review of history and representation of origin and growth of moral development understood in evolutionary terms. Leopold depends upon his insights into the development and growth of moral consciousness in the last three thousand years (from theological origins to justification based upon human reason) and shows how new outlook on civil rights, human rights, abolition of slavery, rights of women, etc. have become part of the moral consciousness of our society. Even anthropological evidence suggests that there are similarities between moral concerns and boundaries of communities with that of societal concerns. However, there seems to be a wide gap between the practice of morality and the history of growth of moral consciousness. It is obvious because morality is not a descriptive phenomenon, but normative – whatever may be its origins and growth.

Treated as the Bible of the ecological conservation movement, Leopold's *A Sand County Almanac* was treated dismissively by the philosophical community, particularly those who dealt with moral arguments for the preservation of flora and fauna. Among these there were respectable environmental moral philosophers such as John Passmore, H. J. McCloskey and Robin Attfield. J. Baird Callicott, one of the first sympathizers of Leopold's Land Ethic identified three reasons why academic philosophers did not take seriously Leopold's arguments. For one the language is condensed prose style by which complex arguments are attempted to be expressed in few sentences or phrases. Secondly, Leopold deviated from the traditional ethical discourse and the familiar assumptions of contemporary ethical theories. Thirdly, Leopold's conclusions had possibility of disturbing implications which hurt the sensibilities of some societies that had historically suffered from genocide, etc.

What is the justification to regard Land Ethic as a moral theory? Leopold begins his exposition of Land Ethic by conducting a review of moral development in the ancient world where slaves were excluded from the purview of morals. And it took the Western world almost seven millennia before slaves (mostly Africans) were included in the category of humans. In spite of this, the review of moral development makes Leopold believe that there is a steady moral growth. This is because more and more human activities and relationships between humans have come under the guidance of moral principles. And this is so in spite of the fact that there are many moral aberrations that continued for long period of time and are even present today. One may recall, history of morality as it is in practice, is not same thing as history of moral consciousness. J. Baird Callicott supports Leopold's observation by citing examples (a) expansion of human rights based upon moral principles in Africa, South America and Asia, (b) adoption of legislations for overcoming injustices against women, children, migrants, etc., and (c) expansion of movements for women's liberation, animal liberation, protection of environment; as an expression of growing ethical consciousness (different from practice).⁴²

Leopold's notion of ethics from the evolutionary point of view is significant for his construction of Land Ethic. Leopold believes that the conception of ethics dominating the moral theory framed by philosophers is not satisfactory as the conception does not take into account its evolutionary character. From the evolutionary point of view, Land Ethic for Leopold is "a limitation of freedom of action in the struggle for existence".⁴³ Here we depend upon Callicott's interpretation of Leopold's understanding of ethics. The expression "struggle

for existence' is obviously a reference to the Darwinian evolutionary framework within which the evolution of ethics is located. It is however paradoxical that in the "struggle for existence" there would be "limitations of freedom of action". An answer to this lies in Leopold's analysis of origin and growth of ethics that can be understood from the sociobiological point of view.⁴⁴ Leopold locates the beginnings of moral history to origins of religions. And the most specific one is the Ten Commandments given by Moses recorded in the Old Testament. This moral code is commended to humans along with sanctions for moral disobedience and rewards for following them. The development of ethics in the West began when attempts were made to locate the origins of ethics in human experience and/or human reason. Human reason features in almost all the historical periods of Western history of moral philosophy, from ancient to modern and contemporary.

For any evolutionary natural historian, the idea that God created ethical theories is somehow difficult to accept, as *prima facie*, the evolutionary theory itself does not accept God's intervention in nature.⁴⁵ Again, human reason as the sole foundation of morality is also questionable. As Callicott, arguing on behalf of Leopold points out, "reason appears to be a delicate and recently emerged faculty. It cannot, under any circumstances, be supposed to have evolved in the absence of complex linguistic capabilities which depend, in turn, for their evolution upon a highly developed social matrix."⁴⁶ Hence, to be social beings, there must be, in the language of Leopold, "limitations on freedom of action in the struggle for existence."⁴⁷ It is obvious from the above that we acquire ethical properties before reasoning as a capacity develops in us.

The evolutionary portrayal of the Darwinian understanding of ethics begins with the world of animals that are motivated by sentiments and feelings, which in the case of humans are 'amplified' and 'informed' by reason. "Land Ethic" of Leopold would be developed on the basis of the Darwinian thesis that the beginning of ethics is the filial and paternal relationship common to all mammals. This filial and paternal affection leads to the formation of the primary social group (family). When such feelings and affections are extended to other individuals closely related, then the family groups get enlarged, which when further extended becomes a community. In this extension at every stage, on the one hand, the formation of groups and its extension helps in the protection of individuals in the group and providing for their existence and survival. On the other hand, as the filial bonds get diffused the more the group is extended leading to community. Evolutionist scholars label the feelings among the individuals of these enlarged groups as "social sentiments".

Darwin's evolutionary ethics begins with 'social sentiments' 'beneficial' to the community, rendered as such by man's 'intellectual powers' (which can recall the past and speculate the future), with 'the power of language' (that can convey 'common opinion'). The resultant behaviour is deemed by common opinion as socially acceptable and beneficial.⁴⁸ It is obvious from the above that Darwin and other evolutionary philosophers treated moral feelings on par with physical faculties. Leopold, accepting Darwinian model believes that ethics originates in the individuals' or groups' tendency to create patterns of cooperative behaviour.

With the arrival of the 'global village' concept, there are radical institutional/societal changes and corresponding changes in value structures. But even when there are the conflicting societal and institutional changes, there seems to be a direction towards the construction of a global value system of human ethic. The articulation of 'human rights'

at all levels of national and international forums is an example of evolution of such a global ethic. The next step of evolution is the formation of one society worldwide, one 'community' with common value structures generally agreed upon as envisaged by Darwin.

Leopold agrees with Darwin's analysis of origin and growth of ethics. He, however, enlarges the concept of global community, which according to him is the next logical step in the evolutionary process. For him the ethic of universal humanity is incomplete unless it "enlarges the boundary of the community to include soils, waters, plants, and animals or collectively: the land".⁴⁹ Leopold throughout his work *The Sand County Almanac* concentrates on transforming the 'community' into the 'land community' which is the 'biotic community' comprising of soils, waters, plants, and animals collectively. 'Land Ethic' is the new ethics of ecology that will emerge in the cultural consciousness. Human society, according to Leopold, exists on the basis of mutual security. Further, this society is based upon economic inter-dependence. However, it continues to exist only because of 'limitations of freedom of action in the struggle for existence'. Leopold further argues that both human society and the biotic community are essentially similar in their functional structure – the former is preserved by 'limitations of freedom of action in the struggle for existence', the latter by 'limitations of freedom of action by land ethic'. This moral response to the environment proves that Land Ethic is not only 'an ecological necessity' but also an 'evolutionary possibility'. What requires to render this possibility into a necessity is 'universal ecological literacy', opines Leopold.⁵⁰

J. Baird Callicott, who is an advocate of a moral theory that provides protection to the biotic community, points out that Land Ethic rests on three scientific concepts: evolution, ecological biology and Copernican astronomy. With the help of the evolutionary theory, Land Ethic seeks to connect ethics with structures of society and their development. Evolutionary theory creates both a diachronic link between humans and non-human nature as well as a synchronic link between the two. While diachronic connection helps us to observe the evolutionary changes occurring between human societies from primitive times to modern complex societies and the changes that occur in their moral or value systems, the synchronic connection provides us with the concept of 'biotic community', namely, an integration of human beings, animals, plants, waters, soils etc. "all interlocked in one humming community of co-operations and competitions, one biota."⁵¹

Leopold, according to Callicott, seem to see the earth as a small planet in an unbounded hostile universe full of large planets. Earth is no longer the centre of the universe and the most significant of all planets and stars etc. in the Copernican astronomy. Callicott believes that this may have contributed, though not consciously, to a sense of community living, dependence on each other and development of kinship among the inhabitants of the earth. It may be noted that there is no direct reference in Leopold's writings regarding the influence of Copernican astronomy. This seems to be Callicott's reading of Leopold's 'Land Ethic'.

Callicott summarises, in the following, what he sees as the most important elements that went into the making of Land Ethic: (1) Copernican cosmology that has contributed to a sense of community living, dependence on each other and development of kinship among the inhabitants of earth, a planet in a rather hostile universe; (2) Darwin's natural history of ethics that showed how from the first moral pronouncements that were attributed to gods to ethics based on reason, is the result of evolution in natural history; (3) Darwin's

understanding of kinship that illustrated that 'kinship' is prevalent amongst all forms of life; (4) Charles Elton's conception of an "economy of nature" that demonstrated how the natural world is like corporate society in which individual animals and plants have their own spaces or 'niches' in the 'economy of nature'. This biotic community, like the old feudal societies, does not allow any mobility or change in one's "roles" or "professions"; and (4) Hume's moral psychology which explained that ethics is the result of sentiments or feelings which may or may not be strengthened by reason.⁵²

The logic of Land Ethic is that natural selection recognizes the implicit nature of humans that they are capable of a moral response in a situation where kinship, identity and community are present. Hence, natural environment is recognized as biotic community which gives rise to an ethics that Leopold labeled 'Land Ethic', a variety of environmental ethics. Given the contemporary conditions of growth of human knowledge, the level of environmental awareness or education, land ethic is possible, according to Leopold. Again, given the fact that humans have the capacity to destroy the basic features of environment, namely, stability, diversity and integrity, it is necessary that we accept such an ethic.

There is one important feature of Land Ethic that needs to be reflected upon. Kenneth Goodpaster, another advocate of Land Ethic, claims that there is implicit to Leopold's Land Ethic "moral considerability"⁵³ for the biotic community. First and foremost, human being's role as conqueror is changed to being part of land community on par with other fellow members such as animals, plants, soil, water and other members of the biotic community. There are in this both the individualistic and holistic claims to 'moral considerability' as the moral concerns change from the individual members of the biotic community, to the biotic community as a whole. Callicott highlights this by pointing out that in "The Outlook", humans are mentioned as members of the biotic community in the beginning of the discussion, but later on simply referred to as 'species'. The gravity of this change is reflected in the summary statement when Leopold declares: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise".⁵⁴

The moral right or wrong in the above moral maxim would give rise to serious consequences. A farmer would be morally wrong to clear the wood to arrange for a larger farming plot if the slope of the area is seventy five percent. It would be wrong on the part of the government to allow increase in inhabitants of wild plant eating animals, as it would affect the biotic community. In other words, whatever is allowed unchecked to increase or expand that threatens 'the stability', 'integrity' or 'beauty' of the biotic community, is morally wrong. In the words of Callicott: "land ethic not only provides moral considerability for the biotic community per se, but ethical consideration of its individual members is preempted by concern for the preservation of the integrity, stability, and beauty of the biotic community".⁵⁵ This position gives rise to serious difficulties for which there has been strong social reaction in some academic circles. Will the ever increasing population of human beings be restricted or humans as members of biotic community be culled because they threaten 'the stability', 'integrity' or 'beauty' of the biotic community?

VI

The debate concerning man's relationship with nature in this paper calls for an analysis on the basis of the metaphilosophical claims made by the proponents. Depending upon the type of attitude taken by the authors, whether defensive or offensive, there are two types of

positions that can be taken regarding the natural world: *subjective* or *objective*. The objective is the framework that scientists employ regards the publicly verifying descriptions of external phenomena that can be observed and measured. It is not only natural scientists, but also some social scientists (with positivist inclinations) who attempt such observations/studies. The subjectivist methodological framework depends upon the internal characteristics of the observer. Humanities and arts are disciplines that depend upon such subjective interpretations of the phenomena.

At another level, studies regarding the relationship of man to the natural world may be distinguished as *reductionist* or *holistic*. The reductionist approach assumes that understanding complex reality would imply understanding behaviour or function of its constituent parts. In natural sciences, reductionist approach is used when we claim that the nature of biological cells is understood if we investigate molecules. In social sciences, methodological individualism is a similar case. On the other hand, the *holistic* approach accepts or recognizes whole as subject of investigation and that study of parts cannot account for behaviour/function of the whole. In the holistic approach, there is the assumption of ‘emergence’ of qualities in the whole which otherwise would not be observed in the parts separately.

Employing I.G. Simmons⁵⁶ types of constructions analysis, the following conclusions could be drawn.

Theory	Subjective/Objective	Holistic/Reductionist
James E. Lovelock’s <i>Gaia Hypothesis</i>	Objective	Holistic
Aldo Leopold’s <i>Land Ethic</i>	Subjective/Historical	Holistic
John Passmore’s <i>Attitudinal Explorations</i>	Subjective	Holistic/Naturalistic
Roger J. H. King’s <i>Contextualism</i>	Objective	Reductionist/contextualist

Analysis of the views of the above four representative thinkers who have contributed to our understanding of man-nature relationship, reflects their commitments to their research methodology and their original disciplines. First, it is not surprising that James E. Lovelock’s interest and training in natural sciences particularly chemistry, led him to believe in laying down objective criteria while arguing for ‘Gaia concept’. But his holistic approach, which was an extension of this concept beyond, was unacceptable as evolutionists believe that evolution occurs at the level of individuals. Secondly, Aldo Leopold’s closeness to nature/forests/wilderness in his capacity as forester and later on as conservator, led him to constantly reflect on history of societies in general, and history of mankind as a whole. It is these reflections that led him to believe in a theory of origin, growth and development of morality in evolutionary terms. At one level these are at best subjective reflections, but at another level they reflect the societal or community concerns. It is in this sense, they are holistic in nature. Thirdly, John Passmore’s attitudinal explorations, by their very nature are subjective. The new metaphysics proposed by Passmore is not holistic in an exact sense, but non-reductionist as it is reflective of nature as it is. And finally, Roger J. H. King’s critique of animal liberation protagonists, land ethic interpreters, defenders of primitivism and ecofeminists, is objective in the sense that he has contextualised their positions whereby showing how their theoretical positions would be inadequate when generalised to a larger whole.

NOTES AND REFERENCES

- ¹ Quoted in R. F. Nash, (1989) *The Rights of Nature*, Wisconsin: The University of Wisconsin University Press, p. 13.
- ² Kenneth Goodpaster and Paul Taylor in particular argue in this direction.
- ³ “The Ethic of Reverence for Life” <http://www.animal-rights-library.com/texts-c/schweitzer01.pdf>
- ⁴ ‘Nature’ here refers to part of the environment that is neither humans nor non-human animals.
- ⁵ Dale Jamieson, (2010) *Ethics and Environment*, Cambridge: Cambridge University Press, p.149.
- ⁶ Dale Jamieson gives example of value of rope one is holding while hanging from a cliff is superior although the man holds the rope with instrumental value, in comparison with the stamp collection he has at home is of intrinsic value.
- ⁷ X buys a painting to place on the wall where there is a hole. This gives the painting an instrumental value. However in due course of time, X begins to value the painting *per se* thus ascribing to it intrinsic value. So much so that X places the painting in a pre-eminent place in the living room so that it is appreciated by one and all. In due course of time, X gets tired of the painting and it also reminds him of bad childhood experiences. X shifts the painting to its original place to hide the hole in the wall, as the painting no longer has intrinsic value to him. This type of change between something being of instrumental value and then of intrinsic value, and at a later stage, turning out to be of instrumental value, and so on and so forth, is a common phenomenon in ascription of values that we experience. This points out to the fact that our evaluation processes are ‘dynamic’ in character, and change under different conditions and circumstances. Dale Jamieson, (2010) p.154
- ⁸ Woods, Mark (2011), “Intrinsic Value”, in Dustin Mulvaney and Paul Robbins (Ed.) *Green Politics: An A to Z Guide*, Thousand Oaks, CA: Sage Publications, pp. 248-250.
- ⁹ John Rodnam, “Liberation of Nature”, *Inquiry*, Spring 1977, p.89. Quoted in Dale Jemieson,(2010), pp.154-155.
- ¹⁰ Use of the term Gaia, the great mother of Greek mythology, Goddess of Mother Earth represents a philosophical tradition that goes back to Hindu Ancient India, Taoism, Buddhism, native North American belief systems, that ‘deified’ nature in order to protect the nature. Gaia hypothesis is a modern scientific attempt to project nature as the ‘ultimate’, ‘single’ reality that consists of everything. Although such an interpretation has been explicitly denied by the proponents of Gaia hypothesis, what is significant is that it echoes the old methodology of spiritual concerns.
- ¹¹ Peter Hay (2002) *A Companion to Environmental Thought*, Edinburgh: Edinburgh University Press, p.136.
- ¹² James Lovelock, (1979) *Gaia: A New Look at Life on Earth*, Oxford: Oxford University Press, p.9
- ¹³ Ibid.
- ¹⁴ James E. Lovelock, (2010) “Gaia As Seen Through the Atmosphere”, in David R. Keller, (Ed.) *Environmental Ethics: The Big Questions*, Sussex, U.K.: Willey-Blackwell, p.211.
- ¹⁵ Max Black in a classical article entitled “More about Metaphor”, in *Metaphor and Thought*, (ed.) Andrew Ortony, (1979) Cambridge : Cambridge University Press) has given an insightful analysis of how metaphors are constitutive of advances in science.

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- ¹⁶ 'Philosophical holism' is a term used to describe a position that environmentalists and ecologists use to refer to nature as whole, that includes plants, earth, animals, humans and biosphere.
- ¹⁷ Lynn Margulis felt that a position such as the belief that Earth is a 'living organism' will alienate natural scientists who have been studying various phenomena that help to understand 'Gaian hypothesis'. In 'Jim Lovelock's Gaia' Margulis provides an alternative understanding of 'Gaia' when he labels it as "an extremely complex system with identifiable regulatory properties which are very specific to the lower atmosphere". Quoted in Peter Hay (2002) p. 136.
- ¹⁸ James W. Kirchner, (2002) "The Gaia Hypothesis: Fact, Theory, and Wishful Thinking", *Climatic Change*, 52, pp.391-408.
- ¹⁹ Ibid. p. 393
- ²⁰ Ibid.
- ²¹ Ibid. p. 393-394.
- ²² Ibid. p. 394
- ²³ Ibid. p. 395
- ²⁴ Three cases are reproduced here to show that there is both negative and positive feedback in biosphere-atmosphere linkage: (i) "Warmer temperatures increase fire frequency, leading to net replacement of older, larger trees with younger, smaller ones, resulting in net release of carbon from forest biomass (positive feedback)". (ii) "Warming may lead to drying, and thus sparser vegetation and increased desertification, in mid-latitudes, increasing planetary albedo and atmospheric dust concentration (negative feedback)". (iii) Warmer temperatures lead to release of CO₂ and methane from high-altitude peatlands (positive feedback). (Ibid. p. 396)
- ²⁵ Cf. Ibid. p. 398-399
- ²⁶ Ibid. p. 399
- ²⁷ John Passmore,(2010) "Attitudes to Nature", in David R. Keller,(Ed.) *Environmental Ethics: The Big Questions*, Sussex, U.K.: Willey-Blackwell, pp. 107.
- ²⁸ Ibid. p.103
- ²⁹ Ibid. p. 105
- ³⁰ Cf. Ibid. p. 108
- ³¹ Ibid.
- ³² Cf. Ibid. p. 109
- ³³ Cf. Roger J. H. King, (2010) "How to Construe Nature: Environmental Ethics and the Interpretation of Nature" in David R. Keller,(Ed.) *Environmental Ethics: The Big Questions*, Sussex, U.K.: Willey-Blackwell, p. 352
- ³⁴ Ibid. p. 353
- ³⁵ Peter N. Carroll, (1969) *Puritanism and the Wilderness: The Intellectual Significance of the New England Frontier*, New York: Columbia University Press.
- ³⁶ Mark Sagoff, (1974) "On Preserving the Natural Environment ", *Yale Law Review* 84, pp.245-252

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- ³⁷ Roger J. H. King (2010), p. 353
- ³⁸ King was referring to J. Baird Callicott's essay on "Animal Liberation: A Triangular Affair", in *In Defense of the Land Ethic*, Albany: State University of New York Press, 1989.
- ³⁹ Roger J. H. King (2010), p. 355
- ⁴⁰ Ibid. p. 356
- ⁴¹ Ibid. p.357
- ⁴² Cf. J. Baird Callicott, (2010) "The Conceptual Foundations of Land Ethic", in David R. Keller,(Ed.) *Environmental Ethics: The Big Questions*, Sussex, U.K.: Willey-Blackwell, p. 202.
- ⁴³ Aldo Leopold, (2010), p. 193.
- ⁴⁴ J. Baird Callicott, (2010), p. 202.
- ⁴⁵ The reference here is to the mainstream evolutionary scientific theories of Darwin and his followers. One does accept that there are alternative models by Pierre de Chardin and Sri Aurobindo who tried to use the evolutionary theories for deriving spiritual teleological conclusions.
- ⁴⁶ J. Baird Callicott, (2010), p. 203.
- ⁴⁷ Aldo Leopold, (2010) p. 193.
- ⁴⁸ Cf. Charles Darwin, (2010) *The Descent of Man and Selection in Relation to Sex*, summarised in J. Baird Callicott, p. 203.
- ⁴⁹ Aldo Leopold, (2010) p. 194.
- ⁵⁰ Cf. Ibid.
- ⁵¹ Aldo Leopold, (1953) *Round River*, New York: Oxford University Press. Quoted in J. Baird Callicott, (2010), p. 205.
- ⁵² J. Baird Callicott, (2010), p. 205
- ⁵³ Cf. Kenneth Goodpaster, (2005) "On Being Morally Considerable", *Environmental Philosophy*, Vol. I, pp.115-131
- ⁵⁴ Quoted in J. Baird Callicott, (2010), p. 206
- ⁵⁵ J. Baird Callicott, (2010), p. 206
- ⁵⁶ I.G. Simmons, (1993) *Interpreting Nature*, London: Routledge.

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