

Discussion papers in environmental philosophy

AGAINST THE MAIN STREAM:

critical environmental essays

Richard Sylvan



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WHAT IS WRONG WITH APPLIED ETHICS and therefore with applied philosophy

There is much that is wrong with and in applied ethics. Specifically, there are three comprehensive counts where things are wrong with the commodity concerned, applied ethics, that is with applied ethics so economically viewed.¹ Namely on the following three counts:

- *extraneous*, with the supply, delivery, consumption, and the like of applied ethics, AE. The category prominently includes the *delivery* of applied ethics: what is done, taught and learnt, by whom, and how qualified (e.g. whether taught by professionals, professional ethicists or philosophers in particular). That has tended to presume that the commodity itself is more or less in order, though the presumption lacks good pedigree, delivery of defective goods being almost as ubiquitous as business enterprise.

The present focus is not however upon the delivery, or other features of the production and consumption, packaging and marketing of the goods, but on features of the commodity itself, applied ethics itself. Thus

- *intraneous* counts, concerning the commodity itself, where a further two things are wrong:
 - the applied idea, and
 - what the application is presumed to be made to, established – or, should it be, establishment – ethics.

The present exercise concentrates upon intraneous problems, especially the third: radical deficiencies in what is supposed to be applied, prevailing ethics, and some extensive repairs thereto.² While the issue addressed may look like yet another dreary demarcation dispute – here about whether to count what is labelled "applied ethics" as what it says or something else, as properly work of "applying" ethics or something else – much more is involved as will become evident, there are grander consequences.

¹ For such a treatment of items like ethics, as economic goods, see further Sylvan and Bennett.

² Thus the exercise stands in sharp contrast with all other papers at the Conference, *Philosophy and Applied Ethics Re-examined*, organised by the University of Newcastle in August 1993, where this work was first presented. An implicit premiss in organising the Conference seems to have been that the issues to be addressed are predominantly extraneous; certainly most of the papers actually relevant to the Conference topic appeared to focus on extraneous issues.

1. The applied count

To begin with, there is something decidedly odd, not to say radically unsatisfactory, about the very idea of *applied ethics*, another borrowed idea.³ It is a widespread assumption that every idea that intelligent agents lob up, and discourse about, is well-defined. Not so. By no means everything that intelligent agents dream up and promote is entirely in order. Rather uncontroversially *colourless green ideas* is one such combination, more controversially *human nature*, *deep ecology* and *post-modernism* are others. *Applied ethics* belongs to this not-in-satisfactory-order or out-of-order bunch, so it is contended.⁴ To bring out the oddness in "applied ethics", its ill-defined character, the conceptual inadequacies, it helps to consider first the dictionary senses and established usage of *applied*. The term in the only relevant sense (the other obsolete sense is that of *folded*) means: 'put to practical use; practical as distinguished from *abstract or theoretical*' (*OED*, similarly *Concise English*). Relevant examples cited are: 'the applied sciences' (from Babbage 1832), 'applied logic (as distinguished from pure)' (from Thomson 1806).⁵

It may appear then, that "applied ethics" amounts to pleonasm, a popular tautology (and "pure ethics" correspondingly to an oxymoron), because ethics itself is already practical, for instance much or all of it being concerned with practical action and its qualities (such is MacIver's assumption: 'moral philosophy is practical – in a way in which other branches of philosophy are not', p.206). In this respect "applied ethics", even more "applied morals", is rather like "applied motoring", "applied nursing" or "applied housekeeping". Conceptual confusion would be considerably reduced by *removing* the modifier 'applied'.⁶ Such a charge of confusion can however be mitigated

³ Ethical theory has tended to borrow classifications from elsewhere, from apparently more successful enterprises. Thus, for instance, the (normative) ethics/meta-ethics distinction lifted, none too adeptly, from logical theory. Thus too the present pure/applied distinction, also purloined.

⁴ What is out-of-order or even nonsense *can* be signified in the material mode. But for those who suppose otherwise, that nonsense cannot be significantly spoken of, paraphrasing into the formal mode is usually a straightforward option. In any case, potential issues are frequently *signalled* by using italics or double quote marks around offending "signifiers".

⁵ '*Applied*. Practical, put to practical use. *Applied science*. Science of which the abstract principles are put to practical use in the arts' (*Concise English*).

². Put to practical use; practical as distinguished from *abstract or theoretical*' (*OED*). Though we persevere with these dictionary explications, there are grounds for complaint; there are neglected nuances. For example, the practical/theoretical contrast (just one of the muddy contrasts with *practical*) differs from an applied/pure contrast. A theory can in principle be applied (a *plying* to, i.e., a mapping, in one-many form) in a non-practical, or impractical, field. And what exactly is practical? Different again is that concrete/abstract contrast. *Applied* certainly enjoys the advantages of ambiguity.

⁶ The advance notices for the Conference (which look pretty confused, even mumbo jumbo), well they add insult to injury by invoking talk of a *theory* of applied ethics. There is said to 'appear to be a significant gap between the theory of applied ethics and its practice'; this is said to be why 'disillusionment has set in' now. While there may be a theory of applications, talk of a "theory of

by properly distinguishing ethics, which includes philosophy and theory of morality, from morals, thereby revealing, perhaps, elements of some theory apt for application. No doubt something like this is the presupposition of those who preach or profit from practical ethics (similarly practical economics, but doubtfully practical housekeeping): that standing in contrast is a suitably established theoretical ethics (could it perchance be utilitarianism?) which can rather uncontroversially be used to guide practice. But is there such a theory, apt for application, for translation into practice?

To appreciate what *is* required for adequacy, consider successful applied subjects. Let us compare "applied ethics" with a long established applied discipline, namely applied mathematics, which often boasts a separate department in universities (a discipline I was obliged to study as an undergraduate in order to proceed further in pure mathematics). In the first place, applied mathematics contrasts with pure mathematics, applied logic with pure. Where, a naive outsider may ask, is pure ethics that similarly stands in contrast with applied ethics? Could there decently be separate departments of pure and of applied ethics?

For the most part, applied mathematics applies to practice, in some wide sense, a body of pure mathematics that is more or less *correct*, at least within the assumption framework and contextual settings where it is applied. (The qualified formulation is given for pluralistic reasons; given the dominant paradigm, the pure mathematics that is applied is correct without further qualification, correct period.) A body of substantially correct theory ready for application is then the first of several pertinent features of that relational object, applied mathematics, the first of several dubiously matchable by "applied ethics". The proviso 'for the most part' (introducing the paragraph) signals another discrepancy. There is a, presumably derivative, part of applied mathematics that investigates, in essentially the manner of pure mathematics, theories, algebras, spaces and similar, selected through postulates, principles or equational sets drawn from standard applied mathematics (thus e.g. Newtonian theories where classical force laws are satisfied, Hilbert and phase spaces, and so on).⁷ Such derivative applied mathematics

applied ethics" heaps confusion ('theory of') upon confusion ('applied ethics'). As for gaps (really, between the theory and practice of ethics), there are two, as we shall see; there is an ambiguity in 'gap'.

As for mumbo jumbo, try the following sentence:

'The teaching and practice of applied ethics has grown rapidly and in an unruly manner across many disciplines, with many practitioners now not possessing any depth of philosophical knowledge and expertise and, because of difficulties experienced with the theory and practice given, in some cases deciding that same is relevant.' Its sequel is easily unscrambled:

'We wish to hold a conference to explore this issue for the Australian community and its practical consequences.'

⁷ Thus, too, there is a two way process. Application feeds back to inform theory and to enrich the pure subject. With ethics, as we shall see, something similar or more dramatic happens. Field developments not merely may inform and enlarge the ethical theory; some may alter it irrevocably.

need not compromise at all normal methodological requirements (such as they are) of pure mathematics, for rigour, exactness, and similar.

Ordinary applied mathematics, in its quest, even haste, for practical results, *does* compromise, or violate, pure mathematical methodology. For example, shortcuts are taken, simplifications made, information shed, figures rounded, approximations adopted, and so. Science veers towards art. From a pure perspective, dreadful things are often done to data or mathematical transformations of data. Skilled practitioners tend to appreciate what they can get away with in this sort of regard. Again, none of this, neither the body of information nor the kinds of skills, is really matched in ethics, in putting ethical theory to practical work.

Next, the mathematics that is applied, a body of pure mathematics, is not thoroughly contested. Ethics however is. Moreover ethics ought to be contested. There is nothing in ethics like arithmetic or elementary mechanics; the nearest thing ethics can offer is some controversial development along axiomatic geometric lines. Mathematics has its critics, both inside (e.g. intuitionists) and out (e.g., cultural relativists), but none (hard core sceptics excepted) suggest changing all of it or tampering with most of what is applied. By contrast, in ethics, there continues to be an array of competing theories, none of which has managed to win broad allegiance. What pure theory is there to apply, to do dreadful things to? It might be said in response: whichever of them is adopted!

Even that, a hollow compromise will not stand up for long. For deeper environmental ethics challenge a broad range of pure theory that is alleged to be applied! What challenges a whole subject, that would change it, can hardly be an application of it. The rise of such environmental ethics is *one* reason why the modifier *applied* is a misnomer. For deeper environmental ethics is not any sort of application of ethics; it instead challenges prevailing ethics. Nor is it, like stock "applied ethics", an adaptation of ethics within an environmental context.

The label *applied* is substantially, if not entirely, a misnomer. Adjectives in modifier or attributive roles, in the combination adjective-noun phrase, often enough do not signify application. The assumption that all modification is application invokes a dubious, presumably false, theory of adjectival attribution. Consider a few examples involving a relevant adjective, 'medical'. Combinations such as 'medical student', 'medical book', 'medical trial' do not signify applications. A *medical s* is not normally an application of *s* to medical matters (of books or students in this fashion); normally it is *a type* (an *m* type) of *s*.⁸ There are occasional exceptions, in which case compounds are liable to be recorded in dictionaries, as with *medical jurisprudence* which is not a type of

⁸ Of course not all adjectives function in this way but for instance enlarging types of requisite *s*. Thus, e.g. *possible, probable, alleged, putative* etc.

jurisprudence, but 'the legal knowledge required of a doctor'. There is good reason to think that *ethics* induces no exception, that medical ethics, and similarly business ethics, follow the normal pattern. Thus business ethics is a type of ethics, namely ethics within a specifically business setting, and accordingly adapted thereto. Observe that such a preliminary account incorporates automatically (what gives the applied presumption some problems⁹ allowance for variations in standards, that business corporations for example should not be expected to measure up to standards set up for ordinary persons (any more than they should be expected to pay the same levels of taxes).

Given the manifold inadequacies of the label *applied*, amendment of terminology appears warranted. Amendment, not abandonment. After all, what 'applied ethics' is supposed to comprehend, such as medical ethics, business ethics, even environmental ethics, are not themselves in court, but presently taken as viable fields. A superior label is *field*, for field-defined or field-restricted; another is *type*, for type-delimited, another *domain*. Where others speak of "applied ethics", let us discourse about *field* ethics. Investment ethics, for instance, is a field ethic, with field investment. An "institute for applied ethics concentrating upon applications to business" is an institute for field ethics with main field business. The "applied ethics" movement becomes effectively a field ethics movement. Correspondingly, using or adapting (purer) ethics within a field can aptly be called *fielding*, fielding ethics; that is, the relation displacing the inept "applying" notion is that of fielding.

Observe that professional ethics are field ethics, with the field in each case the profession concerned. But professional ethics in sum form a quite proper subclass of field ethics; bio-ethics and ecological ethics are plainly not professional ethics. Less obviously, more importantly, field ethics differs from practical ethics (as usually poorly defined), with which "applied ethics" is regularly conflated. For, on the one side, ordinary living and daily life, central to practical ethics, are not fields. On the other, field ethics are not confined to practice, but may involve considerable theoretical material, particularly from the fields concerned.

2. The ethics count

Not only is the *applied* operation in trouble, *ethics* also is in deep trouble. Indeed, in a way, the main problem lies here. There is not a fit, properly satisfactory subject, for some significant applications. For some "applications" have to change and develop the subject! But, the problems do not vanish when the amendment to field ethics is made. Satisfactory fieldwork, satisfactory outcomes in field ethics are seriously hampered by

⁹ See Appendix 1.

long-standing troubles in ethics. For as field ethics involve ethics, whatever is wrong with ethics affects field ethics.

To glimpse these troubles, consider recent ambivalence towards ethics. Is ethics even a good good? There is a most *curious* contrast in later 20th century attitudes towards ethics. On the one side, there are great expectations, for instance for what ethics can contribute, to social and professional life especially; but on the other there is serious disquiet, occasionally verging upon despair and into nihilism, as to ethics, and its role. Virtually the whole spectrum from great expectations through no expectations to substantial forebodings is selectively represented. A few examples:-

- Great expectations for ethics, beginning to re-emerge these days, tend to come from outside professional philosophical ranks, from scientists and social scientists,¹⁰ and from business regulators. Ethics is seen as taking up again its grand legitimization and critical roles. It can indeed be *used* in this respect as regards to a wide variety of practices, such as in business, economics, government, scientific experimentation, and so on. Of course it cannot always succeed, because one ethics can be pitted against another, and each and all challenged.

These expectations, a bit surprising after the drab days of analytic moral philosophy (where philosophy could express no interesting moral opinions), contrast sharply with

- heavy disquiet or worse as to present ethics. A recent example is afforded by MacIntyre's disturbing introduction to *After Virtue*: that 'we have – very largely, if not entirely – lost our comprehension, both theoretical and practical of morality' (p.2). Some, like MacIntyre, promise a happy, even a great, outcome, should we return to proper paths, to a virtue ethic in the ancient tradition of Aristotle. Others are not so sanguine; there is

- no hope for ethics. There are divergent routes here. Either it can play no relevant role any longer, or it can play only a negative or damaging role (thus e.g. Hinckfuss). Though both these routes lead badly astray, present (merely classificatory) objectives do not include showing as much.¹¹

There is, furthermore, reason for at least serious disquiet. Should we care to look closely at, and try to assess, the *total ethical heritage*, then what we find is not very promising.

- What is on offer is mostly extremely sketchy and very piecemeal, much of it a hotchpotch. There are extraordinarily few well-worked out and detailed ethics. Spinoza's *Ethics* is perhaps one rare example, a quaint exception.

¹⁰ Examples include Wilson in *Biodiversity*, and Engel.

¹¹ We try to do show as much elsewhere.

- Most of what is on offer is seriously biased or prejudiced, indeed from a deep environmental perspective even unethical. Prime examples include
- religious bias, heavily constraining or distorting creatures' lives, and putting them to work to serve imagined religious objectives.
- spiritualistic distortion. Even where an explicit religion does not feature, as in Platonism and neo-Platonism and in edified Buddhism, the whole of life may be distorted through promise of an after-life or successor life or extra-material life, where furthermore some system of rewards or punishments may be dished out for previous performance. No doubt such biases help in conferring upon ethics authority, unwarranted authority (fulfil duties or be damned, and similar).
- humanistic distortion, summed up as human chauvinism. It is upon this prejudice, critical for environmental ethics, that we briefly focus.

A main matter that is wrong with ethics, and *ipso facto* its practice and its belated appearance in many professional settings (when it should have been in evidence long ago), is its anthropic bias, its considerable prejudice in favour of (present) humans.¹² The matter is highly material in several fields, most obviously in environmental ethics, but also in medical ethics, bio-ethics, agricultural and veterinarian ethics, and similar.

It is widely assumed, however, that ethics is inevitably human biased, that it has to be anthropocentric. That is not so. Ethics can be repaired. So much is the substance of *ethics without humans*. Both morals and ethics can be characterised, in substantially reportive ways, so as to free them of anthropocentrism and the like.¹³ Furthermore, the whole superstructural theory can be developed in a fashion that makes no essential reference to humans or any other biological species.¹⁴

These repairs represent, however, only the beginning of adjustment and change – of many changes if a satisfactory deep-green ethics is to be reached. When repairing goods, there often comes a stage, increasingly rapidly encountered those days, when it becomes a more attractive proposition to acquire new items than to persist with repairs. So it may be, it is now suggested, with ethics. So increasingly it has been suggested this century, with demands for new ethics, new moral philosophies. Those making such proposals include Schweitzer, MacIver, Leopold, along with many others.¹⁵

¹² This is by no means all that is wrong with standard ethics. Another, important for field ethics, is the lack of an adequate theory of ethical dilemmas, confronting which is a main engine of progress in ethics.

¹³ See Sylvan and Bennett, and also 'Ethics without humans. Philosophy without humans' in Sylvan. Observe that repairs are not unique.

¹⁴ As to how this is accomplished, see the annular theory of Routley, reiterated in Sylvan and Bennett.

¹⁵ MacIver suggests 'that all the old codes are out of date and a satisfactory new one has still to be discovered. A lost moral code cannot be recovered, and a new one obtained, simply for the asking' (p.201).

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Suppose, in any event, we should arrive, through addressing different or new fields, at what amounts to a new ethics, as many think we do (thus MacIver, p.179 and many ecocentric philosophers). Then what emerges is no "application" of a standard ethics, but something *different*, not an applied standard ethics at all. Now something similar may appear to occur for normal applied subjects. A newly encountered group of physical phenomena, for instance, leads not to the elevation of some dusty mathematical theory buried in archives, what is mostly the case, but to elaboration of a new mathematical theory. Normally in this event, the main body of pure mathematics would remain untouched; a new annex or suburb would simply be added to it.¹⁶ With ethics, however, things are different. There are grounds for contending that the green (environmental) revolution has shaken ethics to its (dubious) foundations and core, and, as coupled with associated non domination themes (as emphasised especially in ecofeminism), has left comparatively little untouched. The standard city of ethics is not left alone, unscathed.

Much the same sort of points can be presented in the form of a dilemma, for standard ethics and a proposed field, such as environmental issues. *Either* standard ethics will not cover the field (or cannot be extended to do so because it (or its extension) does not apply, *or* through being forced upon the field it twists or damages the data, for instance leaves an indelible anthropic bias. A homely carpentry analogy may help: there is some cabinet work where delicate hammering would be appropriate, but the only tool we have is a sledgehammer.¹⁷ Likewise, a standard chauvinistic ethic is the wrong tool to try to use or extend for deeper environmental work.

Unremarkably, the three options emerging, namely (inappropriate) application, extension or adjustment, and fashioning of something new or different, correspond more or less to the now familiar threefold division of environmental positions, into shallow, intermediate and deep.¹⁸ As before, deep ethics are not "applications", but new ethics.

3. Extraneous issues

Among the *many* extraneous issues concerning field ethics, those that have come to exercise philosophers do look distinctly partisan:¹⁹ namely, the role of philosophers,

¹⁶ Nothing, no paradigm shift as evolution has effected the whole *citadel of mathematics*; none is likely to (even dialectism, more threatening than much else), because *central areas can be protected* by due qualification.

¹⁷ A different example: an isolated person has an extensive weeding task in a weed invaded forest, with the only technique available a broad-acre chemical defoliant.

¹⁸ For a classification of environmental positions along the lines of the three options, see Callicott *Introduction*, where attention is also drawn to shortcomings in the applied idea.

¹⁹ On extraneous issues in ethics, including especially field ethics such as environmental ethics, see for a detailed treatment Sylvan and Bennett, *part II*.

especially professionals; the place of philosophy in field ethics; and the poor practice of these ethics, particularly from a professional philosophical perspective. Here the main thesis to be advanced inclines towards the following professionally unsympathetic lines: insofar as these matters, philosophical extraneousities, are of negative impact for philosophy, philosophers have largely themselves to blame, for they are largely of their own making – or, to sheet some of the responsibility more accurately, of the making of the controlling power elite of the profession.²⁰ Let us investigate *some* of the extraneous issues *seriatim*.

Because a field ethics concerns the field as well as (relevant parts of) ethics, its investigation, practice and teaching, requires an intersection of capacities and skills, drawn from *both* ethics and the field. This simple observation enables an immediate response to such questions as: if not philosophers, then *who* is to investigate, and teach, field ethics? That response is: those from one area *or* the other who have acquired requisite knowledge and technique in the other, or less promising, those from outside (but with some appropriate informational background) who acquire these prerequisites in both. In medical ethics, where there is perhaps a larger pool of information concerning the field than there is regarding ethics, a moral philosopher untrained in medicine may have more to learn than a medical doctor unversed in ethics and lacking philosophical skills. (Really, *neither* should be let loose on students before they are *duly* prepared in the intersection.) It is evident, then, that philosophy enjoys no natural monopoly in field ethics. The place of philosophy is less exalted, and certainly is not dominant – still less given recent proposed (but hardly well justified) decoupling of ethics from philosophy.²¹

There are corollaries regarding the roles of philosophers on committees relating to field ethics, in decision-making and so on on these topics. Philosophers do not have an automatic place. Unless they are well-informed as to ethics (many philosophers are not) *and* as to the field, they do not deserve a place at all (of course they still may gain a role for want of any better placed). Ousting of under-informed or unenergetic philosophers is not always such a bad thing.

While the informational situation is now *significantly* better than in 1945 when MacIver was agonising over the predicament of moral philosophy, it is still true that 'academic moral philosophers' are not using 'every opportunity to make themselves acquainted, so far as possible, with the real difficulties of those [not merely present humans] who need the help of moral philosophy most ... I ... confess that I myself lack the factual knowledge which would be required to do this work well. I suspect that many

²⁰ Among other things, philosophers did not act, did not respond to incipient demand, fast enough in organising appropriate structures for delivery of field ethics.

²¹ See esp. Edwards.

ethical philosophers are in the same position ...²² One of the reasons why philosophy has lost prestige in recent years is that it has not kept pace' (pp.204-205). One example MacIver incisively develops concerns 'discoveries associated with the name of Freud. The behaviour of philosophers in this connection is particularly hard to excuse. At first they flatly denied the reality of the alleged discoveries – maintained that the notion of "unconscious mind" was self contradictory, and so forth. But all this has now been given up. ... Philosophers no longer dispute ... details of the Freudian system – but disregard them. If they mention them at all, they talk as if they somehow concerned none but medical men – as if the same propositions could be true in medicine and false outside it. In the light of the recognition of unconscious motives the whole traditional theory of moral responsibility needs overhauling, but no moral philosopher undertakes this' (p.205). The reason why the corresponding philosophical debate (about whether unconscious desires are sometimes evil, whether relevant moral predicates are restricted to conscious motives, and so forth) had not really commenced by 1945, after 40 years of exposure to Freudian issues, MacIver attributed to the mass of psychological literature, literature which philosophers have not read, and would have to read, reading that is obligatory if moral philosophy is to be made 'the subject which it ought to be' (p.206).

Recently there has been much disappointment among some professional philosophers, particularly those with orthodox expansionist inclinations, that field ethics has not turned out to be quite the bonanza anticipated, that the expected boom in new opportunities and positions began to dissipate as field practitioners started to supply their own "field ethicists".²³ None of this should have been surprising, for broad inductive reasons. Philosophy had long shed subjects and fields of overlap; and those professionals who have hung in have become something different (economists instead of social philosophers, computer scientists instead of logicians²⁴) Nor have philosophers, especially those who have not changed or reskilled, all the virtues assumed by

²² MacIver here continues 'and for this reason this conception of the task of moral philosophy is unlikely to be popular in the profession.' There are two troubles with the tack: firstly, field ethics do not – should not – exhaust ethics; secondly, field ethics are now enjoying some popularity.

²³ The proposition, from the circulated Conference announcement, that field ethics might rejuvenate a flagging philosophy, that they *had* 'given philosophy a rebirth' can hardly be taken seriously (for all that they may have given jaded philosophy departments a fillip). Concrete working examples and dilemmas might stimulate ethical investigation, but would only exceptionally impact an ethical theory; and moreover ethics itself has but rarely been a source of growth and development in philosophy.

Field practitioners, who often have their own expansionist and imperialist ambitions and programs, are unlikely to let a service subject be supplied from elsewhere unless they cannot yet manage the subject themselves and then only so long as times are good so they do not need the jobs and can avoid chores involved.

²⁴ Interestingly there has been no similar fuss from professionals regarding the attrition of logicians within philosophy (for which some of them have responsibility), or the on-going loss of logic to computing science and mathematics.

professionals; e.g. they have little or no theory, they are too fuzzy, they are indecisive, or vacillate, etc. (remember the sophists; these provide some of the reasons too why philosophers are often not welcome on committees).

Some outside inputs into ethics, such as field studies or field workers may supply, would not go astray. For there is theoretically little that is new or interesting on the standard ethics scene. Much of it is 19th century (or earlier) revival, refinement of utilitarianism or Kantianism, and ornate additions thereto (with bells and whistles), refurbishment of the even older debate between rationalists and empiricists, and so on. One of the few "new" offerings is the revival of Aristotelian virtue ethics! Nothing, however, stops outside inputs. Anyone is free to attempt philosophy. Professionals have no exclusive rights over philosophy, still less over ethics; nor should they. There is a case for widening practice of philosophy, and encouraging paraphilosophers. For critical problems emerging are not so much those of philosophy itself (which could be very different from the way it is practised and professionalised), but of philosophy as professionalised and as conducted. The immediate future does not bode well for change in the latter, for several reasons; the prevailing materialistic technological ethos (which devalues pure intellectual activity), the consequent marginalisation of subjects like philosophy and continuing narrowness of dominant philosophical activity.

Nor, moreover, have philosophers proceeded well, particularly in the Antipodes, in training and applying students who can readily adapt to become field ethicists. Philosophy has never been strongly employment-market driven (but has tended to rely on a version of Say's flawed law in placing its apprentices); indeed there are features intrinsic to philosophy, such as its contemplative character, that renders it antithetical to the very idea of responding to markets at all. There are other regional features that compound this sort of problem: the conservative, and class, bias of philosophy (inherited from similar British arrangements), which has meant that Australasian philosophy has not been innovative in adapting its topics and emphases to changing circumstances;²⁵ and the heavy concentration, as in British empiricism (still dominant in Australia), upon epistemology, with ethics and what went into moral sciences and social philosophy still regarded as second class arenas and not what philosophy was really about or what first class chaps would mainly concern themselves. These are major reasons why philosophy lost out, and deserved to lose.

It is for those latter sorts of reasons in particular, that environmental ethics and environmental philosophy have been unable to gain more than occasional marginal status in philosophy curricula in Australian universities. Fuller accounts of the predicament of

²⁵ It is for this sort of reason that philosophy in Australia, unlike that in parts of USA, missed the field van. Philosophy in New Zealand did not even try to catch the van until now.

environmental philosophy have been given elsewhere.²⁶ Its predicament tends to illustrate a general problem for field ethics, with bioethics (with its own institutional settings) the only partial exception.

Now that field ethics is being lost to the fields in many cases, there are complaints about the calibre of what is done and taught, the quality of the investigators and teachers, and so on. No doubt much of this criticism is warranted; some similar criticism of ethics within philosophy would also be warranted. Among the justified criticisms are these:

- that field ethics as done from the field is divorced from ethical theory (from what theory has so far been developed). Too much comprises mere case studies, as with business MBAs.
- that the field practitioners are not trained in ethical theory, and are often ill-informed ethically and lacking in analytic and critical skills crucial for satisfactory philosophy.

A *different* complaint, of importance, concerns the poor ethical practice, even the unethical practice in some of the fields, despite the development of field ethics. Such a problem is particularly conspicuous in the field of business.²⁷ But this has been a long-standing problem for ethics itself; how to get people to behave as they ought? Teaching agents ethics can certainly enable, and encourage, them to be moral: but it cannot make them moral. Nor would it be proper for it to do so.

The field ethics movement, successor to the late AE movement, is both important and timely, especially as regards getting ethics and axiology back into many fields that have tried hard, erroneously it now appears, to eliminate them. The movement will have to be carefully orchestrated however to avoid capture by the very power structures and disciplinary paradigms that it should transform. These are certainly grounds for some cynicism about such movements: that they are easy targets for co-option, that they can be used to cover up abuses by power structures, and to authorise dubious procedures, or worse, with a rubber stamp of ethical approval from appropriate ethics' committees and inquiries. Such grounds for cynicism can be resisted, however, and new hope inaugurated, given more adequate formulation and development of relevant field ethics (exercises including considerable theoretical work), along with independent and impartial administration of emerging codes and decision methods, and with appropriate openness as regards (formerly abused) procedures they are intended to regulate fairly.

²⁶ See Sylvan 1986, Sylvan and Bennett, Sylvan 1991.

²⁷ A problem in fact exacerbated under prominent ethical positions, e.g., crude utilitarian fostering "greed is good" notions, most social Darwinism encouraging cut-throat competition, etc.

4. Corollary: similar troubles plague "applied philosophy", another fraudulent notion

Not only are there centres and even institutes parading as "applied ethics" centres, journals devoted to "applied ethics", courses and seminars on "applied ethics", and so on: in brief, an intellectual industry founded upon an intellectual confusion, "applied ethics". Now there is an analogous range of activities advanced with respect to "applied philosophy": centres for, journals on, programs concerning, and so forth. No doubt a suitably cashed-up agent can open a centre for, establish a journal of, more or less anything, including any sort of rubbish or nonsense: for instance, centres for vacuous colourless ideas contemplation, journals for yami-yogi hyper-philosophy, and so on.

As applied ethics is a substantial part of applied philosophy, deficiencies in and with applied ethics naturally extend to applied philosophy. Rectification by way of fields is similar too. Philosophy too, like ethics, can be fielded. There can be "field philosophies" in various fields of investigation or endeavour, where adaptation is made of appropriate philosophical methods (as e.g. relevant logical techniques may transform probability theory and statistical inference).

While the main case against "applied philosophy" resembles and substantially repeats that telling against "applied ethics", there are one or two interestingly different turns. One interesting twist concerns criticism of mainstream philosophy, rather than standard ethics, from deeper environmental perspectives. Of course, insofar as ethics is a substantial part of philosophy, and ethics is subject to such criticism, so therefore is philosophy. But a much more sweeping, and exciting, charge has been lodged: namely that mainstream philosophy carries a considerable responsibility for environmental problems and degradation, because it is a prime ideological source for what has transpired. Given then that mainstream philosophy is thoroughly soiled, it is in no way fit for deeper environmental use and adaptation (even if some parts can be intellectually recycled).

The sweeping charge has been developed, more conspicuously than elsewhere so far, in Hargrove's slim text, and has been sharpened in Attfield's review of that part of the text, provocatively entitled 'Has the history of Western philosophy ruined the environment?' Contrary to Attfield, who imagined he was posing a rhetorical question, the answer (as regards mainstream philosophy) has to be: More or less, Yes. The modifier "more or less" takes up qualifications needed, for instance, that mainstream philosophy is but a source, not more, and that the charge concerns mainstream philosophy (including virtually all that is taught in the Universities), not extending however to all the diverse minor sidestreams. The modified charge means that

environmental fields cannot rely, with any confidence or due regard for adequacy, on a simple input of mainstream philosophy, its themes and methods.²⁸

Appendix 1: Business ethics and business exemptions

No doubt it is easy to see, from business as a *practical* activity (though much of it is mere paper shuffling), one source of the applied idea. Certainly the two stock examples of "applied ethics" are medical ethics and business ethics. Interestingly, however, they are frequently presented as not really applied ethics at all. Ethics cannot simply be "applied" to these fields, especially to business, but has to be modified first, softened and sensitised. For example, according to a review²⁹ of *Business, Ethics and the Law*, two main themes emerge from the book:

1. 'that "business ethics" is not a matter of simple-mindedly applying general ethical principles to particular problems in the business sphere'. Maybe not. But there has been a marked tendency for professionals to go soft on business, to bend ethical rules for business, even to act as business apologists. (Prominent examples include several American philosophers, who should know better). Business does not deserve continued exemptions or general dispensations from ethics, and is not entitled to them.
2. 'that for business ethics to be effective in sensitising those in business to ethical concerns, attention needs to be paid to institutional structures at all levels. Ethical exhortation is not enough!' This offers a false dichotomy; for there are other alternatives. In particular, *argument*, and opening those in business to what they regard as ethical impositions (e.g. against their capital and property), are relevant alternatives. Structure is a diversion.

A major component of modernism has been the rise of mercantilism, a significant element of which was the removing of ethical constraints on mercantile activity, on business, commerce and economics. Successfully removed were many restrictions which operated, more or less, in the middle ages, on usury, markets, trading, profit taking, and so on. For example, the idea of just pricing or fair values was rubbished and finally buried. At the same time, mercantile activities obtained many special favours: protection, monopolies, exemptions, and so on. While some of this special treatment has been subsequently removed (e.g. benefits of some competition were early recognised),

²⁸ As much is in effect argued in Sylvan and Bennett and is argued more explicitly, though in contraposed form, at the end of Routley.

²⁹ In NILEPA *Newsletter*, March 1993, Law School, Griffith University. The book itself, an Australian potpourri, seems to be primarily concerned with business regulations rather than with its ethics.

much has persisted, though most of the reasons for it have lapsed or no longer have much force.

Ideas of the ethical independence of mercantile activities were pushed to untenable extremes, especially after the popular assimilation of social Darwinism. It was then that ideas of the complete freedom of business, to undertake any commercial activity (within a lax legal framework fashioned largely for business advantage) really took off. The weak went under, deservedly, through biological inevitability. Defective theory afforded bad excuses for unscrupulous and unethical practices.

While *business ethics* does at least suggest that some sort of ethics is required of business, beyond mere conformity to "the law", it can still border on the disreputable, with but very low standards expected, and more important it tends to transmit the wrong signals. For example, false impressions that business does enjoy special treatment, that business activities can to some extent escape the principles ethically enjoined elsewhere or "universally". But really this state of affairs should never have come to pass; there should never have been a five hundred year dispensation on mercantile activities from ethical input and regulation, either practical or theoretical.

Much should change. What is required is nothing short of a *re-ethicisation* of the whole of economics and commerce. This includes introduction of ethical considerations not merely into the treatment of consumers and workers, but also into treatments of future peoples and environments by business, of payments to executive officers, officials, politicians and so on. It includes such matters as ethical discounting, fair prices, fair markets, collusion, corruption and so on. But even more needs to change: the whole commercial tenor of the age, including the elevation of business, its promotion as the supreme practical activity, when it is but a means to certain ends, to neglected, almost forgotten, ends.

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PARADIGMATIC ROOTS OF ENVIRONMENTAL PROBLEMS

Abstract. Virtually all diagnoses of the roots, and sources, of environmental problems are defective. While defective diagnoses persist, problems will not be adequately addressed.

Focal questions ask why human communities so frequently degrade, impoverish or even destroy their own environments, and more generally why the whole earth is now in jeopardy through human enterprise. More immediate answers, sometimes correct so far as they go (which is not far enough), look to components of environmental impact equations. More thorough-going answers fall into two classes: first those that do not question entrenched paradigms, but seek (unsuccessfully) to explain widespread problems simply through defective practice, and secondly those that, rightly recognising that defective practice is no adequate answer, look to deeper paradigmatic sources of problems. A fatal flaw in most of the latter answers lies in their monistic concentration on a single paradigm, or single narrow band of paradigms. These flaws are exposed, whence a wider, more satisfactory answer can be broached.

Background busywork includes firstly, explaining problems and relevant paradigms and how paradigms operate regarding environmental problems, and secondly, detailed disentangling of proposed and alleged sources of the problems. With this done, it is argued that none of these fashionable answers to the focal questions is satisfactory. A different more complex answer through broader classes of paradigms is accordingly investigated. Among significant corollaries, this one stands out: philosophy as portrayed through its standard history is dismal environmental news.

0. Focal questions and deeper answers.

Human activity is now degrading terrestrial eco-systems at an extraordinarily rapid rate. In modern times humans have devised sophisticated and sophistical idea-systems which justify such system degradation; formerly they would have seen such transformation for not mattering, many still do, transformation as increasing wealth (as in mainstream economics). More recently they have developed social systems which induct most humans into degradation procedures (through need, induction into cash economies, and so on) and which weave entrapping justificatory webs (through agencies, bureaus, courts, and so on).

Whence an increasingly broached question¹: Why is this happening? More explicitly, *Why do human communities so frequently degrade and impoverish their environments, their own habitats? Indeed why do they sometimes, persistently, perhaps over a long period, destroy their own habitats? More sweepingly, why is the whole earth now perhaps in jeopardy through human enterprise?* The answer to be arrived at to these focal questions is in essence this: because too many humans, especially those in control of environmentally impacting enterprises, are committed to or caught within environmentally unfriendly paradigms, paradigms displaying quite insufficient regard for the health and well-being of relevant habitats and of the earth.

¹ In sources as diverse as Shepard (first page) and Jacobs (p.23).

Parts of the answers to such focal questions come immediately through environmental impact equations, conservation laws, and such like. For example, degradation is occurring through the impact of overpopulation, excessive pollution, damaging or faulty technologies, and so on. While such answers are important, often correct as far as they go, and while they may correctly indicate what has to be changed somehow, they are nonetheless somewhat superficial, and they leave much to be explained. For example, they do not explain why a community persisted upon a course that deliberately led to such problems, or why it is so resistant to changes that might reduce impacts and pull it out of its problem-holes. Less superficial answers look to ideologically entrenched attitudes and commitments, to pervasive paradigms that underwrite anti-environmental practices, as for instance the wood-production ideology does forestry practice, even so-called "new forestry".²

An illustrative example which reveals the power of paradigms in blocking or facilitating action will shortcut a more elaborate argument, through action theory, to the efficacy of idea-systems. Consider an unwanted pregnancy, resulting despite due precautions or whatever. Observe that, more and more there are comparatively safe technologies available to effect termination and seemingly solve the immediate problem. Ask: why so many people are opposed to choice of abortion? A very common answer is: because they are operating under an elaborate paradigm, typically organised religion (bureaucratic Christianity in the West), themes of which, the creeds of which, prohibit such choices.³ Of course pro-choice considerations are also paradigmatically embedded, for instance in forms of liberalism. Picturesquely, a social paradigm imposes controls on action, a system of red and green lights on a captured agent's routing procedures. Or with a different picture, paradigms project a steeply impeding topography on action space. Paradigms not only guide, control and limit; they also correlatively give permission, as, for instance, space to play god, freedom to release a new species or variety which may or has proved a pest or noxious or has been biologically engineered, liberty to neglect or degrade or vandalize.

The settings in terms of which agents such as humans act and operate, even down-to-earth everyday agents, invariably include, not far in the background, paradigms, cultures, creeds, ideologies, myths or the like, all idea-systems, all involving models (in a technical sense) of one sort or another. Even the most practical (and vociferously practical) of humans are governed by background ideosystems. It is in terms of these background ideosystems that a great deal concerning human practices with respect to natural environments can be explained, what would otherwise lack satisfactory explanation.⁴ That explanation comes not however

² For main details of this illustrative example, see FF. For more on this style of explanation, see further Routley.

³ I am not, however, going to maintain that religion, or a certain religion such as Christianity, is the main villain of the environmental piece. Religions in general borrowed much in their damaging articles from philosophies (see below). What I shall be suggesting is that dominant philosophies do have much to answer for in this regard.

⁴ As logical positivists observed, explanation and justification patterns tend to coincide. How people justify their practices offers an explanation, though perhaps a misleading or superficial

through a single paradigm, as has too often been supposed, but through a bundle of apparently aligned paradigms.

One working *image* for what is going on here is appropriately ecological: that of a fig cluster (similarly a mangrove or bamboo thicket):

Diagram 1: Structural diagram connecting problems with their multiple roots



Observe systematic plurality. Notice however a countervailing human propensity to seek single answers and uniqueness (as depicted in the rhomboidal box), where causes and sources are plural. So it is with paradigmatic sources and roots of environmental problems. They are *plural*.⁵

What is sought are ultimate sources, or roots, not immediate causes. The cause of the pollution may be a factory that the agent installed, to produce more flim-flam. That too may be the physical source of the immediate problem. But deeper questioning seeks the reasons for such production and such factories. While there may be problems with ideas and idea-structures as causes, as causally efficacious, these problems do not transfer to reasons and sources. (But there are buried metaphors, and linkages, to be unscrambled: how are “A is source of B” and “A is a root of B” to be explicated? In terms of directional explanatory and other rational transmission connections.⁶)

explanation, of them.

⁵ History too is not singular, but plural, as has occasionally been recognized; at the very least there are plausible alternative histories.

⁶ While there is much written on roots and sources of environmental problems or developments virtually none of it addresses the question of what is meant by the partially buried metaphors of *roots* and *sources* (the metaphors are evidently different; more literally, plants have roots, normally below them, streams rise from sources, not roots, normally above them, and so on). A striking example is supplied by Pepper's useful introductory text. Although this text, *The*

These deeper sources are important. Without locating them, perhaps all of them (if they resemble blackberry), problems may not get properly addressed. Should we wrongly locate roots, then proposed resolutions directed at these, cutting them off or replacing them, will also go astray, wrongly directed or whatever.

There are several parts to the approach sketched, if it is to be properly elaborated—including a working classification of environmental problems and their proximate solutions, and an account of paradigms and their roles—before getting to paradigmatic answers to focal questions. But we can be brief on the necessary preliminaries, because they have been addressed elsewhere.

1. *Problems and paradigms.*

Although these will be duly connected, paradigms implicated in problems, they are different components, and admit and deserve separate explanation.

1a. *Environmental problems and proximate solutions.*

A definition of 'environmental problem', and a classification of such problems, has already been proposed.⁷ Observe that the final sets of problems that emerge are not value-framework independent. What constitutes a major problem on deeper perceptions may be but a minor problem, or written off as not a problem at all, on shallower perspectives. Among such indicator problems, that it is here presumed are *serious* problems, are those of

- sustaining biodiversity and
- maintaining significant wilderness.⁸

Even if the broad impact of human enterprise is sufficiently reduced to guarantee comfortable survival of future humans, these desiderata may not be guaranteed. There will be outstanding problems.

In any event, it is not too difficult to say more or less what environmental problems are (at worst by furnishing familiar lists), and in many cases to indicate at least in principle how they are to be resolved. Impact equations, emerging immediately from a classification of

Roots of Modern Environmentalism, presents itself specifically as concerning roots, there is in fact no explication offered of the crucial *roots* metaphor, and for that matter no direct account of what the roots of environmentalism—still less, though quite different, of environmental problems to which environmentalism answers—are supposed to be (granted there is much oblique material). It is apparent that Pepper has become rather carried away with the *roots* metaphor, throwing it into several chapter headings and applying it pretty indiscriminately to mean simply *elements* (from some earlier occurrence); thus for instance, 'the roots of the theme of reconciliation of freedom and authority' (p.193). Such a usage is unsound. Because rudiments of some idea make an earlier appearance in some authority or work, later workers may not have arrived at such an idea by expanding on these rudiments; they may have arrived where they did quite independently or by a different route. The mistake is that of reading a source or (genetic) causal linkage into a mere temporal injunction: *post hoc, propter hoc*.

Dictionaries do better, with a short listing for the *figurature* use of 'root' running: 'the basis, bottom, the fundamental part, or that which supplies origin, sustenance, means of development, etc.' (Concise English Dictionary). That will serve, for a start.

⁷ See Sylvan and Bennett, GE.

⁸ As to the extent of the problem in North America, and a proposed remedy, see *The Wildlands Project*.

problems, reveal how they are to be resolved.⁹ Namely, by altering relevant impact parameters.

Given this why are they proving so intractable? Why is so little done? Why is so very little *spent*, despite all the talk.¹⁰ Proximate solutions, about as far as positive science conveys us, are not a satisfactory stopping point. How is it, given so much scientific information and expertise, that humans are continuing to sharply degrade, and risk substantially destroying, their habitats.

To these, the focal questions of this exercise, there is an array of competing answers on offer. As we will soon see, most of these answers too simple, and taken as intended as comprehensive, they are wrong. The questions however are *important*, because if we fail to get to bottom of these, there is even less prospect of satisfactory action to turn around a very difficult situation.

That these issues do not matter, that casual human relationships or how many dollars uncaring humans can stuff in their pockets, matter more than whole islands of habitats—these sorts of value judgements (after all *matter* is a value term par excellence) derive from and are supported by particular ideologies.

1b. Model-like objects: paradigms, ideologies, cultures ,and so on.

A *paradigm* was explicated, in previous work, as a model in precisely a generous logical sense.¹¹ That is, a paradigm amounts to a structure supplied by an elaborate interpretation function on a general system, i.e. on an integrated relational structure. Naturally it is required to be *faithful* to what it models, the social forms and norms, scientific research programs, etc. A *social paradigm*, in contrast to a scientific paradigm, is a paradigm where the propositional and imperatival theory, the socio-political themes and value judgements, is that of a social group. A pure *culture* is but a comprehensive social paradigm, where by “comprehensive” is meant that it covers a sufficiently comprehensive part of the life-styles and life-forms of the community concerned. There are now many examples of capsule formulations of the themes delivered under rival social paradigms and under different cultures; from these formulations we can work back towards the underlying models.

The basic vehicle, a situations or worlds model, is a *semantical* object, an item like a complex universal¹² similarly open to a range of construals and reduction attempts, e.g. metaphysical, conceptual, epistemic, linguistic and so on. Once this is realised, it can be seen that successive cohorts of philosophers and sociologists have repeated one another in vaguely discerning essentially the same sorts of underlying structures under different categorisations: thus, for instance, forms of understanding (Kant), of consciousness (Marx), of life (Wittgenstein), conceptual schemes (Conant), presuppositions (Collingwood),

⁹ For details see again *Greening of Ethics*.

¹⁰ See e.g. *The cost of past environmental policy in OECD countries*, Box 1.7, in Pearce et al, p.24.

¹¹ See Routley, where many environmentally relevant examples are documented. For an analogous account of *culture* see Sylvan 86.

¹² It resembles a *structured* universal, e.g. Plato's system of forms, Locke's of complex ideas.

Weltanschauungs, total views (Naess), perspectives, outlooks, ideologies, programs, An ideology, for instance, in the nonderogatory (non-Marxist) sense is an ideas-system, initially a propositional system or theory with a relevant domain of ideas operative, from which a paradigm can be discerned and elaborated.

Paradigms are now regularly presented, in extremely truncated form, through a tabulation of capsule themes. Here is a combination example:

TABLE 2: Elements of Taoism as contrasted with Deep Ecology and with the dominant paradigm: an initial capsule formulation .¹³

Taoism	Deep Ecology	Dominant (Western) Paradigm
Harmony with nature, through Tao	Harmony with nature	Domination over nature
Nature valuable in itself; "humanism" rejected	Natural environment valued for itself	Nature a resource; intrinsic value confined to humans
Levelling of differences; wide impartiality	Biocentric egalitarianism	Human supremacy
Supplies ample	Earth supplies limited	Ample resources with substitutes
Following Tao-te	Spiritual goals, especially self-realisation	Material economic growth a predominant goal
Enlightenment	Self-realisation	Personal (material) enrichment
Doing with enough (recycling inappropriate)	Doing with enough; recycling	Consumerism
Non-competitive lifestyle; voluntary simplicity	Cooperative lifestyle	Competitive lifestyle
Decentralised/neighbourhood and village focus	Decentralised/bioregional /neighbourhood focus	Centralised/urban centred/ national focus
Hierarchy without power structure; anarchoid	Non-hierarchical/ grassroots democracy	Power structure hierarchical
Limited technology	Appropriate technology	High technology
Considerable caution	Precautionary practice	Risking taking (verging upon adventurism)

¹³ This tripartite example is adapted from UTD, where capsule elements of Taoism are duly expanded.

As observed, paradigms control action space by some equivalent of directives; red and green lights duly interpreted. They may not supply direct commands, general obligations and prohibitions, but may operate more indirectly. For instance an enlightened person, a role model, a person following Tao, would act this way, not that. (Taoism, like certain modern ideosystems, eschews deontics.)

Paradigms are absorbed and they guide practice. They commonly form part of actors' worlds; they are certainly part of actors' programs for practice and considered action in a world. In a *sense* then, they are things, programs actors carry round in their heads; so heads have to be changed, *not* rolled.

2. Proposed answers to focal questions; a preliminary classification of inadequate answers and suggested remedies.

Most of the wide range of answers proposed supply a single source, and are defective. Roughly, virtually everything you have read on this (or may read elsewhere) is wrong.

TABLE 3. Main tabulation of answers and remedies

<i>Defective practice answers</i>	<i>Source</i>	<i>Remedy</i>	<i>Objections</i>
D1.	Ignorance	Relevant information	Information now available
D2.	Unintended consequences	Relevant information	Information now available
D2a	Faulty technique, or technology	Repairs	Repairs already made
D3	Deviation (from theory, etc.)	Adherence	a. Deviation uneliminable, or b. Adherence no remedy
D3a	Education (for failure to limit deviance)		
D4.	Systemic lock-in (through poverty, ensnarement in market forces, etc.)	Trap removal	a. Explains only certain cases, and b. Due to paradigmatic features
D5.	Insensitivity or insensibility	Problem appraised	Remedy tried; background ideological blockage
<i>Defective paradigm answers</i>	<i>Source</i> single paradigm	<i>Remedies</i> proposed (among others)	
P1.	Christianity (mainstream Catholicism)	Scientific enlightenment, or alternative (Eastern) religion	

P1a.	Protestantism and its ethic	
P2.	Cartesianism	Monism
P2a	Dualism	Anti-dualism Modified holism
P2b	Mechanism	Organicism
P3.	Substance metaphysics	Process metaphysics
P3a	Possessive individualism	Non-reductionism
P3aa	Personalism	Transpersonalism
P4.	Capitalism	Socialism
P5.	Industrialism	Pre-industrialism (romanticism) Post-industrialism
P5a	Technocratic bureaucracy	
P5aa.	Transnational business	
P6.	Enlightenment	Anti-enlightenment
P6a	Materialism	Anti-materialism Spiritualism
P8.	Patriarchy, Masculinism	Feminism
P8a	Human domination of humans	Anti-domination (anti-hierarchy)

Further sample listings of this paradigmatic sort (but with the paradigms often subject specific or partial) include:

<i>Source</i>	<i>Typical remedy suggested</i>
Platonism	New metaphysics
Leibnitzianism	New metaphysics
Kantianism	Consequentialism
Mainstrand Anglo-American philosophy: reductive empiricism-cum-utilitarianism	Continental philosophy
Utilitarianism	
Economism	New social science, or ethics
Contractarianism	Consequentialism
Domination transfer	Domination removal
Adolescencism	Maturation
Infantilism (from Freudian psychology)	Maturation

And so on.

A very rough *recipe* runs as follows: draw up a potted list of *major* movements and factors in dominant Western thought. Then most elements in that list will have been nominated, likely

separately but perhaps only in combination, by someone as the source of the problems.

That list accordingly continues (even including sometimes entries like Taylorism), but what is included is representative of the important and more interesting answers to be encountered. There are other answers however, some varying from interesting to crazy, that we should also take into account, for instance Shepard's answers. Although Shepard dismisses ideologies, what he offers is a further ideosystem, of similar dubious or false cast. *Strange answers* include pushing it back to human *psychology* (thus not only Shepard, but also Fox, and Ehrlich with talk of 'mental maladaptation').

Basically, there is something wrong with a society that does that to its habitat. It is sick — in a popular sense, yes, it is sick. It is the slides that follow, however, that are to be resisted. The slide begins invitingly: As it is not literally sick, well not physically usually, it must be *mentally* sick; that is, sliding further and fast, insane or mad. But the sources of mental sickness lie in childhood (as Freudianism erroneously insists). The slide continues to: what we have are immature societies, frozen at an early stage of development. No doubt there is *something* to theme that dominant societies, USA especially (which influences so much now in other cultures), are locked into youth culture, a sort of late consumptive adolescence.¹⁴ No doubt, too, that maturity — but a environmental maturity — is desirable, even mandatory.

Meanwhile, immaturity is fostered right through human life. Considerable effort is put into trying to induct older people, who are often marginalised, into active consumptive society, to spend their money through tourism, on new housing, in those most wasteful of modern institutions such as airliners and hotels, hospitals and old-age homes, and so forth.

3. Documentation as to some of the acclaimed purer sources.

Like the lists of proposals and intricated paradigms, the documentation too is somewhat perfunctory, tending towards notes. While whole theses could be spun out on several of these topics, already beginning to elicit such treatment, a prime objective here is different from usual: neither to convict, nor to clear or excuse, but to partially implicate most items cited in the main tabulation above. Consider, in brief, some of the usually accredited sources:

- *Western religion*, above all Christianity. The theme that the source of ecological problems, 'the historical roots of our ecological crisis', are to be found in Western religion, and specifically in 'the Judaeo-Christian belief that mankind was created to have dominion over nature', was advanced in a particularly pointed and subsequently influential way by White.¹⁵

One useful summary of White's line of argument runs as follows:

Allied with technological and scientific developments, orthodox Christianity has produced arrogant exploitation of nature, and a contemporary ecological crisis. White's thesis is that the West's successful science and technology

¹⁴ It interestingly matches the locking of primary production systems into pioneering stages such as preclimax formations. Shepard's dialectic is investigated in more detail in Appendix 3.

¹⁵ White's article has generated an enormous defensive literature, primarily from Christian apologists, but also from softer environmentalists and from testy historians of ideas. The whole area looks in danger of disappearing from intellectual view under a heavy blanketing snowfall, snowed.

developed between the 8th and 12th centuries — it is much older than the scientific revolution though it was not until about 1850 — following the democratic revolutions — that the science and technology were combined to produce truly immense powers to change nature. The early development, however, was paralleled by the development of exploitative attitudes to nature which seemed to be ‘in harmony with larger intellectual patterns’, namely the victory of Christianity over paganism. This destroyed the animistic beliefs whereby men thought twice before they plundered and destroyed natural objects. It substituted instead a faith in perpetual progress, a belief that God designed nature for man’s benefit and rule, and that action, not contemplation, was the correct Christian behaviour. Science formed an extension of theology (for to know God you had to find out how his creation worked), and technology provided the active means to carry out God’s will. Because today’s attitudes are essentially inherited from Christianity, then it ‘bears the burden of guilt’ for contemporary ecological disruption.¹⁶

What has happened with the divisive charge, advanced by White, that Christianity was the prime source of environmental problems, is particularly instructive. In an attempt to diffuse the charge Christian apologists pointed to, what there undoubtedly were, recessive strands or isolated seeds in Christianity which were much more environmentally benign (though some such as stewardship, which has evolved toward total managerialism and sustainable development, have proved increasingly problematic). That does little or nothing to meet a more sensitive criticism that mainstream (or dominant) Christianity has much to answer for as regards destruction and degradation of natural environments.¹⁷ Similar responses are apposite for attempts to exonerate their wider sources, such as Western philosophy.

Against the sheeting of responsibility to religion, dominant forms of which should undoubtedly cop *some* heavy criticism, it has been contended that

philosophy ... is the primary source of most Western ideas [and] is ... *responsible* for the ideas and attitudes that inhibit environmental protection today. ... Religion ... though often criticized ... as the chief culprit, has played a much less fundamental role. Most of the environmentally offensive ideas in Western religion originated not in religion but in Western philosophy.¹⁸

- *Classical Greek philosophy*, above all the peak philosophies of Plato and Aristotle. Greek philosophers approached natural phenomena in a way that (1) prevented the development of an ecological perspective, (2) discouraged the aesthetic appreciation of the natural world, and (3) promoted a conception of reality that made the idea of nature preservation conceptually difficult, if not impossible.¹⁹

¹⁶ Pepper pp.44-5. Pepper then embarks upon the murky story of alternative interpretations of Biblical data and the Christian tradition, dredged up by a series of White’s critiques. The issue continues to be debated; for an interesting recent contribution see Callicott.

¹⁷ Each religion is multistranded. But we should look hardest at dominant operative forms. Ask, first, not what they say, but what they do, and would do.

¹⁸ Hargrove p.15. Certainly the sort of message that Pentecostal missionaries even now try to preach to resistant Australian Aboriginals, that the earth is just filth, mere rubbish, can be traced back in direct line to Plato’s attitude to the land, an attitude Hargrove and Plumwood help expose.

¹⁹ Hargrove p.21. Hargrove’s claims may appear to have been confuted by Attfield, but really, while they have been subject to minor qualification, they have been highlighted: see Appendix 1. There is a much fuller story still to be told about classical Greek philosophy reassessed environmentally, of the very different roles and impacts of Plato (with his unearthly philosophy), of Aristotle (with his earthier chauvinism), of Stoics and of Epicureans. For a modest beginning,

More sweepingly, they set Western philosophy on a ruinous environmental course, a course accentuated with the appearance of modern rationalist and empiricist philosophies.

- *Cartesian philosophy*. The dominant modern environmental approach is sometimes denominated Cartesianism, or the Cartesian Technocratic paradigm, in honour of Descartes, upon whom (as a conveniently select individual from a swag of like-minded people) several of the leading themes and ideas can be pinned.²⁰ While Descartes was undoubtedly extraordinarily influential, so were others; Newton for one, Locke for another. The paradigm is accordingly better denominated the Atomist-Empiricist-Technocratic paradigm, or some such. Evidently it substantially overlaps other modern ideologies, such as that of the Enlightenment, widely implicated as major sources of environmental problems.

- *Western metaphysics*. While some conglomeration of the preceding sources and others (some potted history of Western metaphysics, so to say) may be offered, more often what is presented is some selection of Western metaphysical elements. Here is one example, plainly exhibiting a heavy Heideggerean influence:

The root of our environmental problems lie in Western metaphysics. For metaphysics, Being is presencing; no allowance is made for any other mode (sheltering, declining, concealing). Once metaphysics has established the absolute dominion of the present over the not-present or no-longer-present, the way is paved for the scientific method, with its emphasis on replicability of results, predicability, quantification, and control. Nature becomes a “natural resource” —and people become “human resources”. The sources of anthropocentrism, imperialism, colonialism, sexism and consumerism can all be traced back to metaphysics.

Western metaphysics has more or less conquered the world, and there is no going back. Western metaphysics is more than simply a false consciousness overlaid on top of “authentic” experience. Being changes historically, and metaphysics is the index of that change... Metaphysics has a conquering, exclusive imperative, ... and different [former] modes now exist only as vestigial trances. They cannot be resurrected through ancient wisdom, native healing, goddess worship, or any other supposedly intact, dormant system.

We cannot create a “new order”. That would simply be another form of the Will to Power... We can—and must—turn away from the dominant rhythms of western metaphysics if we are to avoid the nihilism of a perpetually ensconced technocratic rationalism.²¹

An alternative to turning entirely away from Western metaphysics, consists in combining

see Plumwood on Plato, Toulmin on Stoics as contrasted with Epicureans, and Glacken on lesser or lost Greek strands.

²⁰ For encapsulation of the Cartesianism paradigm (a dominant dualistic form), summarising Drengson’s exposition, see Routley, table 5. For certain critical elements of Descartes’ contribution, see Appendix 2. Drengson, for one, has helped portray Descartes as the environmentally evil genius (or demiurge). That some orthodox philosophers, not merely maverick philosophers, are now rushing to the defence of Descartes should be seen as entirely in keeping with the character and roles of Western philosophy.

²¹ Undisclosed source. Amusingly, I have seen myself accused of ‘reject[ing] in its entirety mainstream western philosophy and science, ... seen as the cause of the [environmental] problem’ and instead basing my ‘ecocentric values on Eastern philosophies’ (thus Bellett). This charge was levelled on the strength of a peripheral exercise on classical Taoism and Deep Ecology (now included in UTD).

rejection of standard Western metaphysics (or, less sweepingly, of dominant metaphysics, characteristically individualistic and atomistic) in favour of development of recessive traditions or mere Western seeds. Such a more sophisticated approach, also critical of Western metaphysics, with atomism a main villain, is pursued by those who promote instead process or plenum metaphysics.²²

- *Enlightenment*. The source of problems lies in ‘the intellectual heritage of the Enlightenment’ (e.g. Dobson). Of course the main doctrines of the Enlightenment substantially overlap those of modern mainstream philosophy and of Descartes’ philosophy (but they shed dualistic and theistic scholastic hang-overs).

- *Capitalism*. The assumption that capitalism is responsible for environmental as well as social evils, widespread until recently in state-socialist countries (when their own records were revealed) can be traced back to Marx. According to Marx, with *capitalism* for the first time, nature becomes purely an object for humankind, purely a matter of utility; ceases to be recognised as a power for itself; and the theoretical discovery of its autonomous laws appears merely as a ruse so as to subject it under human needs, whether as an object of consumption or as a means of production.²³

But, as observed, the main theme had appeared in earlier philosophy; for instance, the idea of nature as purely an object for humankind, was advanced in Aristotle: ‘Now if nature makes nothing incomplete and nothing in vain, the inference must be that she has made all animals for the sake of man’.²⁴ Aristotle adopted a similar stance on nature as on other species. The theme was to be oft repeated in subsequent Aristotelianism, and reiterated apparently in shallower Stoicism. But the subjection of everything to *utility* appears to be a distinctively modern contribution.

- *Modern industrial society*. Modern *industrialism* (‘the smooth-superhighway of industrial progress’) is the source, such is an extraordinarily popular theme: ‘... the root causes of the present crisis lie deep with the very foundations of the industrial paradigm’²⁵ Similarly ‘roots [of] the environment crisis ... go deeper to the foundations of modern industrial society’.²⁶ Again, ‘the structural roots of the environmental crises [are found in] industrialism, in commoditization, in commercialism, and in competition and greed’²⁷ The popular theme, that industrialism is the source, tends to confuse mere means— industrial technology can without

²² For the first process option, see Gare; for the second, where the plenum is that of a holistic relativity theory (more exactly holistic relativistic geometrodynamics), see Mathews.

²³ *Grundrisse* p.409f.

²⁴ Aristotle, *Politics*, Book 1, ch.8. *What* an inference, you might well exclaim. See further Hargrove p.25.

²⁵ M. Gabriel, ‘How “attitudes and implements” have brought us to “the end of nature”’, a paper presented at UNE *Environmental Paradigms* Conference, April 1993. Gabriel proposes a managerial resolution: ‘for us to learn to manage both our relationship to our environment, and more broadly the environment itself’ (quotes from abstract of paper). This amounts to the flip side of an old problematic record. For the “solution” derives from the same defective box as the evident problem.

²⁶ Gabriel *ibid*. Similarly in McLaughlin.

²⁷ Editorial in *The Ecologist*, Jan-Feb 1992, p.2.

any doubt at all vastly facilitate environmental degradation (as well as, less satisfactorily, subsequent clean-up and environmental repair)—with sources and causes, what directs and powers *those* uses of industrial technique and practice.

- *Patriarchy*. The source is patriarchy, and androgyny; problems derive from mistreatment of women. ‘Our troubles begin with the invention of male deities located off the planet’.²⁸ ‘patriarchy is the source of the environmental crisis’.²⁹ One sample linkage statement runs as follows:

... there is a huge denial ... of the violence perpetrated on women both historically and ... present[ly] and ... this the same energy that, turned against the Earth, is destroying the very life-support systems and rapidly destroying the conditions that makes complex life possible. The fires that consume the Amazon are the very same fires that burned 9 million witches and I believe that there can be no solution of our ecological problems unless we simultaneously address our gender issues.³⁰

Patriarchy, as source, is evidently a special case of long invoked *domination transfer* themes:

- *Human domination and exploitation of humans*: It is an extraordinarily widespread assumption that the impact of humans (or, until recently, of Man!) on the environment, or creatures or things in it, is a product of that of humans with each other, typically of groups or classes. In misleadingly brief form, the source is social: Man’s inhumanity to Man; and the solution correspondingly is social. Unremarkably, this unlikely assumption comes in a variety of different forms: early, concerning the mistreatment of animals as an (inevitable) spill-over from mistreatment of humans, recently concerning maltreatment of nature spilling over from, or being one with, that of women. The fashionable assumption runs, in one form or another, from Aquinas through Kant to a range of recent trend setters, including Marcuse, Illich, Passmore, Bookchin ... and some leading feminists. In particular, it is part of the very meaning of *social ecology*, an ideology shaped and championed by Bookchin: ‘ecological problems arise from deep-seated social problems’.³¹ On this theme among others, Bookchin simply follows a prominent trend in social anarchism set by Kropotkin and his contemporary Reclus:

all see that the *domination and exploitation of nature by man is but an extension of the domination of man by man*. Thus, ‘Both Kropotkin and Reclus ... laid the foundations of a radical theory of human ecology. Ecological despoliation was seen to reflect imbalances in human relationships—domination of nature thus following from human domination’. ... It follows that if domineering and exploitative human relationships can be avoided in small-scale decentralised societies then such societies are also best for a

²⁸ Quoted in Eckersley p.64, who develops and begins to assess patriarchal source themes. For a more critical assessment see GEF.

²⁹ See Seed, quoted in GEF; also Salleh (see e.g. EP3).

³⁰ *John Seed’s Workshop Schedule 1992*, Rainforest Information Centre, Lismore, 12. 12.91. Seed’s extravagant identity claims are but a dramatic extension of that popular tendency to transform comparison and similarity statements into identity claims. Indeed reductionism often reaches further, with attempted conversion of all relational statements into identity ones, along with unrelational property claims.

³¹ Bookchin sometimes qualifies this central claim, with ‘nearly all present’, e.g. EP3 p.354. But he is not strictly entitled to any such qualification, given his invariant theme that the domination of nature always results from the humans domination of other humans (see e.g. Clark EP3, p.346). The text EP3 contains a big section providing a useful introduction to social ecology.

harmonious man-nature relationship.³²

Domination and exploitation of one division by another can in turn be seen as a case of dualism at work, between the one, the dominator or dominating class, and the other, the dominated.

- *A snare of dualisms.* Environmental problems derive from operation of a set of connected ideologically-entrenched and defective dualisms.³³

- *Modern educational systems: Roots* of environmental problems lie in educational systems. Or if roots don't, *solutions* do. However, roots of environmental or social problems do not lie in educational systems. *Parts* of their solutions may however. For education is critical, for instance, in correcting *insufficient adherence* to established satisfactory arrangements, such as, so it is claimed, Enlightenment ideals or traditional ethical systems.³⁴ Therewith we are transported full circle back to defective practice answers.

4. *Commentary on, and objections to, proposed answers*

A main part of this exercise consists in a detailed critical commentary on the entries in the main tabulation, and on proposals like them. Small beginnings are made on the exercise, in two stages reflecting the major division in the main tabulation.

D. Defective practice answers tend to come from those who presume we are already in possession of adequate theories, or what approximates them or supplies main elements of them. (Such answers are also more liable to emanate from conservatives, opposed to new or radical theories, advanced on the basis of inadequacy of prevailing theories in practice.)

Defective practice answers are especially popular in economic reaches. There was a time, perhaps not past yet, when all market failures in the shape of negative externalities were passed off as unintended consequences of economic activity. While outputs or “consequences” such matters as pollution certainly are, unintended they mostly are not now, without *emptying* ‘unintended’ of its normal sense. For example, industrialists, apprised of conservation laws and unsurprised by polluted wastes, who dump their waste where and when regulators and waste-watchers are not looking, can hardly pretend that that output is an unintended consequence of their industry. That should now be a *bad* joke.

Accordingly new green economics insists that we dig deeper—without however exceeding economic settings—to discover why markets may foreseeably fail and why environmentally rectifying technology is not delivered.³⁵ Where they usually arrive, travelling

³² Pepper p.192, with internal quotation from Breitbart. Unfortunately it is all too evident, given humans could so socially organise, that they could settle into harmonious small-scale communities which retained but little of pristine natural environments.

³³ Such a proposition, outlined in V. and R. Routley, obtains a much fuller elaboration within Plumwood. In an interesting way, such a proposal can hardly be wrong, given the conclusion reached below that a set of defective paradigms in at work. For evidently paradigms can be covered by dualisms, represented by set of them in each case, somewhat as numbers can be represented in binary terms, generated from a basic two-oneness duality.

³⁴ Thus Passmore, Attfield, and others. For a critical assessment of education, see Sylvan and Bennett.

³⁵ Thus e.g. Jacobs, p.24.

within such unduly confined settings, is, like welfare economics before green, at better regulated markets, with business set as before within frameworks of plans and incentives, controls and penalties. Environmentally, however, such approaches do not reach very deep, or tap into underlying paradigmatic problem-sources.

But these sorts of defective practice answers do not always derive from standard economic sources. A deviation-style answer is much favoured by Marxists to explain failure, environmental and other, of the former Soviet Union and other Eastern block countries; namely that true Marxism was not practiced. Unfortunately, even if it had been, environmental consequences would be no better, given the heavy industrial commitments and environmental shallowness, at best, of true Marxism.³⁶ Differently, enlightenment liberals like Passmore try to ascribe failures in Western environmental practice, not to any deficiencies in mainstream theory, but to deviation from well established principles. Unfortunately adherence to these “well established principles” is just one way in which the Earth will lose what remains of its wilderness and remarkable diversity.

Now there are no doubt cases, past especially but also present, some resulting (collectively) in extensive environmental degradation, where defective practice answers may be correct. For example, there is harrowing case after harrowing case (brought together in texts like *Topsoil and Civilization*) of degradation of prime agricultural lands by imposed farming practices, where at least early on (before damage became visible) ignorance and unintended consequences could be legitimately claimed. In most historical cases we do not have enough information to be able to say with much assurance that agriculture proceeded until effective collapse because of continuing ignorance, or because practices were locked-in in one way or another, or because of sheer obduracy. But we do know more about present agricultural practices, for example in more arid parts of Australia, concerning both irrigated and dry-land agriculture. Many of these practices are undoubtedly sharply degrading lands, and the consequences of the practices, which cannot plead or pretend ignorance, are sufficiently appreciated. But the practices persist, and are encouraged by a sweep of subsidies or concessions. No doubt some of the practitioners can reasonably claim that they are locked into bad practices through circumstance, circumstances *now* beyond their control such as financial pressures, unfavourable terms-of-trade, and so on, coupled with the need to make a living. But some, such as companies controlling large tracts of land, can make no such claims or excuses, nor can claim such things as family precedence, attachment to place, and similar. Their obdurate practice has to be attributed to something else, most obviously not deviation from theory, but commitment to an environmentally defective paradigm.

P. Dealing with defective paradigm answers is an even more complex, and vexed,

³⁶ It is surprising how much of the practice of later Socialist states is prefigured in texts like *The Communist Manifesto*. Thus “industrial armies” are to be set up; credit, communications and transport are to become state monopolies; “migrants and rebels” are to have their property confiscated; and so on. All this runs contrary to much Marxist apologetics (as A. Urquhart, who made those points, also observed).

business. Let us try to condense main matters to a few *themes*:

1. Many of the (incomplete) paradigms listed are *not even sufficient* for environmental impasses. They may be seriously mistaken, they may have undesirable intellectual and perhaps social effects, but a society could persist sustainably with those drawbacks. Thus, for example, substance metaphysics (under modified Spinozism), dualisms, even patriarchy. The same might even hold for materialism and mechanism, (assuming these practices can be coherently made out, that depending on how differentiated ideologies and values are accommodated, and so forth).

To illustrate: a metaphysics, of any sort, cannot be the whole story, because it does not, on its own, account for action, anti-environmental or other. Without special bridges from metaphysics to value-intricating action theory, a sort of naturalistic fallacy operates. Thus subverted, in essentially Hume's way, are all the vulgar sources of environmental problems which take them as derived from metaphysics.

2. While several—not just *one*—of the paradigms listed are sufficient—in the *right circumstances* (given long historical development, accumulation, and so on³⁷)—none are necessary. Similar impasses could arise, and locally have arisen, given significantly different paradigms; for example given, instead of main Western trouble-making paradigms, Confucianism or advanced Polynesianism.

At this stage in dialectic, green history or ecohistory, and related virtual histories, enter decisively. Ponting's *Green History of the World* begins with a graphic account of the rise and ecological fall of Easter Island under the impact of Polynesian projects. The work also conveniently documents *many* other examples, well-known to biohistorians, of ecological degradation or collapse, *far* from the influence of Western paradigms. An important example (much less speculative than some of the examples because of a comparative wealth of primary documentation) outlines the destruction of accessible Chinese ecosystems under Confucian dynasties. What several of these examples also reveal is that no very high level of technology is needed to inflict serious environmental damage; persistence in pursuit of an ideological project (with nothing directly to do with basic needs) will suffice.

Other cultures did, or would have (given the technology and numbers), wrecked similar damage. For instance, deforestation, salination, megafaunal elimination, and so on, were well established before rise of modern Western paradigms, or in regions outside their influence.

3. The list of paradigms, as so far presented, is entirely Western in orientation. Moreover environmental woes are regularly ascribed to Western sources — wrongly. For non-Western paradigms have led, or would lead given the opportunities (including access to the technologies), to outcomes as undesirable as under dominant Western paradigm. Witness

³⁷ While it is easy to imagine ineffectual or incompetent tribes which live benignly environmentally, by just muddling along, under even the worst of paradigms, that is not really to the point. A pertinent tribe needs to have developed the structure which leads to problems, to have the means, and so on.

again Confucianism, for instance, and its role and influence in Asian regions. Confucianism incorporates human chauvinism par excellence (as well as, some might say, Chinese chauvinism).³⁸ Or Islam, with its reach across the Middle East.

The main tabulation (of table 3) should accordingly be extended to take due account of non-Western paradigms, including for example:

Other Abrahamic religions	Islam
	Judaism
Confucianism	
Shintoism	
Polynesianism, at least in advanced forms as on Easter Island.	

What is “Western” is tending to blur also. Is Judaism Western, how western, or Islam? There is also a tendency to suppose that more Western religions, Abrahamic religions, with their intense monotheism, are significantly ideologically worse than non-Western. But the contrasts are different and much more complex than that. A better divide is into monistic and pluralistic. Even so, many undesirable social and environmental features are incorporated in or encouraged by religious pluralisms from the Indian subcontinent.

4. All the single paradigm answers are inadequate, all are too simple. Even so some are less inadequate than others. It is the same, more or less, for the combined answers, often to be encountered. For generally they represent but one thin cross-section of Western paradigms.

While all the single one-source one-shot paradigmatic answers, occur on their own, often they are combined. For instance, although Descartes is often cited as a villain, more often criticism of Cartesianism is combined with criticism of other concurrent ideological elements, such as Baconian empiricism (less incompatibly, Drengson, for one, regularly combines criticism of the technocratic paradigm with criticism of Cartesianism—though Descartes, for all his rich and appalling thought, contributed little to the rise of technocratic organisation.) Similarly Hargrove combines Greek philosophy, as original source, with modern rationalism and much else.

5. Towards a more satisfactory explanation.

Not only are the paradigmatic roots seriously intertwined (because of connections of one paradigm with another, because for instance of heavy philosophical inputs into religious paradigms), but further there is not a single defective paradigm. Rather there is a *family* or sheaf of paradigms, commitment to any of which, or any suitable combination of which, in requisite circumstances, appears to have yielded environmentally untoward outcomes (requisite circumstances including availability of technology, extent of social support, and so on). Within that plurality there are of course gradations—and not only gradations but major differences—in calibre, in environmental friendliness. A Cartesianism which regards animals as mere auto-

³⁸ Its net of effects extends widely. Consider, e.g., the role of Chinese medicine in decline of large fauna.

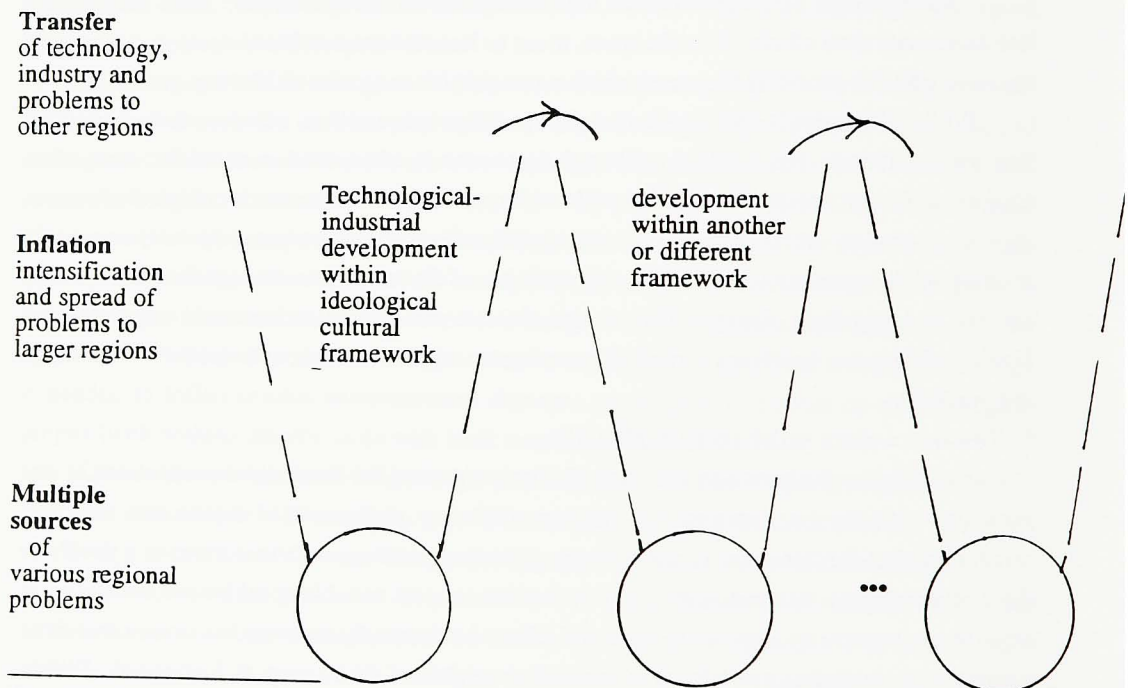
mata incapable of feeling genuine pain, is significantly worse as regards other life-forms and their decent treatment than a utilitarianism which positively values animal sentience.

The family is not exclusively Western, or Northern, though (through colonialism and cultural imperialism) paradigm of these sorts now predominate. Paradigms and cultures of less “advanced” and third world communities have also operated to enhance environmental vandalism and degradation locally and regionally.

Industrialization and technological advance are, without doubt, what have *inflated* environmental problems from rather localised ones, damaging islands and river catchments, to grander and global ones. They are the engines, powerhouses, of major problems.³⁹

They did not however run on their own, nor do they continue on their own. Such engines were not designed and built, fuelled and tended, independently.⁴⁰ They evolved primarily in the specially favoured culture of capitalism, though parallel developments could have occurred, and later did, in other prepared and heavily controlled surroundings, such as state socialism. Now however these engines have been rendered more reliable and less dependent on careful cultural support, and have been transferred to run in less favourable settings.

TABLE 4: Connected continuing sources of global environmental problems



³⁹ The picture of development of environmental problems preferred accordingly bears passing resemblance to that now tendered for development of the early Universe, where a source event, the Big Bang, was followed by a huge inflationary phenomenon. Naturally the resemblance has limitations; for instance, universe inflation is not terrestrially replicable in the way industrialization now is (hired or delivered off the shelf, pollution problems and all, with a big price tag).

⁴⁰ Lacking such favourable ideological surroundings, earlier technological “break throughs” were not duly developed: thus early wheels, steam engines, gunpowder, etc.

Even if the whole “West” went into a terminal decline, and its paradigms disappeared into history, serious environmental exploitation and degradation would continue, driven by other cultures. For instance, the West could collapse through protracted war, through choking on its own toxic wastes, or whatever (there are many routes to catastrophic decline, outlined for instance in “Limits to Growth” scenarios, that could differentially impact on the West). Degradation would now continue, however; there would be only temporary respite from environmental crises.

While most of the problems, awfully aggregated in contemporary environmental crises, are produced or accelerated by — what connects them — contemporary industrial society, not all environmental problems are or have been of this sort. But many of the other problems, such as destruction of rainforests by itinerant peasants, can be seen as by-products, or similar; thus, in the example, the peasants displaced by agribusiness, absentee wealth-holders or similar, arrived there on industrially-made roads opening the forests, and often wrecked this damage using industrial machinery.

An environmental friendly culture has to be much more critical concerning certain *types* of industrialization, and much more selective regarding technology than present dominant cultures, Western *or* non-Western. While there are such paradigms, on the ideas market, they mostly lack sophisticated contemporary elaboration.

Examples of more friendly paradigms, that do not lead of themselves to massive environmental problems and crises include those now tabulated:

TABLE 5: Examples, several flawed, of environmentally friendly paradigms.

Oriental ideologies:

Taoism (classical)	recessive traditions, now with tiny followings and little political influence.
Jainism	

Indigenous cultures:

Australian Aboriginals (e.g. Aranda)
Amazonian Indians, etc.

Western philosophies:

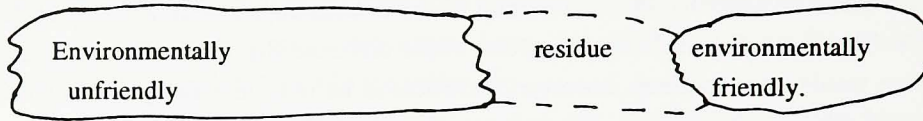
old	Stoicism Spinozism	under certain favourable interpretations
new	Deep green theories, such as deep ecology.	

Given the remoteness of most of these examples from contemporary life, and difficulties with their wide adaptability, it is a short step to a familiar conclusion that new paradigms need to be worked out. Much more intellectual effort should be devoted to such enterprise.

What we have arrived at, then, is a rough classification of paradigms into two large

families: environmentally friendly and unfriendly. No doubt there is a fuzzy residue class (neither, and perhaps both).

DIAGRAM 6: Broad environmental division of paradigms.



To questions as to why agents adhere, or continue to adhere, to environmentally unfriendly paradigms, the answers are likewise plural, and diverse (and some match answers in Table 3). Reasons are psychological, social and cultural (with circularity here encountered), and include considerations of the following sorts and others: because that is how things are done, or have always been done; because needs can be met, perhaps only met, in that way, so it is believed; because there are no alternatives, or none seen, perhaps because none have been sought; because negative outcomes can be overcome, or do not really matter; and so on.

It is not difficult to indicate, more or less, which paradigms will, if duly, diligently or religiously practiced, lead to environmental problems and impasse. Some **family characteristics**, then, of **unfriendly paradigms**:

* *Combination effects*, illustrated through Leibnizianism. Any which guarantees satisfaction of all or enough elements of the consumption impact equation, and so would generate excessive impacts. To illustrate, consider what might be called *Leibnitzianism*, in honour of Leibnitz (though Leibnitz's fragmentary work did not initiate any genuine historic school). Leibnitz was heavily committed to all of human population growth, unfettered technological advance, and human lifestyles of consumption, in short, to precisely those factors that combine in the impact recipe to produce excessive human impacts upon environments. There is fair evidence for these contentions. First, Leibnitz was an early exponent of utilitarianism, indeed he was all-round an enthusiastic maximizer. From his formulation of utilitarianism, he drew an immediate obvious corollary: the directive to increase human population (maximizing on aggregate human pleasure is most obviously achieved by production of more happy humans, other aspects of which technology and affluence can assure).⁴¹ Secondly, Leibnitz was a technology enthusiast; he was heavily committed to the developments and use of scientific technology, for which he had all sorts of schemes (e.g. the *characteristic universalis* intended to encapsulate all of knowledge in an accessible useable form, a complete calculus duly mechanised, as well as numerous technological projects.⁴²). Thirdly, he was committed to an affluent lifestyle for himself and (through symmetry and basic assumptions of utilitarianism) for others. For his own part, he

⁴¹ For Leibnitz's anticipation of utilitarianism, see Hruschka. For Leibnitz's immediate application of the principle, to support human population increase, see p.172.

⁴² 'Leibnitz's interest in machinery is illustrated by his complicated plan to drain the Harz mines, which involved the construction of a new type of windmill, and a virtually friction-free pump', Cottingham p.193. For a detailed account of Leibnitz's extensive entrepreneurial and technological activities, see Aiton.

abandoned an academic career at an obscure German university ‘in favour of the more active and lucrative pursuits of the courtier and diplomat’ and, so it turned out, the bright lights of major European cities and grand tours of Europe.⁴³

Leibnitz has sometimes been accounted environmentally friendly. Some of that apparent friendliness was due to scholastic conservatism. Thus he was opposed to mechanism; he was sympathetic to the organic and teleological, which did not contract to isolated human and superhuman loci. His metaphysical theory of monads, which are centres of living energy, effectively distributed life everywhere, though not equally. Harmony and order too prevailed throughout the universe, though under God’s maximizing management, the presence of which they duly established! But even this life-expanding harmonious order, variants of which are now familiar from Whiteheadian and deep ecological quarters, was not as benign as it has superficially appeared.

Leibnitz supposed that, by virtue of pre-established harmony and final causes governing inevitable progress, humans would not go wrong in the longer term in their environmental activities, that they could not ‘*cumulatively* make undesirable changes in nature’.⁴⁴ Leibnitz joyfully foresaw more and more of the Earth coming under cultivation, and its long-term advancement to a complete intensive garden, even if there were occasional relapses where parts deteriorated back temporarily towards wild state. Leibnitz even criticised Cartesianism, now widely regarded as prime villain of the environmental piece, as *failing* ‘to provide the modal stimulus to the control of nature’ ... ‘to scientific advance’. The idea of control, advancing to total control, total management, is prophesized in Leibnitz (in a sort of chauvinistic Gaia hypothesis). He saw ‘order as progressively increasing, with the help of man [as] a finisher of nature. He boldly applauded the idea of progress to the earth as a unit, assuming both an orderliness on earth and an orderliness in the changes it had undergone by man’.⁴⁵ No doubt Leibnitz’s lifestyle commitments need not (and may not) be reflected in his philosophy, which may have independent environmental merit, for example as stimulation or input for later developments. There is unfortunately little evidence that that is so. Nonetheless, substantial fragments of Leibnitz’s philosophy do admit environmental bending and adaptation, in a way that Descartes’ philosophy does not at all easily.

An important corollary does emerge: that a promising new metaphysics is no panacea for improved environmental performance or paradigms. Not merely neutral metaphysics, but even positive metaphysics, such as certain organic and process theories, are compatible with, and can be coupled with, damaging social theories and life-styles. It is almost enough to consider the theories, practices and lifestyles of Aristotle, Leibnitz and Whitehead.⁴⁶

⁴³ Cottingham p.24, p.26.

⁴⁴ Glacken p.478. As he remarks, these bold assumptions made by Leibnitz have proved wrong.

⁴⁵ Glacken p.506.

⁴⁶ Leibnitz’s standing in the history of philosophy is somewhat curious. His main achievement, setting aside his reputation as an intellectual wizard with *lots* of ideas, appears to be spasmodic work upon a beautiful ruin, an incomplete (and incompletable) metaphysics, of which only

* *Direct untoward effects*, illustrated through Cartesianism and Confucianism, or indeed any system which attributes little or no value to natural items, and perhaps much value to nature transforming or interfering human (or elite) projects. So it is with Confucianism, which is entirely human focussed. 'Centering his attention on man in his present life, Confucius had as his goal the achievement of a good society characterized by harmonious social relations.'⁴⁷ The outside world, the nature environment, was of no moral significance. It mattered only instrumentally, to humans. Descartes went further. Human bodies too were automata, complex machinery. 'The exception is [*mind*, or specifically] *thought*, and its external manifestation language: this alone cannot be explained mechanistically—a thesis which leads Descartes to assert a fundamental divide between human beings and "the beasts"'.⁴⁸ The remaining world, the natural environment—lacking humanity, thought, mind—was again of no moral significance. It possessed derivatively only what value and meaning humans, or minds, chose to confer or project upon it.

Since, either way, any way, a natural environment devoid of humans had no thoughts, purposes or interests, no value or meaning of its own, it could not matter what happened to it. It could be regarded, justifiably, as nothing but a reservoir of resources for humans.⁴⁹ Cartesians drew just such conclusions; similar conclusions derive from Platonism and Pentecostalism, and are implicit at least in Confucianism. Descartes again went further. His practices and methods, like those of Bacon, were 'aimed at making men the masters and possessors of nature'.⁵⁰

* devaluation of natural items as against human elements or artefacts (typically exhibiting human chauvinism);⁵¹ as a corollary,

* entitlement to domination, dominion over nature;

* short-term framework;

* maximization assumptions, coupled with grand projects.

Family characteristic of friendly paradigms will tend to *invert* (in effect negate) these features. An environmentally friendly paradigm can be expected to yield environmentally significant corollaries, such as:

- an end to degrading primary production, wherever it prevails. Instead ecological forestry

tantalizing fragmentary structures were ever available.

It is not even as if there is a surviving supply of challenging bad arguments that can be put before baffled students, as with Descartes and Berkeley for instance.

⁴⁷ Reese p.102.

⁴⁸ Cottingham p.15. The utter invalidity of Descartes' argument to this divide (cited by Cottingham) is now comparatively easy to expose, given almost 400 years of hindsight. There are no such status divides. See further Appendix 2.

⁴⁹ Borrowing some nice phraseology from F. Mathews.

⁵⁰ See *Discourse VI*.

⁵¹ Shallow will work out only with right mix of humans. But in any case, it is implausible. An appealing ecological theorem insinuates itself hereabouts: Given certain conditions (such as short-term vision, techno-fix, ...), shallowness is necessary and sufficient for environmental crisis.

and ecological agriculture will come to prevail.

- a calling off of grand ideologically-grounded projects, interfering with or damaging natural environments, such as major dams, river diversions, demolished islands (e.g. for airports), new mountains, terraforming, extensive rainmaking, climatic interference, and generally the sweep of “playing God” projects. A little of this sort of technology can go a very long way.

A short answer can now be ventured to the focal questions: Because most agents are bound to (locked into, committed to, or captively go along with) environmentally unfriendly paradigms. As a result the (long-term) health of the rest of environments does not matter, or matter enough.

6. Resulting unfavourable report on dominant philosophy.

It will hardly have escaped notice that virtually all dominant philosophical roads lead to Rome, to environmentally unfriendly paradigms. Stripped of metaphor, there are environmental conditions of adequacy, which most philosophical systems fail to meet. In an environmentally friendly new world, most philosophy that is remembered, indeed most of the humanities, is destined for scrapping. Prevailing philosophy is a serious impediment to satisfactory environmental outcomes. Philosophy, not just Western philosophy, has by and large been bad environmental news.⁵² It has supplied, or mightily assisted in supplying, main unfriendly paradigms under which environments labour. Of course not everything has to be tipped; much can be salvaged, arguments, subtheories and so on (and with intellectual tipping there need be little material waste). Nor therefore is it as if an entirely fresh start has to be made. As well as salvaged bits and pieces (which need to be carefully tested for soundness), there are recessive paradigms and neglected traditions to look to for suggestions, and inspiration, and perhaps to rehabilitate.

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APPENDIX 1. Dominant philosophy has aided and abetted ruination of terrestrial environments.

That dominant intellectual paradigms are dismal news for deep (nonchauvinistic) environmental theory has been previously argued, in contraposed form.⁵³ More recently Hargrove has investigated, in detail, negative implications of the main philosophical tradition

⁵² It may be insisted that philosophy can make no difference, for instance to environmental practice. It is not an expression of basic needs, or of any such practical matters. Exceptions to such practical bravado have however to be recognised almost immediately; philosophy soon enters for organizational, justificatory and explanatory ends. That concession still grossly underestimates the extent to which ideas, and more generally paradigms, influence and even govern action and practice, especially reflective and rational action.

On the substantial point, not therefore removed through the alleged practical impotence of philosophy, see Appendix 1.

* An earlier version of this article was presented at the Environmental Paradigms Conference, University of New England, Armidale, April 93. It would not have been written otherwise.

⁵³ Notably at the end of EE, pp.188-9.

for environmental theory and practice, especially for environmental attitudes concerned with nature and creature preservation, with nature appreciation and development of a proper ecological perspective.⁵⁴ However Hargrove has ventured some of his particularly challenging themes in insufficiently careful form, thereby leaving himself unnecessarily vulnerable to criticism and counter-claims. These include the criticisms assembled by Attfield, who, though not unsympathetic to Hargrove's case, has excessively weakened the themes. For example, what Attfield presents as 'substantially correct' is Hargrove's 'verdict that the history of philosophy has discouraged preservationist attitudes', vastly less than Hargrove's actual negative verdict which comprehended considerably more than just "preservationist attitudes", and recorded a situation conspicuously worse than mere "discouragement" of nature and creature preservation, as well as much else. Indeed it is worse than Hargrove has charged; Hargrove's indictment of mainstream philosophy is itself weaker than that here ventured, which takes mainstream philosophy as thoroughly implicated in the present escalating environmental mess, through its roles as a major source and supplier of operative ideas and paradigms.

There is a single qualification, invoked incidentally by Attfield himself, that would remove much of Attfield's criticism: a restriction to *mainstream* philosophy (or differently, to dominant philosophy). Consider Attfield's exceptions to 'the adverse impacts of Western philosophy', those alleged 'philosophical traditions that have encouraged taking nature seriously'. Firstly, insofar as the Church Fathers, medieval Christians and others Attfield alludes to are philosophers at all, they are entirely minor figures, unlikely to be known to many philosophers, and but rarely or never referred to in regular philosophy courses; they do not form part of mainstream philosophy.⁵⁵ Secondly, these minor figures do not afford the clear support for his claims that Attfield has regularly assumed.⁵⁶ Many of the statements supposed to offer support are ambivalent, or environmentally dubious, supporting some form of managerialism (e.g. perfectionism or stewardship); and in any case they have to be set against the remainder of what a figure says and does (so far as can be ascertained). After all, as regards the latter matter, there are isolated claims in major philosophers (Plato is regularly cited in this regard) which may make them appear environmentally aware and even sympathetic.

Although Plato's philosophy generally suggests that he neither knew or cared about environmental problems, one passage in the *Critias* shows that he was very much aware of at least one problem: the effect of deforestation on soil

⁵⁴ See e.g. Hargrove, p.21.

⁵⁵ Consider the sorts of exceptions:

- minor philosophers, many of whom we know very little about, outside gossip and speculation, such as Theophrastus, early Stoics, and lesser Epicureans.
- figures who are only secondarily or marginally philosophers, such as Hooke, Boyle, Ray and Evelyn.
- medieval and early modern Christians, who typically are not significant philosophers, and were usually committed not the nature preservation and the like, but to nature management or perfection.

⁵⁶ In work referred to on p.127. The main historical claims, many of them based on secondary sources, are stated in his *The Ethics of Environmental Concern*. A more detailed criticism of these claims will be made elsewhere.

quality in Greece during his own lifetime.⁵⁷

Unfortunately Hargrove does but a comparatively poor job in accounting for what he alleges, Plato's indifference and lack of ecological concern.⁵⁸ The reasons for Plato's indifference to serious ecological degradation of forests and soils in Greece can be ascribed to a combination of several elements of Plato's philosophy (a natural-world-dismissive ideology) including: elevation of transcendental forms as what was truly real and really of value, denigration and dismissal of the everyday natural world as utterly inferior, of entirely lower existence or even illusory and certainly not of rational concern. This dualistic ontology and axiology—a wonderfully valuable world of forms standing in complete contrast with the illusory material world of perception—was supplemented and reinforced by a corresponding epistemology. Under a tripartite theory of mind, the higher rational part, which gave epistemic access to the forms, a part exhibited only by humans and more elevated beings, was sharply separated from the two lower animal parts. Thus under Plato's conception of the human, humans and especially the important rational component of the human, stood in opposition to nature; the distinctively human task is completely separate from nature and concerned with control of it and its unruly elements. It is because what really has value—rational selves cavorting among the forms—is separate from nature, transcending it, with nature at best comprising very inferior copies, of lower existence, that it does not matter what happens to the earth and earthly things, to mere matter, that is a matter of indifference.⁵⁹

APPENDIX 2. On the prominent roles of dominant philosophy in the inferiorization and mistreatment of (mere) animals.

Although the attitudes concerned reach back to antiquity, and were rationalized in classical Greek philosophy (through a theory of separate parts, "highest" of which was a soul or rational component), the whole appalling affair was given an enormous stimulus by Cartesian philosophy.

Descartes cherished a scheme

for a purely mechanistic science of physiology. Descartes compares the human body to an 'automaton' and argues that had we sufficient knowledge of the structure of its working parts we could explain even highly complex behavioural responses in purely mechanical terms. The exception is *thought*, and its external manifestation, language: this leads Descartes to assert a fundamental divide between human beings and 'the beasts':

There are no men so dull-witted or stupid—and this includes even madmen—that they are incapable of arranging various words together and forming an utterance in order to make their thoughts understood, whereas no animal, however perfect, can do the like. This is not because they lack the necessary organs, for we see that magpies and parrots can utter words as we do, and yet cannot speak as we do (i.e. show that they are thinking what they are saying). By contrast, even men born deaf and dumb, and thus deprived of speech organs as much as the beasts, or more so, normally invent their own signs to make

⁵⁷ Hargrove, p.29.

⁵⁸ This sort of problem arises not merely in regard to Plato, as Attfield observes, with decided relish. There is little doubt but that Hargrove's historical excess needs to be sharpened and much elaborated, and, in some critical areas, rectified.

⁵⁹ On this classical polarisation of nature and higher humanity, see Plumwood.

themselves understood ... This shows that the beasts do not merely have less reason than man, but have no reason at all ...⁶⁰

These sorts of considerations have been immensely influential in establishing a received fundamental ontological divide, not merely between humans and (other) animals, but between humans and nature. But, as we should now appreciate, they are all subtly, or less subtly, astray, and do not sustain the conclusion drawn.

Firstly, investigation reveals internal incoherence. No men are incapable of stringing words together and forming utterances, yet many men are so incapable, not least those who are dumb. As his differential objective demands, Descartes exaggerates what those born deaf and dumb may do—they do not ‘normally invent their own signs’, but may painstakingly learn a sign language—by contrast with ‘the beasts’. But, as we are now learning, many animals, whose organs are not well adapted to speech, can also painstakingly learn sign language. Indeed they may communicate by signs and sounds (though not usually speech) “in the wild”. There is no sharp cut-off, such as a fundamental divide presumes, between creatures that can, or do, communicate by signs and sounds, and those who cannot, or do not.

Secondly, even less is there a significant boundary between those that can understand inputs and reason, and those that cannot, or do not. None of reasoning, thought and understanding are inextricably or inexorably tied to speech, nor, more broadly, to language.⁶¹ For example, dogs, whose speech is rather limited (though they certainly communicate, including to humans, by a range of different sounds, as well as signs), can understand and respond to several hundred commands and the like (that is, to a number of the same order as the vocabulary of basic languages). As for reasoning, the problem-solving capabilities of many sorts of animals, especially laboratory rats, are now well (even excessively, for primal comfort) documented.

Regrettably, Descartes has not been on his own, or out on an exceptional limb. Virtually all past great philosophers insisted, if not on an unbridgeable gap, certainly on a difference in kind of supreme philosophical importance, between humans and other animals. Only Hume afforded a conspicuous exception to unifying philosophical orthodoxy. Worse with other supposedly fundamental divides, such as that partitioning off *nonsentients*, there appear to have been *no* exceptions. The world was and is sharply divided, so it was and is imagined, into fixed inflexible categories. Furthermore, despite Hume, Cartesian inputs have persisted, for instance in the widespread philosophical idea—running contrary to an enormous body of evidence—that animals have no interests, preferences or intentions, that they receive no satisfaction from what they do or choose to do, and so on.

Cartesianism certainly assisted, not merely in changing philosophical *method* importantly,

⁶⁰ Cottingham, *Three Rationalists*, p.15, also quoting Descartes.

⁶¹ For this reason, the “language of thought” conception, pervading much cognitive science, is decidedly regressive. Nor is it necessary: combinatorial operations, which can perform a fine *representational* job, provide an improved replacement for such a “language”: see DP chapter 11.

but in altering *metaphysics* irrevocably, above all as regards human place in nature. As an outcome of rectified method,

Philosophy, including physical science, becomes in Descartes a self-contained discipline, guided by the light of reason; it has no need to be supplemented by revelation, scripture, or ecclesiastic teaching.⁶²

As to the new physics and its outcome in metaphysics,

despite a certain amount of judicious fudging over whether the earth 'really' moves, Descartes was firmly committed to the new Copernican cosmology, whereby the Earth is dethroned from its central position. The Earth is simply a planet, it has the same status as Mars and Saturn—'bodies we do not make so much of'... What is more, the sun itself is only one star among innumerable others, each of which is the centre of its own celestial 'vortex'. Descartes [rightly] saw all this as having important implications for human life. The universe, as conceived of in medieval and scholastic cosmology, was one which revealed, in all its details, the purposes of a benevolent creator. In the words of Paracelsus, writing some hundred years before Descartes 'all things belonging to nature exist for the benefit of man'. For Descartes the vastly expanded size of the post-Copernican universe, the possibility of innumerable other worlds, and the insignificance of our planet in comparison with the hugeness of the whole, made it impossible to continue to regard man as the 'dearest of God's creatures'... The belief that all things exist for our benefit alone, says Descartes ..., involves a presumptuous view of our status and a failure to recognize the unlimited vastness of God's creation ...⁶³

So, in important respects, Cartesianism offered improvements and a way *forward* environmentally. But the message was mixed and muffled, as with that concerning final causes, hostility to which Descartes justified as a corollary. No doubt final causes were used to smuggle in *divine* purposes, specifically God's special concern for the welfare of humans (no doubt the Church and Church fathers who engaged in this smuggling were not to be trusted). However undesirable practices could be weeded out, without eradicating respectable ones. Over-zealous in just this fashion was the common 17th Century slogan, 'Abandon final causes and look for underlying structures', which affords another example of explanatory skimping.⁶⁴ Sound methodology can admit both internal structures and final causes. Nonetheless, dethroning, relegating or abandoning final causes was a major movement within modern deanthropocentrization, so far as it has yet proceeded. Lovejoy has highlighted the matter. For, according to him,

...physico-theological ideas came to rest on the assumption that all other elements of nature were created *for man's sake*, and therefore put man and nature into an *unequal* relationship:

Tout est créé pour l'homme is at once the tacit premise and the triumphant conclusion of that long series of teleological arguments which ... is one of the

⁶² Cottingham pp. 176-177. Unfortunately for Descartes' grand systematic-doubt project, reason was far from sufficient, and *did* need supplementation, though not through reinstatement of established prejudice. Though judiciously shedding some ancient conventional wisdom (e.g. concerning humans' privileged control place in nature), Descartes was either forced or else felt obliged to reinstate much received wisdom, through poorly concealed subterfuges, in order to get his rationalistic roadshow moving.

⁶³ Cottingham, *ibid*.

⁶⁴ On the slogan, and the Church, see Cottingham p.178. On skimping, see DP chapter 11.

most curious moments of human imbecility.⁶⁵

APPENDIX 3. On Shepard's approach to focal questions.

A remarkably sustained investigation of the focal questions is found in Shepard's books. In his *Nature and Madness*, he considers and quickly dismisses many of the stock responses to focal questions suggested by contemporary luminaries (or by himself in earlier work), such as lack of information, faulty technique, insensibility, greed, political inertia, change to agriculture and settlement,⁶⁶... . He would (and should, for his eliminative argument) have also dismissed industrialization, state and corporate control, and so on.

More disconcertingly, for present purposes, Shepard claims that 'a history of ideas'—similarly no doubt a story of paradigms—will not serve; for it 'is not enough to explain human behaviour' (p.3), it 'seems too easy and academic' (p.3), itself an easy and superficial criticism. But if, for instance, the 'dictum that nature should serve man' and 'insistence that animals feels no pain' should become widely entrenched, then they may well impact heavily on practice, as accordingly appears to be the case. His slight further argument appears to miss the intended target: 'The meticulous analysis of these philosophies and the discovery that they articulate an ethos beg the question' (p.3). *How*, it can reasonably be inquired? What is offered is but the facile, false, 'ideas are impotent' consideration, fostered by thinking and operating in terms of *causes* (e.g. lower p.3), rather than reasons and (rational) explanation, and encouraged through an attempted move to (what is explanatorily inadequate) pure behaviour. For a simple example of the familiar explanatory roles of ideas and paradigms, consider an alternative explanation through them. The admittedly bizarre ("crazy") 'turning everything into something man-made and [or] man-used' (p.5) is readily explained through dominant paradigms: *that* is the way it acquires value, otherwise it is worthless. There is no need at all for psychopathology here.

Correspondingly Shepard briefly reviews and rejects several of the very partial, and often hopeless, solutions suggested under stock responses to focal questions such as making information, or better information, more widely available, bringing people from all walks of life together, encouraging conviviality, hitting problems with smart technology, practicing conservation, and so on.

Shepard's own resolution is more readily reached from a further (meta-focal) question that he proceeds to ask: why do humans *persist* in degrading their habitats once sources and solutions are made *transparent*? He effectively argues by elimination: other sources (read as causes) do not succeed in providing an answer; but 'the idea of a sick society' (which he leaps to, without argument, p.4) does. Wrong on both counts: On the first because a non-causal explanation in terms of ideological wiring can provide answers (listen to politicians,

⁶⁵ Pepper p.44, quoting Lovejoy.

⁶⁶ No doubt a popular picture of human social changes with agriculture and settlement *is* simplistic: that before societies lived in harmony, afterwards they did not. But it is also too simple to go on to claim, as Shepard does, that 'the economic and material demands of growing villages and towns are ... not causes but results of this change' (p.3). Some demands appear to derive from factors, such as population pressures, which were among causes of the changes.

representative of the people, again, just a little time). On the second because some industrial societies are not sick in a normal sense (though *some* may be), rather sickness has to be so redefined (such low redefinitions are among underlying subplots⁶⁷) that having certain ideological commitments that are carried into practice counts as “sickness”.

So it is that Shepard arrives at his *theme* of ‘general, culturally-ratified distortions of childhood, of massive disablement of ontogeny as the basis of irrational and self-destructive attitudes towards the natural environment’ (p.ix). Succinctly, ‘there are profound psychic dislocation at the root of modern society’ (p.xii). Psychic disorders have evolved: ‘over the centuries major institutions and metaphysics might finally celebrate attitudes and ideas originating in the normal context of immaturity [or] ... adolescence ...’ (p.15).

Having glided easily and invalidly to the idea of sick societies, in a mere three pages, Shepard proceeds to diagnose in more detail the nature of the alleged sickness.⁶⁸ It supposedly arises, like other psychopathy with which it is immediately associated, in infancy, and is manifest in life-long immaturity, with whole societies stuck in a kind of destructive adolescence. No doubt there is something to some of what Shepard describes in child and person development (not the ‘private demons’ and so on) or might well have described. There is evidently, conspicuously in “new world” societies, wide commitment to a shallow juvenile culture, adulation or imitation of immature media and sport models and flawed authority figures, marginalization of the elderly, and so on, coupled with hyper-activity, violence and vandalism. But, like political commitment to extensive economic activity, this is hardly satisfactorily accounted for through psychopathological reduction, concentrating the whole social problematic in the ontogeny of individuals.⁶⁹ A superior explanation to widespread individual psychic disorder proceeds through ideological commitment, that industrial human are raised and educated in, inducted into and committed to, defective ideologies without coming to know or properly experience alternatives.

The ‘portraits of maturity’ alluded to likewise appear individualistic and culture-bound, resembling those of deep ecology, directed at embroidery of person and self, through personal

⁶⁷ For trickery through redefinition of sickness and madness, Wisdom has already prepared us. Observe that Shepard’s redefinition of sickness to include sick (i.e. debasing and devaluing) practices with regard to natural habitats (and conjoined therewith, to, older people) does not leave no contrast classes. For there remain benign ‘relic tribal’ societies, such as the Manus, Crow and Comanche, Aranda and !Kung San (p.xii), ‘people who feel themselves to be *guests* rather than *masters*’ (p.6 *emphasis added*)—an elegant analogy.

⁶⁸ ‘The idea of a sick society’, which as Shepard confesses (on p.4) is hardly new, is reached on the third page of the main text.

⁶⁹ A psychopathic reduction is in part made plausible by reexpression in medical or psychological terms of what would better be otherwise expressed. Consider, for instance the language of the following clever paragraph, which infiltrates much with no argument:

‘The person himself is, of course, caught between his inner calendar and the surgeries of society. His momentum for further growth may be twisted or amputated according to the hostilities, fears, or fantasies required of him, as his retardation is silently engineered to domesticate his integrity or to allow him to share in the collective dream of mastery’ (p.16). But the trapping of agents between inner directives and social conditions and demands, or between rival ideologies, can be retold in different, less medical and metaphorical terms.

growth and identity, wider identification and relatedness, self-realization.⁷⁰ They are not exactly those of older and ecologically wiser societies. They do not reveal ecologically mature mixed communities.

Furthermore, comparisons with relic tribal societies, which are important, can be decoupled from psychopathological analysis and reduction. Different lifeways, commitments and ideologies, are what they are and do not all reduce to matters of mental health. Undoubtedly we can learn of and from these different societies. We can still witness 'small-group, leisured, foraging life-ways with[in] natural surroundings. ... there is the rub—... for us, now, that world no longer exists' (p.14 rearranged). Nor is it really true that such a world is no longer accessible to most of us; more leisured small-group ways can be retrieved, some natural surrounding can even now be restored.

In a curious fashion, Shepard has managed to invert likely causal relations. While a certain interaction can no doubt be conceded, it is not so much human ill-health that is leading to environmental degradation, but rather environmental degradation, generally brought about for other reasons, that is increasingly leading to human ill-health, and in the longer term causing erosion of life-support systems.

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⁷⁰ Cf pp.12-14. Likewise there is a conservative underlay, more oppressive than that of deep ecology: insistence on 'one particular mother' (p.7) even suggestion of unsatisfactoriness in 'taking mothers off to work' (p.15)!

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MUCKING WITH NATURE

Let Being Be: so deep ecology recommends, following later Heidegger. The main advice tendered is that we interference-inclined beings let things, natural things particularly, be the way they are. This means a tolerance for natural things in their own forms, a preparedness to leave places and natural systems alone, not to interfere or change natural things arbitrarily or casually, nor to simply exploit them. While a hands-off no-action, non-interference and non-management, approach is no doubt the *right sort* of policy recipe for the diminishingly few not significantly damaged or messed about with natural systems still remaining on Earth, deep advice is little heeded; serious interference inroads continue to be made almost everywhere upon parts of remaining natural systems. The inadequacy of the justificatory bases for these assaults needs repeated exposure. Moreover, questions arise as to what to do about, and with, the increasingly many damaged, degenerated or vandalised natural areas, where there may be room to make a difference for the better, to initiate some restoration or rehabilitation. It is upon some of these questions that the present essay concentrates.

To obtain a clearer view of the terrain than is usually available, it is important to attend to two regularly neglected matters:

- to distinguish and classify cases, and
 - to disentangle relevant “management”, theses and different non-interference theses.
- The present essay concentrates upon cases where there is or has been active interference; so to begin with, cases of non-interference should be separated off. But even such analytic activity has of course been resisted. There has been a concerted attempt to assimilate cases of non-interference to those of interference – typically for standard power or profit-based motives such as control, management or conquest, for instance in order to prepare for inroads upon uninterfered-with areas. The arguments advanced are characteristically bad. Bottom of a rotten barrel is this kind: as doing nothing counts as doing something, inaction as action, so non-interference itself amounts to interference!¹ Similarly (similarly amazingly) there are no unmanaged systems: just varieties of management, with apparent nonmanagement nothing but negligent management. Then there are the many assimilation and analogical “arguments”: interference merely resembles, and is no worse than, past natural forces which have shaped and

¹ Poor as this argument (regrettably glimpsed in works of environmental philosophers) is, it is not that much worse than influential arguments advanced by major philosophers. Consider, for instance, the famous Riddle of NonBeing, which, in a parallel formulation, asserts that non-existence itself amounts to a form of existence. In more familiar mode, consider any item, Pegasus for instance, that does not exist. That's already contradictory, according to the surprising Riddle; for the truth of “Pegasus does not exist”, implies that Pegasus does exist, whence Pegasus both does and does not exist!

(catastrophically) transformed environments: fires and cyclones, earthquakes and landslides, and so on. (Such abysmal arguments, more excuses for exploitation than arguments, are critically assessed in FF chapter 1.) Then there are encroachment, or working-inwards arguments. For instance, it is noted that, increasingly, there is need for action beyond and at the boundaries of natural or recovering areas to prevent internal incursions, disturbance, and so forth. But such exterior action in no way subverts internal non-interference; the idea that it does confuses topological exteriors and interiors (while deliberate practice may erode the boundary and establish the conditions for a slippery slide inwards). Nor, in any event, is so preventing internal interference itself a type of such interference.

1. A CLASSIFICATION OF TYPES OF ACTIVE INTERFERENCE OR INTERVENTION.

There is a rich mixture of cases of interference or intervention to distinguish. There has been a marked propensity, however, convenient for various vested interests, anxious to interfere or to support interference, to mix them up. The conflation has also been used on other, green side to oppose worthwhile restoration prospects. Yet what is feasible or justifiable to do to already damaged systems is very different from analogues for pristine systems, terrestrial or extraterrestrial. The cases fall into two broad groups.

Group 1. *Active interference with substantially natural systems.*

This first group of types of cases comprises those proceeding from, and typically altering, substantially uninterfered with and unmodified natural environments. What is distinctive is then the *initial* state, which is essentially natural. Normally the natural state would be proceeding, before intervention and disruption, by slow evolutionary processes. Introduced in this way, it already seems clear that the onus of justification for drastic non-conservative change should fall upon those aiming to proceed with the change.² That this appearance may seem to vanish with the arrival of Mammon or economic rationality, reflects on the adequacy of the general practices involved, not on the illusoriness of the appearance.

Let us begin with two types of *commandeering* what are (essentially) natural areas, one for more short-term exploitation, the other longer-term supposedly renewable operations.

² Assumed is the recent shift in values from the bleak dark times when natural systems had no recognised value (perhaps only human labour did, not even human wants) and were “free” for exploitation. Other more problematic assumptions will enter in what follows, for instance that we can approximate total value assignments for the options offering in controversial cases like beach sand mining projects. While that is a myth (a myth underpinning consequentialism however), we can with some informed guessing achieve something in the order of a subjective probability distribution, namely an appropriate partial (and extendible) assignment of nonjective values. For the presupposed deep-green theory, which also explains the jargon, see EE .

Type 1. Environmental *pillage* comprises short-term despoliation: cut-out and get-out processes. Maybe the despoiled region will gradually recover in part through natural healing processes, maybe it will not; the issue is usually not of great concern to the operators. Their time-lines rarely exceed a smattering of years, and their costings rarely take much account of the heavy environmental costs incurred, never the full costs. Such operations, still celebrated by old-timers and industrial moguls, are now being pushed, in the more civilized world, further and further into the out-back and under more and more controls - except when they are military operations. Hopefully, their time is appropriately numbered.

Type 2. A second type of commandeering, often benignly called *reclamation*, takes over natural environments allegedly for longer-term purposes, such as agriculture, transport networks or settlement. Thus the swamps of Waikato “reclaimed” for dairying, parts of the lowlands of Holland from the sea, and swathes of the Amazon forest on the pretext of on-going beef raising. Such usage is doubly inappropriate. While there may be a proper use for the term “reclaiming”, where the sea floods or removes former agricultural land, or volcanic outflows or debris coat it, there is little case for the term, where it is commonly used – infilling deltas and estuaries, etc. If a swamp or an estuary never was under human domination, how can it be *re*claimed? Unless, perhaps, humans are taken to have a claim on all natural systems not already claimed by other recognised humans. The term “reclaiming” is thus a highly loaded term, which incorrectly suggests that something has been taken away from a legitimate use.

Not so long ago there was considerable enthusiasm for grand reclamation schemes. Even the rare philosopher with some sensitivity to natural environments, such as J.S. Mill, shared this general enthusiasm (see his essay *Nature*). Now, as the natural world shrinks apace, schemes of this sort are increasingly in doubt. But an enormous amount of small-scale reclamation does proceed apace, as human populations and touring populations continue to grow, almost everywhere. Hedges and “waste areas” where wildflowers grew disappear; natural scrubberies are knocked over for exotic grasses, golf courses, or suburban swimming pools.

To offset mounting criticism of short-term commandeering practices, “responsible” extraction firms now offer some restoration, at least when not outback or abroad and out of main view. Restitution, at least in the unattainable ideal limit, entirely undermines environmental criticism, so it is sometimes fondly imagined.

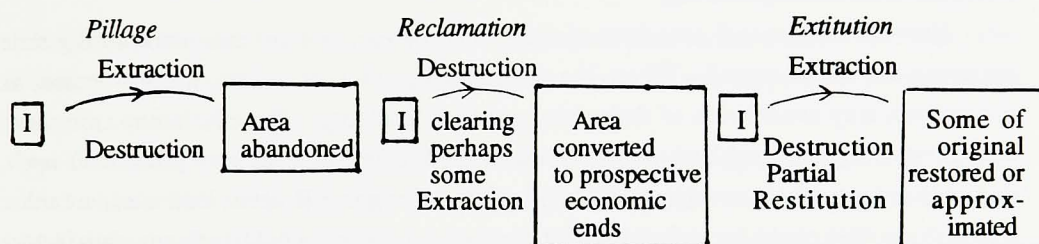
Type 3. *Extitution*, to coin a term, involves extraction followed by some restitution, as when following a clear-cutting operation, where the landscape is blitzed, the landscape is recontoured, perhaps burnt, ripped and seeded or planted. Typically of course with forestry operations, as distinct from some purely mining exercises, restitution does not attempt to approximate the original well, but is aimed at a commercial tree cover; the understorey is neglected, as are the original inhabitants, who when not entirely forgotten may be moved first, not to return. Thus

type 3 may shade into type 2, when a “sustainable” commercial system, such as a pulp forest or agro-forestry, is the objective. The shading occurs because pure forestry tends to leave many more relics of the original than, for example, intensive agriculture.

The different types discerned can be usefully displayed through process diagrams, of the general form:-



In all group 1 cases, the initial state 1 involve that of a substantially natural area, which is then transformed by processes significantly reducing its naturalness.³ Of course the same processes can operate in other environments.



Evidently some of these processes can be decomposed into subprocesses, in particular extitution thus:

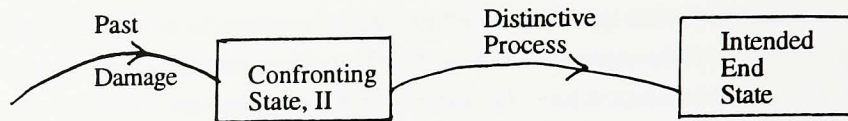


But plainly this exposes elements an integrated engineering operation is designed to remove from public view.

Group II. *Active interference with damaged or modified systems.*

This second group of types of cases results, in effect, by altering the initial state I to that where the environment is no longer substantially natural but has suffered past damage. Accordingly, the diagrams will take the form:

³ There is an overemphasized problem about what is natural, and the place of humans in “natural” settings. For present purposes, it will suffice to follow Elliot’s brief discussion, and take ‘natural’ to mean something like ‘substantially unmodified by human activity’ (cf. p.144: all such page references without further indication are to Elliot’s main article). For a detailed discussion of Nature and what is natural, see DP.



The cases to be considered are cases of natural evolutionary processes disrupted by human intrusion and interference. But, of course, natural processes do proceed occasionally in revolutionary ways – natural disasters so-called, such as volcanic eruptions, hurricanes, floods, ... and so on, interventions all heavily but misleadingly deployed in forestry and other industrial propaganda (see again FF). Without doubt such natural processes may lead to reduction in value, as when mass species reduction of prized species occurs, or where vast areas of rich forest give way to poor savannah. The propaganda tends to rely upon the assumption, sponsored by too many environmentalists, that whatever happens naturally is alright, coupled with the assumption that *very* approximate imitations (or fakes) of natural products are adequate. Both assumptions fail.

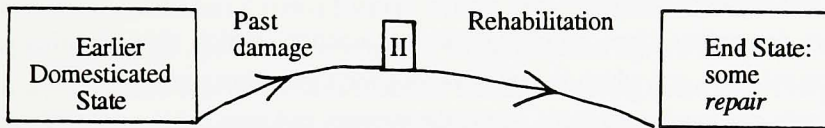
Now all the group I cases can simply be repeated, with the new confronting state replacing the initial state I. Where the past damage has been severe, such processes as reclamation may avoid much of their previous objectionability. There is, in any case, quite enough severely damaged land already available, and “idle”, to work such procedures upon. Rather than repeat these analogues of group I types under group II, let us look at some further types, types that could be included under group I but which would lack any satisfactory justification in that setting.

The group II types to be primarily investigated comprise cases of partial restoration, of already substantially damaged or interfered with systems, to something more resembling some past state (so far as this can be ascertained). Where the attempt is to replicate some remote past state, there may be complicating physical limitations, e.g. the place has changed location (owing to tectonic plate movement), the climate has changed, so trees can no longer grow where once they did, etc. It is worse than impractical to work to help return a desert to its remote rainforest form.

Type 4. Rehabilitation implies some deliberate alteration in the system towards a former more natural less degraded state. Plainly, there are various degrees to which this effect can be sought or achieved. At a fairly minimal, if still arduous level, it may comprise little more than – what may be important and enough to allow natural processes to do the rest – weed removal, or removal of severe scars, such as planting of erosion gullies and slips. It may well involve contemporary artifice and technology, including sophisticated fencing to keep *out* stock, feral animals, native animals, perhaps humans. It may involve patrolling, to actively remove or exclude intruders. (From this angle, life is still easy in the Antipodes compared with parts of Africa, where poachers and active peasants and their domestic animals have to be kept at bay if prized animals and any trees are to survive.)

More active naturalistic rehabilitation will include such steps as replanting with local trees. Regeneration may include nonlocal species if these are introduced as a temporary measure, for instance to speed natural regeneration by providing a partial cover (a practice with acacia species in regenerating former rainforest areas in Australia). It is partly for cover reasons also that trees tend to come first, or as sole item, in large-scale endeavours in Australia (e.g. in South Australian efforts).⁴

So far the emphasis has been on *naturalistic* rehabilitation. But there is nothing the notion of rehabilitation that implies such naturalistic direction, as the following diagram serves to indicate:



Rehabilitation may thus involve transformation back towards an earlier domesticated state. One important type of such less naturalistic rehabilitation, typically well disposed to environmental concerns, constitutes the next type to be singled out.

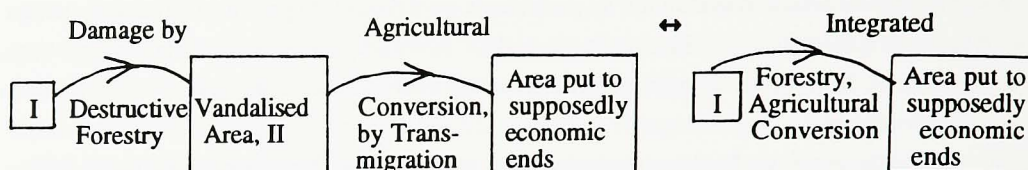
Type 5. Reinhabitation tends to place humans foremost – though, with the emphasis on communities which the practices commonly include, occupation may be by communities of people and animals. Rural reinhabitation normally consists in resettlement, by groups, families or communities, of often rather “run-down” farming areas, formerly occupied or abandoned by small or family farmers. Whereas the previous farms were operated as small enterprises within the prevailing mixed economy (though with more on-farm inputs to food, fertilizer and energy than modern business farming), the new settlements are much more oriented to subsistence farming and tend to rely on much less on sale of agriculture produce and much more on off-farm inputs from welfare and urban jobs.

Reinhabitation is a largely voluntary (re)occupation process, little supported by (and often opposed by) government and state organisations. In these respects, among others, they contrast with a variety of resettlement schemes.

Type 6. Resettlement schemes are themselves of many types, including for instance, reserves for native people, farm settlements for ex-soldiers, occasional social experiments, even transmigration as damagingly practised in Indonesia. Some of these resettlement procedures would however be better classified as subtypes of group I cases, transmigration for example

⁴ Other reasons are less commendable, for instance the hang-up on size, favouring giant trees over lesser trees and these over scrubs. Interestingly, in constricted suburban gardens these rankings are sometimes reversed.

where it is integrated (as in Kalimantan) with destruction of the natural environment. Interconversion of process diagrams makes the point:-

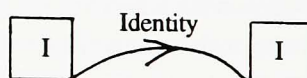


Pillage thus is made, through a veneer of integrated planning, to look like reclamation. Quite differently, such interconversions of process diagrams exposes to view the softness of necessary classificatory exercises.

There is another type, requiring passing mention, which also contains several overlapping subtypes, and which shades in various ways into other types.

Type 7. Parks and garden schemes, where the intended end state is not a primarily economic one. Though revenue may be generated by visitors, research produce such as new varieties, seeds, books, landscaping services, and the like, nonetheless the operations and maintenance typically depend on subsidization, either by a state, a club, or a wealthy organisation or individual. Mostly these schemes aim at species-enrichment of the park or garden environment by introduction of prized exotic species, or species considered representative of other environments.

In fact, many older parks and gardens were produced by serious interference with substantially natural uninterfered-with environments, i.e. such cases would count as belonging to Group I cases, though directed at a utilitarian (educational and recreational) end state or, more purely, produced with an ornamental-aesthetic end in view. Would that the times of cutting into fine or typical natural ares of gardens, playgrounds, or like artifice, were past; but in too many cities these practices continue on both public and private lands. Too often supposed national parks also supply examples of this general sort, where sizeable chunks are cut out of a natural environment for recreation or amenity areas or for roads and service areas, and then more and more is taken for recreation or “research” A pure reserve, an increasingly rare object, is represented by the identity process; that is, a pure natural reserve, which few national parks are (except in fragmentary parts), has the diagram:



Many of the preceding types, having been introduced and placed within the broad explanatory classification⁵, will now be set aside. What will be investigated, in much greater

⁵ The classification has still to be much improved, since neither exhaustive nor sufficiently exclusive. For example, there is a third group III, comprising interference which is not

detail, are aspects of just two types: extitution, and rehabilitation. Extitution has (amazingly) been presented as putting heavy extraction industries on a sound environmental basis, while rehabilitation, sometimes condemned on similar grounds to extitution, has (curiously) been criticised as faking nature or playing god.

While only certain sorts of macro-mucking with nature get examined, in sequels other sorts of interference will be considered, or examined in more detail. Also investigations of micro-mucking exercises, which often have unintended as well as intended macro-consequences, will be initiated. Micro-mucking includes genetic engineering, vaccine utilization, tampering with tissues and cells, and like practices.

2. EXTITUTION (EXTRACTION-RESTITUTION) AND “FAKING NATURE”.

Most extraction operations – mining, logging, some agriculture – do little or no restoration, but indeed depend for their financial viability on doing little or *none* (typically they depend as well as on substantial infrastructure assistance, government incentives, special tax concessions, and so on, as for instance most open-cut mining in the Australian “out back” well away from main urban centres). But some operations have now to comply with restoration requirements, of varying degrees of rigour - none very taxing: virtually all such enterprise could be stopped by moderately demanding conditions.⁶

What is said about extraction-restoration cases depends considerably on *how* the integrated process is carried out. It is easy to *imagine* circumstances where operations are much less damaging than those actually used presently, operations unlikely to be much used because of their costs. Consider, for instance, mining by tunnelling under a natural area from outside it, and duly backfilling and sealing when the precious ore is extracted. Or consider pure aerial logging where trees are not dropped to the ground, but lifted straight-up out of the forest, so there is no damaging roading, little smashing down of surrounding vegetation, destruction of habitats, and so forth, just some selective uplifting. The actual practices that we see are very far removed from such imaginable procedures, and appear likely to remain so in present avaricious congested times. Much more typical of actual industrial practice is devastation followed at the end of operations by some shabby, markedly inferior clean-up and patch-up. Consider what

active (and deliberately undertaken); for instance just being there, fairly passively, in sufficient numbers or with equivalent impact.

⁶ It is important to ask: why is the need for restoration felt by many extracting companies nowadays? Mainly of course they are *pushed*, in one public (or state) way or another. But some now recognise, to some extent, the damage extraction does, its negative “externalities”. The recognition connects with a critical shift in values (cf. note 2) from the older assessments of natural systems as having at most negligible prior value. Now it is conceded that such systems, even if not valuable in themselves can enter positively into the preference-rankings of many present and future valuers.

happens too often with beach sand mining on Australian coasts, both eastern and western. Those vandalistic buggers go in with their heavy imported machinery, and knock over a rich and complex littoral rainforest growing on the dunes, which they eventually replace, after processing, with a flattened sand expanse, sparsely covered by a straggly array of sclerophyll scrubs mixed with boneseed and other imported weeds. It often does not require much skill to make comparative value assignments for *before* and *after* states (these can then be depicted on process diagrams). And too often the result is that the *after* state has markedly inferior value to the *before* state; indeed in many cases the difference is enough to render the whole operation dubious or undesirable. No doubt, however, such operations with restoration involve a considerable improvement on former practices. There is a mining area at Captains Flat, not far from where I live, where the subsequent public clean-up alone – necessary because of toxic chemical leakage, but still bare and ugly in result – cost *much* more (in duly discounted terms) than was ever privately gained from the previous mining operations (even generously allowing for economic multiplier effects and other trickery). When more satisfactory environmental accounting is done, extraction operations of this debasing sort appear to be commonplace.

Can extoration jobs or extitution projects any longer – now that some requisite environmental accounting is done – be justified? No, they cannot. So says a [the?] worthwhile segment of the exponentiating discussion of ecological restoration in environmental philosophy. A seminal article, Elliot's much cited 'Faking nature', appears to say as much. For Elliot appears to demolish the "restoration thesis", that the 'destruction of what has value is compensated for by the later creation (recreation) of something of equal value' (p.142). But it is just this sort of thesis that is taken to theoretically justify the claim made on behalf of extoration projects that they cause no permanent damage because compensating restoration can be effected. What Elliot appears to show is instead that value is inevitably reduced, and that justification is therefore lacking.

Unfortunately 'Faking nature' is itself of a deceptive nature. For Elliot formulates his main claims in nonequivalent, sometimes evasive, and mostly hedged-about ways, open to, and given, different interpretations by different readers. Certainly Elliot has been read as claiming that engineered and regimented "natural" landscapes and systems lack the value of the originals they replace, that restored "wilderness" lacks the value of pristine wilderness. He *seems* to suggest, therefore, that mining, logging and other damaging extractions enterprises ought not to proceed; and he lets the unwary conclude from his suggestions that wilderness should be let be. But Elliot makes no such claims. Indeed he is pretty evasive about what is really being shown (witness the high concentration of modal terms deployed), and speaks often with a forked tongue. He gives the impression he is with the environmentalists and conservations, perhaps all the way, by sometimes guardedly speaking with them (e.g. 'We might claim', 'we may value') and by regularly infiltrating strong aesthetic judgements, e.g. that an area to be bulldozed may

'contain striking rock formations or particularly fine specimens of mountain ash' (p.143). In fact however, these are only the sorts of judgements that a forester enthusiastic about forests, but fully committed to their regular clearcutting, may also offer. Moreover, Elliot proceeds to shift the burden of proof to the environmentalist, when from a conservative stance it plainly falls on the developer who is the party proposing radical disruptive change from past status: 'The environmentalist needs to' do this and that, in particular 'he [or she] needs to appeal to some feature which cannot be replicated as some part of a natural area's value' (p.144), if a *prima facie* case for development and restoration of a natural area is to be defeated! Such demands are onerous and unjustified; the onus of argument no longer falls that way. As to outcome of such disputes, Elliot does a careful, and politically very familiar, balancing act:

Establishing that restoration projects, even if empirically successful, do not restore value does not by any means constitute a knock-down argument against some environmentally disruptive policy. The value that would be lost if such a policy were implemented may be just one value among many which conflict in this situation. Countervailing considerations may be decisive and the policy thereby shown to be the right one (p.143).

At best the matter of lost value 'will provide an extra, though by no means decisive, reason for adopting certain environmental policies' (*ibid*). In particular, it is left entirely open that the value of the extracted material together with that of the restored area exceeds that of the original area, even though the original area *may* have more value than the restored area (i.e. even granted the "restoration thesis" fails).⁷ Unremarkedly then no ought-nots emerge from the underlying shallow benefit-cost environmentalism of this article. What environmentalists may find are some bits of ammunition for the ideological battle against developers and their hired engineers, dubious bits some of them, such as the faking idea, as will appear.⁸

⁷ In symbols, $v(\text{extract}) + v(\text{restored } \alpha) > v(\text{original } \alpha)$, though $v(\text{original } \alpha) > v(\text{restored } \alpha)$. Of course even then no *oughts* or *ought nots* follow, except on simplistic utilitarianisms, which match them to maximizing value. But *ought* judgements do not derive quite so easily.

⁸ Elliot has also been read as making a positive statement about wilderness, with his article anthologized under the dubious heading, 'Wilderness: What Is It "Good For"?' (It is no secret that some noted animal liberationists, of a utilitarian cast, closely associated with the editors of this anthology, do not think wilderness has more than mere instrumental value.) Again appearances are deceptive. While Elliot skilfully adapts the wilderness experience machine to show that someone (John), who does value wilderness, is short-changed when given some mere product of contrivance or engineering in its place, he does not reach a positive evaluation of wilderness or a case for it. What we get is: 'it is possible to understand and sympathize with John's claim that the [restored or regenerated] environmental does not have the fullest possible value' (p.147). Again, *we* have been short-changed. Further Elliot is prepared to countenance mucking with natural landforms, and wilderness, which do not measure up to approved shallower experiential standards, as emerges from his (warranted) discussion of naturalness as but one factor in the mix of valational factors: 'Artificially transforming an utterly barren, ecologically bankrupt landscape [not Tokyo or other mega-citiscapes, but natural landforms!] into something richer and more subtle may be good thing' (p.146).

Nor does it appear to be much appreciated how exceedingly *weak* the awkward main claim he does venture is: 'My claim then is that restoration policies do not always restore value because part of the reason we value bits of the environment is because they are natural to a high degree' (p.144). No doubt an entirely general claim (deleting the 'always') cannot be sustained; for a naturally destroyed environment may sometimes be restored to one of greater value.⁹ Taking account of such abnormal cases would lead only however to a thesis of restricted generality, not to the weak claim of particularity that Elliot offers. There is *no* general statement of greater value of substantially natural undisturbed environments, only this minimal claim that restoration policies *sometimes* fail to restore value.¹⁰ So they do; but scarcely a developer around need lose any sleep over that, as it need not touch any future development. Thus Elliot rejects only in absolutely *minimal* way the "restoration thesis": to reiterate 'that the destruction of what has value is compensated for by the later creation (re-creation) of something [sufficiently similar] of equal value' (p.142). Stated in that lax fashion a restoration thesis is often enough true; the fractured cup or broken wheel is replaced by a superior one, and similarly. 'What has value' has to be appropriately restricted to environmentally relevant items.

Perhaps the utter weakness of what Elliot eventually goes on to claim has escaped attention because he fronts up very tough, so it may appear. He is going to show that there is an ethical system, with very nice properties and 'not lacking in normative appeal', 'which supports decisive objections to the restoration thesis' (p.143). No doubt there is – at least to a duly revised restoration thesis – virtually any deeper environmental ethic. That is not nearly good enough: environmental engineers need to be met on, or nearer to, their own ground. Elliot does offer some suggestions as to how to do just that, some good, some not so good, but does not follow through with any due environmental resolve.

In the main development of his argument, differentiating original from restored environment, Elliot slides from suggestion to suggestion. He glides through the suggestion that the original is valuable because it is natural – variously, unmodified by humans, undeveloped, unspoilt, even unsullied – to the suggestion that the restored copy lacks similar value because it is not simply a copy, but a *fake*, thereby importing a term which conveniently carries heavy negative connotation. 'Thus we might claim that what the environmental engineers are

⁹ With certain artefacts, restoration can greatly enhance economic value, e.g. vintage cars, classic furniture, etc, though the items may only be restored to original forms. Such examples help bring out the obvious point as to the extent to which value assigned is time-dependent (something obvious in degenerate types of valuation, such as valuations in real estate).

Valuation also easily moves into the subjunctive-hypothetical (something real estate valuers are loath to admit). It would have been better to still have the original forest. Given however the devaluation that has occurred, it is worth settling for a restored environment.

¹⁰ The weak particular form is not a slip; it is repeated; e.g. '*there will be cases where... it is better to have the natural object than ... the artefact*' (p.145, italics added).

proposing is that we accept a fake or a forgery instead of the real thing. If the claim can be made good then perhaps an adequate response to *restoration proposals* is to point out that they *merely fake nature*' (p.144, strong embedded claim italicized). Such a claim cannot be made good generally, and is too easily repudiated by the engineers. For the contrast between the restored environment and the original typically does not resemble that of fake and original. Particularly relevant, there will normally be no element of deception or fraud, and furthermore, in the unachievable case of perfect restoration which Elliot envisages, no covering up of faults or defects so as to give a presentable appearance. In short, there need be, as out-front-argument-smart engineers can insist, no faking; the restored environment is not normally a fake.

A more elaborate argument to the same end appeals to the standard sense of 'fake', as supplied in English dictionaries. For example, according to the *Concise Oxford* entry for **fake**: 'v.t. to do up, to cover up defects or faults, so as to give a presentable appearance to, to doctor; to contrive, to fabricate, to make up from defective material; to cheat, to defraud, to deceive'. Observe that the result of faking a processed item is a *fake* – and that is 'n. a thing thus prepared for deception, esp. a manufactured antique (furniture, etc.); a swindle, a dodge'. In a "restored" forest, or beach, there is normally no such element of deception. For overt operations, the whole idea of faking, of fakes, looks misplaced.¹¹

In certain special cases however, elements of deception may occur, as when forestry companies try to make damage a *fait accompli* by making a secret start on operations, or as when logging is hidden from roads by a veneer of old-growth timber. Elliot does consider, but in passing and with a different purpose, what some might count as faking as regards nature (as distinct from artefacts); namely situations where environmental engineers 'perform the restoration quickly and secretly' (p.146). What is really required for an analogue of faking is their performing the *whole* extoration process secretly and deceitfully, and then passing the done-up environment off as untouched or pristine. (Even then some may have qualms about use of the term 'faking', because there is no artist or artisan responsible for the original, unless a creative god be drawn into the argument.) But few cases of consequence are of this sort, especially when Environment Watch! is on the job (since also restoration is far from instantaneous). There are other special cases too, of artificially contrived, made to look natural, environments, such as beaches and ports in grand shopping malls. With some stretching, these could be accounted "fakes", though there are apter terms. Usually such cases are not extoration jobs.

¹¹ Other terms used in the literature, while better for some purposes (e.g. avoiding the assumption of fraud), suffer other limitations. One is *imitate*. 'To imitate' means, however, 'to produce a likeness of in form, colour, or appearance; to follow the example of; to mimic, to ape'. Imitation typically produces a *copy elsewhere*, of something ... It could however be a later copy in the same place as an earlier original, etc.

Another serious weakness in the faking comparison is this: that faking does not (normally) include restoration; it involves production of a replica or of an analogue, neither of which, by contrast with restoration, touch an original. If faking did involve mucking with originals, it would cause even more of a stir. Certainly too if art restoration proceeded like environmental “restoration” there would be some outrage. A Rembrandt work would then be “restored” by first destroying or vandalising it, next extracting what is commercially valuable in it (maybe the pigments contained precious metal), and finally knocking out an inferior look-like from what was left of it. Not really a smart way of increasing value.

There are yet other weaknesses in the faking comparison derived from art and craft. For in the source situation, both the original and the fake are, in significant respects, human products, and draw their value in part or whole from that instrumentality, from their mode and manner of production, the creativity involved, and so forth. They are *both* instrumentally-achieved artifacts, in a way that an original environment is not. Penetrating more deeply into the trouble with fakes, what is wrong with them apart from their fraudulent mode of production and presentation, does however offer a guide to other reasons why extortion *characteristically* diminishes value: its bearing on the history of (dubiously) interfered-with items.

The upshot is that the faking analogy, heavily relied upon by Elliot is the course of his spider-webbish argument, really has to be given up – which rends the web. It is no longer enough in the relevant contexts, if it ever was, to argue simply that ‘fakes lack a value possessed by the real thing’ (p.144 ff.). What is left? Fortunately more important components fused into the argument, which operates beyond artistic-aesthetic analogues, remain: that of origins, and associated value-delivering features, such as uniqueness and irreplaceability. In these terms, Elliot has conflated the undoubtedly important issue of origins with a special case of it, relevant to certain artifacts, faking. The partially concealed argument turns on the significance of the *origins and genesis, process and history* of an item for its value. In this connection, which is of the first importance, Elliot develops three nice examples, which reveal that ‘an object’s origins do affect its value and our valuations of it’ (p.144: the nicest of all is the bone gift, an exquisitely carved object which he treasures, *until* he discovers ‘that it is carved out of the bone of someone killed especially for that purpose’ p.145). Unfortunately however in main statements of his claim as to the inferior value of restored environments, origins are hidden again; he revert to the faking analogy or proceeds to substitute *naturalness*, which does not do the same work, for *origins and genesis*.

Even though the faking, forgery analogy breaks down, its failure does not mean that extortion is admissible after all. Nor does it mean that there can be no general principles for evaluating types of restoration, that, as is sometimes erroneously suggested, extortion proposals must be evaluated case by case. Despite its failure the analogy is nonetheless highly suggestive. Its highlights the importance of history and its features, origins, genesis, evolution;

it also emphasizes the art-like features of natural items, such as uniqueness, irreplaceability and nonsubstitutability. For history is not all there is to it. Highly valuable natural systems, wilderness and species, like original art works, are characteristically unique, irreplaceable and unsubstitutable, important value-delivering features, tied to a full history.¹²

The assumption regularly produced in support of the restoration thesis is the *present-value* assumption: that an item's value can be fully assessed in terms of how it now appears and is, in terms (more narrowly) of its features as-of-now in the present time slice. But that is a *truncated* item, an item whose past and future has been abstracted away. Exposed so nakedly such an evaluation procedure may look foolish. However it is the sort of procedure, the sort of evaluation, that we are regularly invited and encouraged to make, every time we enter a market. Market valuations are supposed to be based on price, which reflects present condition.¹³ We are not supposed to enquire about the history of produce, whether it was produced under sweat-shop conditions, or by child labour, whether it involved wall-of-death fishing, or life-threatening pesticides, or other environmentally or socially inadmissible or dubious procedures.

Fortunately some of us do now sometimes make further requisite enquiries, whereupon however we lose the “objectivity” of the market, and move to the murky world of shadow pricing – which is a weird way of trying to retain the shonky equation of value with price (as operationally assessed, not properly interpreted transworld). Shadow pricing at least exposes the importance of origins and genesis, that the value of a commodity cannot be satisfactorily truncated to its present shelf features. Examples like Elliot's can then be used to show that the present-value assumption fails not only for commodities but right across the value spectrum.

The present-value assumption is part of a much wider, and generally defective philosophical practice, that of *skimming*. Indeed a major and systematic drive in human

¹² Explaining these factors and how they contribute (already explained in deep-green theory), important though it is, is a separable exercise. A suitable initial characterisation of one of them, irreplaceability, can be reached by modifying the formulation arrived at in Goodin (p.61). The subjective emphasis Goodin unnecessarily insists upon can be removed by replacing his ‘pursuit of ... our ultimate ends’ by ‘contribution to ... ultimate value’, whereupon objectivity or not will depend on the underlying account of values. In these (nonjective) terms, an item is *irreplaceable* if no other available item can substitute for it in its contribution to ultimate value, a value for which in turn no other value can substitute.

¹³ Not only the textbook market system, but the actual practice of economics, as reflected for instance in company and government accounting, encourages neglect of past and future features. (Of course the practice is opposed by a more advanced but never applied theory. For insofar as the presupposed theory amounts to a restricted utilitarianism, all future consequences have to be really taken into reckoning.) Only in special circumstances do features outside a present time slice, history and prospects, enter. Mining and forestry operations, for example, do not normally budget for long-term clean-up, pollution or erosion neutralizing or negating operations. Future markets do take some limited account of future movements (but as discounted), and antique markets of past sequences; likewise art markets. If it is discovered that an art work, up for auction, is not the work of an old master but a clever forgery then the value expected, and realised, is liable to plummet. Evidently then *modified* markets could do much more to take account of world lines of objects, and could be coupled with cradle-to-grave accounting for commodities.

intellectual practice is towards skimping: leaving out relevant considerations, omitting detail, truncating, reducing, functionalising, over-economizing. Now skimping, which undoubtedly often makes thing intellectually easier, and may enable quantitative development and even beloved calculation, does have a *limited* role, especially in modellings, in approximations, and so on. But extrapolation from such reduced roles, and some success there, to how things *are* (presumptively no more than their models or reductions), that is entirely unwarranted. Two relevant examples of skimping concern aesthetics and ethics. For example, a continuing battle in literary criticism takes place over what sort of skimping is permissible: whether authors' biographical details enter, whether historical setting matter, whether systematics or transcultural comparisons count for anything, and so on (under some forms of skimping, analogues of forgeries and fakings, plagiarism and the like, hardly matter very much). Rather evidently all the components that forms of skimping try to eliminate should enter; issues should turn rather on their relevant weights (some of which may be small). It is similar for ethics. Mainstream ethical theories (that shallow thinkers still imagine environmental philosophers should be *applying*) are *distinguished* by their style of skimping. Consequentialisms, and their narrow forms such as utilitarianisms, leave out all but consequences: motives, surrounding decision context, history, and so on. By contrast, a main rival, Kantian ethics, skimps on virtually all but motives, on consequences especially. A correct ethics does not skimp.

Much in restoration and management theory turns on skimping, for example upon stripping down value to present value or to other sub-components of full value. Stripping away some of the past or the future reduces a dynamic thing, diminishes it. The properties a thing has at a given time are not all there is to it, by any means (the assumption that it is part of the genesis of personal and other identity problems). Two items exactly alike now, in their present time slice, are nonetheless not identical, and perhaps diverge significantly, not least in value, because of radically different histories or future paths. But an original and its attempted restoration may differ in precisely this sort of way. The "restoration thesis" depends upon serious skimping.

Skimping also appears in the contention, advanced on behalf of restoration objectives, that "no one objects to the destruction of an object such as a mass-produced trinket, if it can be replaced by one just like it". For that *leaves out* not only the mode of destruction, which may be wilful damage, but also the costs of replacement, which can be considerable if it is a object like a bulldozer, and the wastefulness of the exercise.

Because he neglects the ubiquity of skimping, Elliot fails to latch onto some crucial features of what should considered wrong with even high quality extortion jobs. This happens for a mix of reasons: partly because he does not look within extortion, its destructive centre, but treats the process as a blackbox; partly because of his regular tendency to consider the natural environment instrumentally in experiential terms, primarily as a source of aesthetic

experience for humans, especially higher-fliers on wilderness-experience trips. The *omitted* features can be brought out by reflecting on extortion jobs effected on other items: on sacred or cultural things, such as cathedrals, cemeteries, ancient temples or grounds, or on humans. Suppose, for example, some humans are found to have a very (economically) valuable substance or part within their systems. It could be, for example, a rare blood form or fats, an extra large heart or brain, unusual genes. They are taken by a medical extraction company, with the permission or connivance of the responsible government (in the way that much other economic product is generated), operated upon or whatever (e.g. just bled in a mild case, their prized parts removed and synthetically replaced in other more dramatic cases), and restored to perfect condition. To make the case more comparable with beach sand mining, suppose some people have a rare substance in much demand in the aerospace industry and elsewhere, in their blood or fat. Such medical behaviour would now be regarded as outrageous if practiced on humans; it could still be got away with on dolphins and chimpanzees in many civilized parts of the world. Nor is it simply that natural origins of the affected humans have been tampered with, less still that they are fakes! What they may be is “guinea pigs”, treated as mere instruments. Of course there may be a difference: some humans may consent to such extortion (or to that of their charges) for economic gain, in a way that no wild animal freely would.

Take a wild free-running river. Suppose it is dammed, or diverted not permanently as with hydro and irrigation projects, but just while its bed is carefully dug for gold-bearing ore. Features integral to its intrinsic value, its wildness, its freedom of flow, have been significantly interfered with. In the process of extortion, it has been given instrumental treatment, its value downgraded, not merely for that stage of the process, but permanently. It is the river that was dammed deflowered or deflowered, etc. That history counts, and cannot be discounted entirely in assessing its value. Damming is damning.

In sum, there are two critical defects afflicting typical extitution projects:

- Even where some serious attempt is made at restoration, environmental value is significantly reduced.
- Satisfactory restitution cannot be achieved.

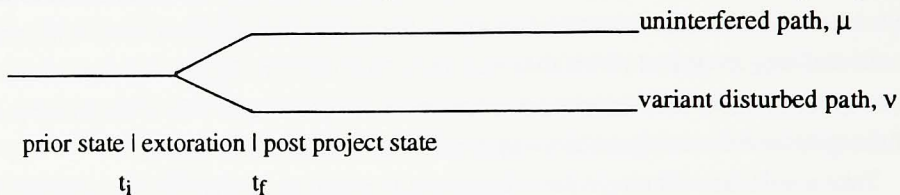
Thus, to truncate a long argument, except where there are entirely new-look no-impact projects or there are major overriding circumstances (short-term economic objectives, such as employment or relief of current deficits, are *not* among them), extitution projects should not proceed, because they diminish total value. Except exceptionally extitution is out. The first matter has already been argued. A start on the second will now be made.

From typical extraction assaults full environmental restoration is impossible. This commonplace environmental claim depends for its correctness, however, upon a suitable notion of impossibility. That suitable notion is certainly not a logical one; restoration even after other devastation is logically easy, magical technology and wizardry not being logically excluded. A

suitable more demanding notion has to be in the order of scientific possibility or (stiffer and to tie into likely available technology) technical possibility: let us call the requisite notion s-impossibility.

Restoration after large extraction operations is technically impossible for the following sorts of reasons:- Such operations remove soil and lose topsoil; but it is technically impossible to replace soil with sufficient precision or to reproduce topsoil in sufficient quantities. Such operations also characteristically much simplify natural systems; they may eliminate local species, they certainly reduce floral richness, variety, diversity, and the like; and once again properly compensating restoration is technically impossible.¹⁴ Such familiar considerations can now be reinforced by more advanced arguments, which at the same time expose serious limitations to grand environmental management plans.

Let us compare the paths of an area as uninterfered with and as disturbed through extensive extoration. Relevant details and parameters are recorded in the following diagram:



Now prior to initial time, project commencement time t_i , project proponents and their environmental managers pronounce, predict, that after the finishing of all works at time t_f , the system will be sufficiently or even just like the uninterfered system (would have been); that is path ν is like, is relevantly isomorphic to, path μ . How reliable is such a prediction (upon which project viability and approval may depend)? As we are already painfully apprised from past failures in environmental management, not at all reliable. There are now theoretical grounds for surmising that reliability can never be achieved. The grounds apply chaos theory (so misleadingly called), supposing that the equations controlling the evolution of the system, as disturbed or not, are appropriately nonlinear. (Systems of just this kind can of course be deliberately selected; but further many natural systems do have requisite complexity to be of this kind. For instance, their full state description will include dynamic meteorological equations which may well have nonlinear character.) Then a small disturbance of the system can induce large and unpredictable variations in subsequent systemic behaviour (the “butterfly effect”). But during extraction the system involved is subject to major disturbance, not all fluctuations from which can be damped down to zero in restoration; disturbance effects remain. Accordingly

¹⁴ Verification of full restoration is also technically impossible, because this could require complete before and after survey, with not merely every scrub but every nematode and particle of rock duly accounted for, *much* more than the limited sampling that biogeographers attempt.

predictions that path ν will resemble path μ are unwarranted. Even if restoration should be s-possible, it is s-impossible to have information in advance that it is.¹⁵

An important corollary is that there are significant *informational* limitations – beyond practical and theoretical on-ground limitations – to extensive environmental engineering and science. These limitations extend to environmental management, especially management through manipulation of certain selected controllable factors (“factor management”). For it seems possible (to the delight of therapeutic nihilists, on whom more *post*) ‘to prove in advance that environmental sciences will not develop the ability to make precise predictions needed for factor manipulation of the environment’ (contradicting Hargrove p.160¹⁶). Newer environmental sciences would do better to look to discursive sciences like geology which are ‘more concerned with explanation than prediction’ and are poorly equipped methodologically to formulate reliably ‘predictions about future events’ (Hargrove p.160, reiterating Kitt’s geology textbook).

A significant wider corollary of the common outing of extitution is (yet another) rejection of the sustainable development rhetoric and ideology. For much of the economic development regularly proposed is of environmentally destructive kinds, which it is conveniently presumed can be sufficiently repaired subsequently to support sustainability claims. The outing arguments reveal however that such development cannot generally hope to sustain environmental values; that, as should be well-known, the shallow *sustainable development* idea is a noxiously dialectical one, because ecological sustainability is inconsistent with the types of economic development envisaged.¹⁷

3. REHABILITATING DAMAGED NATURE.

Many projects, whether intending restoration or not, it is now too late to halt. They have happened or are happening. What do we do with our industrial “heritage”; degraded or destroyed forests, beaches, mountains, farms, and so on? Keep some as representatives, horrible warnings, of the results of unregulated industrialism? And all the rest? Just look upon them and despair? Aren’t we entitled to look for, or try for, some improvements? While restoration certainly does not annul environmental criticism, it may nevertheless mitigate it, and it can mean some real improvements, including restored-nature.

Such rehabilitation does not fall within the scope of the critique of extitution. Consider briefly a special illustrative case: The degenerate forest was a rainforest mixture in the past, but

¹⁵ Analogous divergences of information and knowledge from truth and fact are already familiar from other fields, from quantum-theoretical indeterminacy, and from necessary limits to knowledge (Routley 81).

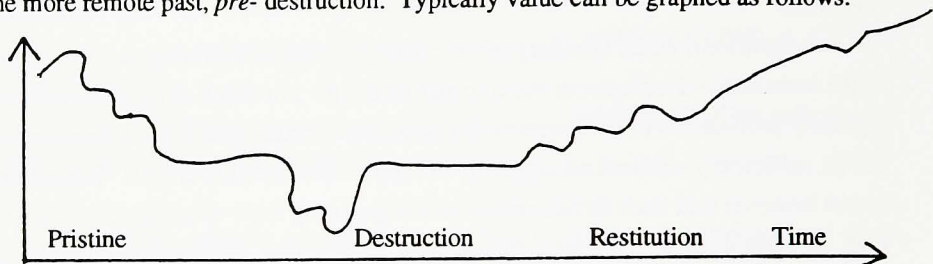
¹⁶ Hargrove, no nihilist, continues: ‘... If factor manipulation can be done successfully, humans will almost certainly figure out how to do it’! Is human hubris culturally irrepressible?

¹⁷ The deep troubles with sustainable development are emphasized in detail in several other sources, e.g. Bennett and Sylvan.

is no longer. The area will be a rainforest mixture in the future, if rehabilitation is successful. It is rehabilitation of what has *already* been damaged, in several stages, damage present people are now in no position to prevent. Then no argument like Elliot's stops the "faking" or "renaturalizing" enterprise being assessed worthwhile – which it very often will be. But certainly it is logically illegitimate simply to proceed on (as some would) to: *So* it is worthwhile. That requires some further argument that value has been increased (of course, analytically, worthwhile rehabilitation will, or will tend to, increase value). Fortunately there is evidence that, and arguments that, in some cases value can be *increased* by rehabilitation. Consider such examples as that of an almost "dead" river devoid of fish which is then "cleaned up" and to which fish return, or that of a cleared hardpan area of tropical rainforest turned to a bare eroded "desert" landscape which is then carefully reforested.

The assessment of value increase should be with the more recent past, *post*-destruction, not with the more remote past, *pre*-destruction. Typically value can be graphed as follows:

Positive
value



Frequently there may be no way, short or even long term, of approaching pristine conditions; for example, species may have been lost¹⁸, requisite top soil may have vanished, climate altered and so on. Though full replacement or substitution may be impossible, nonetheless considerable increase in natural features may be achieved, if of lesser value than formerly. It may, for instance, comprise something new as well, though based on something older (details of which we now lack), for example, with one species of a genera substituting for another species. All this serves to emphasize, too, how damaging an environment and then trying to patch it up is one thing, rehabilitating an already damaged one is quite another. As is evident then, 'there is a significant difference between preventing damage and repairing damage once it is done' (Elliot, in a different context, p.146). Rehabilitation, as a matter of meaning, does not involve original areas that have suffered no interference. There are two types of substantial interference that should be distinguished:

I. natural interference, as with earthquakes, eruptions, storms, etc. There is no doubt that

¹⁸ Perhaps irretrievably, as with mega-fauna eliminated with aboriginal assaults on new world environments. Restitution need not however be backward-focussed or regressive, any more than deindustrialisation. Both can be progressive with a strong appreciation of the past and of past mega-mistakes.

such phenomena can seriously interfere with or remove the value of natural areas or exhibits. For instance, the famed pink and white terraces near Rotorua have gone, buried under volcanic lava, the forests of Mt. Egmont are not as rich as comparable forests nearby that did not suffer the same fallout from volcanic eruption.

II. human interference, perhaps adapting natural methods such as fire, as in subsistence agriculture; perhaps not, as in mining, forestry, agriculture and urban clearing. These sorts of human interference, in principle rather more controllable, will be a main concern in what follows.

The biological wealth of the world has been drastically rundown by humans, not by natural interference, with the recent pace of devaluation much increasing. Much of this loss is irreversible. For example, even if humans could replace species of which suitable samples are held – entirely unlikely – there are many species not held. Because so much of the Earth is now damaged, land especially, with many maps now revealing the enormous extent of substantial human interference, it may look as if rehabilitation is going to have to become a dominant mode. But sometimes it is strongly resented. There is, for instance, the playing God charge, a very one-sided charge. Extracting lumber on a grand state is not playing God, that is good clean development; trying to fix up afterwards by amateurs is. But it should be hard to get such a charge to stick at all. For the amateurs are most ungodlike; they rely heavily on Nature, they forget critical requirements, they often fail, and so on.

It may be thought evident that there should be some appropriate effort made to repair damaged environments. We can no longer, now we humans are so many, regard broken-down environments as throwaways, and there is mostly nowhere inconspicuous to “throw” them as there still is with other waste. But quite apart from the inordinate expense of many repairs – even where repairs are even feasible – it is not so evident that restoration should be attempted at all.

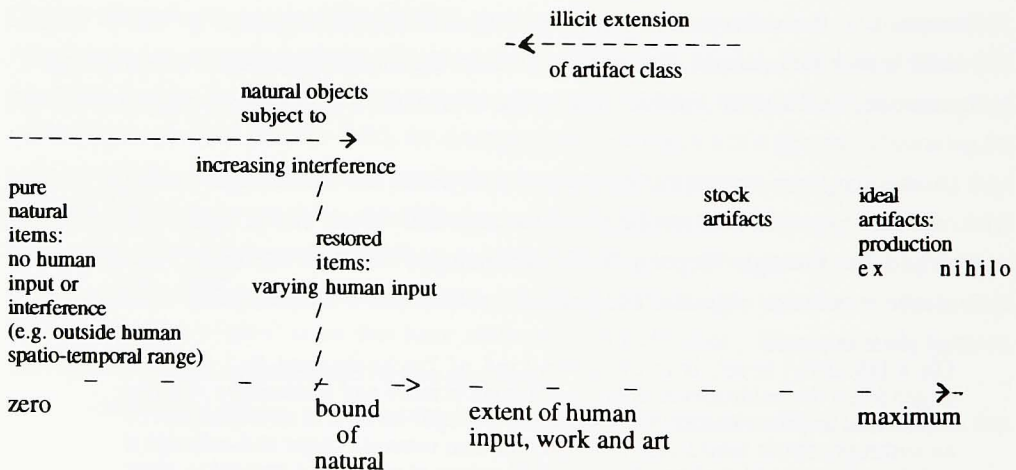
A sweeping case against human restoration of nature has been mounted, notably by Katz, who calls the optimistic total rehabilitation message that ‘nature can be made “whole” again’, and should be, through “beyond 2000” technology, THE BIG LIE (p.1). Extensive and enthusiastic restoration objective and policies are based on a misperception of nature and of humans' place in nature:

On a [shallow] level, it is the same kind of “technological fix” that has engendered the environmental crisis. Human science and technology will fix, repair, and improve natural processes. On a deeper level, it is an expression of an anthropocentric world view, in which human interests shape and redesign a comfortable natural reality. A “restored” nature is an artifact created to meet human satisfactions and interests. Thus, on the most fundamental level, it is an unrecognized manifestation of the insidious dream of the human domination of nature. Once and for all, humanity will demonstrate its mastery of nature by “restoring” and repairing the degraded ecosystems of the biosphere. Cloaked

in an environmental consciousness, human power will reign supreme (Katz p.2).

As with Elliot's muffled case against extitution, so here with Katz's power-drive against rehabilitation, I want to accept a substantial part, but by no means all, of what is splendidly contended, while at the case time significantly redirecting the case. The point to diverge is evident: that where it is claimed that "a "restored" nature is an artifact created to meet human satisfactions and interests'. For, firstly, it is normally not an artifact, except in an extended sense. Furthermore, restoration may have been undertaken for altruistic reasons, far removed from aims or dreams of domination and mastery of nature (as group egoistic distortion would have). It could even be aimed instead at liberation and independence.

Firstly as to the slide on 'artifact'. An *artifact*, 'a product of human art and workmanship' (OED), involves a substantial mixing of human labour, far more than with restored natural areas. Consider an area of restored bushland, such as may be encountered around urban Sydney, where the restoration may be achieved largely or entirely by careful weeding (for examples and hand techniques see Bradley). The restoration results primarily by nature doing its own thing; it is nothing like furniture or pottery making. An ecological restorer, unlike an artisan, does not produce the item, there is no making (no *fact*, so *naturefact* would be a thorough misconception). Rather there is adjustment at margins, here there is resemblance with artifact restoration; and there is *helping* in healing, here the resemblance is with natural healing. The sort of illicit extension of *artifact* that is widely deployed (including by Katz and Elliot) in minimizing the differences can be shown diagrammatically:



The illicit extension of artifacts is rendered that much easier because, with the advent of sophisticated greenhouses and space-garden experiments, there is a conspicuous intermediate class between elaborate artifacts and restored environments where there has been considerable

interference. But easy or not, the extension is illicit, resulting in a false dichotomy between purely natural items and [extended] artifacts.

Unfortunately Katz's case depends essentially upon this illicit extension (and associated false dichotomy): 'The recreated natural environment that is the end result of a restoration project is nothing more than an artifact created for human use' (p.4). 'Restored ... natural areas [may] appear more or less natural, but they will never *be* natural – they will be anthropocentrically designed human artifacts' (p.5). The weeded bushland, a weeded bush garden for that matter, is not an artifact. Similarly the fencing and reseeded of a woodland area that has suffered some degradation, now a common restoration practice, does not produce an artifact. The twisting of things is not confined to the key term *artifact*. Consider also 'recreated', 'created', and differently 'use'. The bushland and woodland are not created or recreated; they evolve under natural forces with certain boundary conditions adjusted. Nor of course need such adjustments have been made *for* human use (even if done *by* humans). They may have been effected to preserve some plants or to provide habitat for certain birds. Only by illegitimate stratagems, like those deployed in favour of egoism, can the argument move from such objectives back to human uses.¹⁹ The *point* of restoring natural environments is not invariably 'a controlled nature that offers pleasant experiences' to humans. Another point is the welfare and persistence of other creatures and natural features. Yet another goal is richness, and therewith *value enhancement*. While the issue of *value* of restored environments is certainly central, value need not be shallow, answering back somehow to human interests. The value induced can be deep, and after restoration, substantially independent of human interests and uses.

Suppose however we concede an extension: *artefacts* comprehend the extended class including restored natural systems.²⁰ Then Katz's case, rerun with artefacts, breaks down at another point. Consider the crucial claim that artefacts 'are essentially anthropocentric. They are created for human use, human purpose – they serve a function for human life' (p.4). Even if true for artifacts (it is dubious at best: consider nesting boxes, contrived sanctuaries, ...), it is substantially false for artefacts, as already explained. Similarly for his derived claims. Even if it were true that 'the doctrine of anthropocentrism is then an essential element in understanding the meaning of artifacts', it is not essential, but right off the mark, for artefacts. In these terms the anti-restoration case mounted rests upon the fallacy of equivocation on the middle terms: artifact, artefact.

¹⁹ On these stratagems, which would also render all value anthropocentric, see Routley² 79.

²⁰ Including not merely Elliot's "ecological artifacts", which may involve very substantial contrivance, but also rather natural ecosystems. A *natural artefact* is not then an impossible object but a rather natural object where there has been some low level restoration activity.

Even with the way to certain restoration efforts cleared of significant ideological obstacles, there remain questions of justification for instances, questions whether instances ought to proceed (given, what is often not satisfied, that they are affordable and feasible), and there remain many problems for most types of efforts. The broad justification, in every instance, is bound to appeal, sooner or later, to some sufficient increase in *value*, which in turn will support deontic directives, such as that the effort should proceed. Now there is no doubt but that in some cases – there are again many sorts of cases to unscramble and classify – that value does duly increase. Consider for instance an ecosystem that has been much impoverished through “creaming”, and that is restored by reintroducing creamed species from elsewhere: value, here tracking richness, is thereby enhanced.

There are many *problems* in the way of rehabilitation, even where an admissible opportunity does offer itself. Firstly, there are serious *practical* obstacles, which make undertaking a rehabilitation project both difficult and in many respects a labour of love. But many painful and worthwhile enterprises are of this kind. For one thing, changing an environment in a positive way is a slow, and commonly difficult, feat. Simplification and destruction are, by comparison with complication and construction, very easily achieved, especially if chainsaws and bulldozers, or the like, are available. Try making even one plant. For another thing, both “weed” animals and plants help establish the conditions for their own perpetuation. The result is that once degeneration, thereby increasing or introducing certain types of fauna and flora that can escalate change, has been set in train, it is so much the harder, because of positive feedback effects, to reverse degenerating trends. For yet another, rehabilitation projects are, almost everywhere, grossly undersupported and underfunded.

Another group of problems centre upon *lack of information*. There are many environments which have suffered apparently degrading transformations, involving evident loss of richness, including original communities and where the types of human interference, if perhaps any, are not presently known or understood. Even where something of the history of an environment is pieced together (for instance, in new world regions, through detailed pollen analyses, climatic analyses, and so on), it may not be fully known whether present environments (with loss of mega-fauna and so on) are an end result of human interference or not.

Such questions of past history become particularly important where the aim of rehabilitation is to influence an environment so that it comes more to resemble what that environment was like at some past richer stage. Lack of information may jeopardise, or rule out, authentic imitation. In fact it is presently unlikely that rehabilitation to resemble some more remote past stage can ever be more than very approximate. For example, even where we do have some inkling of what sorts of trees and scrubs were growing in an area, we still have comparatively little notion of their comparative numbers and distribution, and generally even

where genera are known, species are not. Nor of course is there any very serious present prospect of replacing species which have become extinct (assuming there is justification sometimes for doing so).

There is an interesting and tricky prior question, then, of what environmental restoration should aim at. For instance, how far back should it look. Not to before major climatic changes occurred, if it is to be realistic. But, in more feasible circumstances, is any past vision at all is permissible? For instance, can I reasonably consider some restoration here (above Lake George, NSW) to how things were, so far as we know, 120,000 years ago? That is before major burning began, so the pollen record from the lake below indicates. (Present evidence dates Aboriginal occupation only back to 60-80,000 years ago, however. It is known that these peoples practiced burning widely in drier areas, but not in wetter areas, or in rainforest, which regular burning destroys.) However there are problems in trying to reach so far back, apart from the prior question of: should anyone?

Certainly there was a time before aboriginal peoples began their sometimes very damaging practices (almost nowhere of course do they compare in destructiveness with subsequent European activity) when climates and soils were similar. And sometimes perhaps, in some small ecoregions, we should be looking back to those times. Likewise we might contemplate restoration of parts of Greece and other Mediterranean zones to how they were, more or less, before deforestation; for instance, regreening the eroded bare hillsides where woods once grew and streams used to flow but little now is produced or thrives.²¹

²¹ Both issues in turning the clock back 2000 years or more, issues concerning stalled evolution, and issues with the boundaries between restoration and gardening, are raised by the question of *ornamental forests*. Consider ornamental rainforest, now a fashionable "form" in Australia, a very different form from reforestation, since its goal is not commercial (or woodlot) timber production, its plantings accordingly do not comprise just a few commercial species (often exotic) but a rich variety (normally indigenous), and its opportunity costs are typically low because not taking out of circulation land valued for other purposes.

Ornamental rainforest practice can range from planting or intermixing a few rainforest plants in a large suburban garden to establishing sizeable rainforest patches, including whole valleys or more (cf. Jones 'creating a rainforest' p.24 ff.) Critical questions for distinguishing restoration cases within the gradation include: whether the plants established grew in the area within recent geological times, or would have but for disruptions of evolutionary processes, whether once established they survive under natural conditions without substantial artifice, whether the area is extensive enough to count as an independent rainforest patch (naturally occurring patches can be quite small) and persist on its own.

One of the more specular examples of ornamental rainforest in Australia is the main rainforest gully of the Botanical Gardens in Canberra. Such specially tended areas do not qualify as restoration, for several reasons. Most important, it is extremely doubtful that there ever was, in recent times, rainforest in the gully. Certainly if there was, it would have been of a different sort. No attempt is made to make the gully comprise only what is found in the adjacent region; on the contrary, to the limited extent possible, an attempt has been made to represent different types of Australian rainforest. While the planting is restricted to Australian species, many are far out of their range (and their likely evolutionary range under present conditions). Further, while the result of this extensive exercise in rainforest gardening is certainly impressive, it is undoubtedly artificial. It is sustained against unfavourable natural elements by *much* artifice, for example, from a hot and excessively dry summer climate by an elaborate system of sprinklers

The problem of lack of information extends to the problem of *lack of requisite technology*. So far human societies possess neither the means, the technology, nor the collective will, to effect much in the way of satisfactory restoration of many damaged systems. Consider for instance the vast acreages of degraded or destroyed tropical forests, which are beyond restoration hope. Once again, humans and their often crude technologies succeed much better at negative effects, destruction and progressive degradation, than at positive contributions. The very limited roles of technology, regularly successful only in such matters as supply of artifacts, has not been sufficiently appreciated (as Katz emphasizes). It is very far from the case that nature can be restored or improved to any extent humans desire. *It* is extremely recalcitrant sometimes, while our technologies are weak and crude. But while technology cannot generate such things as natural items, it can *assist* in restoration projects. 'While technology ... cannot supply, replace, or restore nature or the "wild"', technology-assisted restoration nonetheless has a point and place (contrary to Katz, pp.1-3).

Rehabilitation can be viewed as a cooperative venture, between the rehabilitators and Nature, with Nature entirely essential, and doing much of the "real work" Rehabilitation is largely making things propitious for Nature to do "her" stuff, perhaps much faster than she would proceed otherwise. (In cooler climes, Nature is in no big hurry. She loiters along, content to satsize.) Humans carefully mix in some quantity of their technologically-aided labour. That does not thereby make the result *theirs*, or account for a *major* part of the thereby enhanced value (contrary to illustrious philosophic forebears).

Such a *modest* role for technology is far removed from the gross overestimation of and overenchantment with technology that now prevails, especially among developers and politicians. Such overestimation reaches its acme in such themes as those of universal technological repair and of total rehabilitation: that humans possess the means, if not the will, to

and misters (and so a constant supply of outside inputs in summer: water, energy, etc.), and from a cold winter by frost protection coverings and other devices.

Accordingly, the Garden's rainforest gully is not, in any good sense, a rehabilitation attempt; nor does it pretend to be, there is no faking. More or less everything obtainable and authentically Australian that had some prospects of growing there was tried, and a good deal that stood little or no prospect. Losses were enormous, despite all the artifice, and the advantages, such as total freedom from browsing animals. The main object was, as with the rest of the Gardens, to *represent*, so far as possible, Australian flora, to have on display samples of as many species and genera as the comparatively atypical conditions of the site on Black Mountain permitted. As a result of the magpie-collecting, the rainforest gully represents nowhere anytime; it is a species mishmash, with a bit in common with an enriched mixture of various cool temperate rainforests.

Still, as observed, the result is not at all displeasing or without genuine merit. Some would go much further, including Alastair Gunn: 'The rainforest gully is quite awesome. If you could recreate something like that it would be a fine thing' (letter, May 19, 1986). But such an exercise is more in the order of a church or temple, an exercise within an adopted but modified tradition of European landscape gardening, rather than any attempt at rehabilitation or "recreation" As such examples and intermediatities begin to reveal, however, there is no sharp boundary between the cases.

correct any, and every, case of damage human intervention has caused to the natural environment.

The human presumption that [humans are, or will be,] capable of [such] technological fix[es] demonstrates (once again) the arrogance with which humanity surveys the natural world. Whatever the problem may be, there will be a technological, mechanical, or scientific solution. Human engineering will modify the secrets of [damaged or inefficient] natural processes and effect a satisfactory result (Katz p.3, who introduced this by expressing outrage at 'the idea that a technologically created "nature" will be passed off as reality' – a *further* outrage).

As a matter of logic, there are no general technological solutions to environmental problems (see e.g. Routley 80). But the practical situation is much much worse than that, than occasional or isolated failure. There is a long list of environmental problems to which there are no satisfactory technological solutions, and no serious prospect of such solutions. To be resisted entirely, therefore, are such proposals as that developers should get a "free go" straightaway, because technology will so improve that things can be rectified later on (at somebody else's expense): that is, futurizing the costs while plundering easy benefits. For many natural environments or ecosystems that humans have degraded or destroyed they cannot rehabilitate; for instance, forests whose inhabitants have fled or vanished and whose soils have changed or disappeared. For similar familiar reasons, the total rehabilitation theme, which depends upon unavailable (and unattainable) technology, encounters insuperable difficulties.

Whereas grand rehabilitation schemes, applying unreliable and dubious mega-technology, tend to be utterly problematic, many projects are not, but may, even if difficult, have much to recommend them. Again straightforward cases are those where the extent of interference has been fairly small, without major works or vandalism, and some natural systems and main natural cycles are still intact and functioning. Rehabilitation may involve no more than, what may not be easy, excluding browsing animals and low-level fires, closing old roads, weeding and introducing known but vanished seed and spore sources. Even trying to regain former *wilderness* can sometimes be very simple, for instance, merely closing off some dirt roads, or a little more elaborate, closing ripping and revegetating dumps and tracks.

While what is being suggested is modest rehabilitation projects, that is not intended to mean that *nothing* should be done about past large-scale deprecation. Certainly measures can be taken and tried. Only let us not pretend that satisfactory restoration can be achieved, or that adequate compensation has been made or can be obtained. We dwell on an Earth much scarred by human activity; no marvellous technology will remove these historic marks of past vandalism. Many crippled natural systems will long persist to remind us of our haunting forebears, to honour past largely forgotten entrepreneurial heroes and industrial giants. But even here, with paraplegic ecosystems and worse, assistance can be rendered, helpful improvements made. Through such rehabilitation humans can atone too for the sins of the past,

for the ways of the forebears, for the destruction they wrought. (Rehabilitation can cleanse, figuratively and literally, in a way that mere repentance can not.)

Two different things emerge from the comparison of damaged systems with damaged humans: positive ways to proceed, and ways to excuse past procedures. Both operate with an appropriate recharacterisation of *rehabilitation*, which does not require exact imitation, or imitation at all – though there are conditions of *authenticity* to be met. Rehabilitating people who have been partly crippled through accidents does not mean getting them to do everything they managed before. Many rehabilitations are *partial* only, decidedly partial as regards past states. They need not fail for that reason. Rehabilitations of people or creatures or systems that have suffered damage need, moreover, not to be merely backwards looking (to a glorious, inglorious, or mediocre past; indeed unkind reflection on things past can be further damaging); forward-looking elements, to what can be attempted in each future period, are also most important. All that makes way for excuses and apologetics. The excuses presume very low standards for rehabilitation, suggesting that not only is that as much as can really be expected, but that it is all that is required. As such excuses are inadequate in medical settings (a wheelchair future is not good enough for someone who can be helped to walk again), so they are inadequate in environmental settings.

Extensive rehabilitation is certainly not letting degraded Being be. It is not (even *prima facie*) going with the way the flow has been forced. Is it even admissible? The claim to be staked looks like this:- Rehabilitation is admissible, at least in satisfactory duly modest and promising circumstances, which often (regrettably) obtain. If successful, it can increase value; in favourable circumstances, it will do so. Then it is a *worthwhile* enterprise. But though often desirable and pointful, it is in no way individually obligatory. In typical cases, where restoration enterprise may amount to a demanding hobby, it is supererogatory. However, although individuals may be absolved, cultures and societies, which have let destruction proceed, are not. There are outstanding social responsibilities. Humans collectively should do much *more* in rectification of the environments they have damaged or vandalised. Correlatively, they should do much *less* in further erosion of natural values, especially of substantially natural environments.

There are, of course, other presumed nature-enhancing schemes than nature rehabilitation (see s.1). Fortunately (for present length concerns) other sorts of mucking that might be considered for inclusion in nature rehabilitation can be presently beaten on technicalities. For either they do not offer *nature* rehabilitation so much as repair of seriously degraded systems for limited human purposes, or they are not nature *enhancing* but rather purport to limit further rot and decline. Restoration ecology of stock sorts illustrates the first, more benign form, sustainable development and its subtypes and sources such as sustainable forestry and sustainable agriculture, the second. Both are typically shallow, the kinds of environmental

exercises that can now be acceptably engaged in by government departments, which can, for example, save dollars, by improving worker health, or produce dollars, by getting degraded land back into production, and so on. While such exercises and others, like greening projects, may have *much* merit, they are far from exhausting what is required in restoring the Earth.

Thus what is now heralded as *restoration ecology* lacks the excitement and glamour it is sometimes portrayed possessing. It is no 'ecology of renewal', but more like housework in a slum. Largely it is some cleaning up of some of the appalling mess: of air to the point perhaps where it may be breathable, of water to the point where it can be put to secondary uses (do not expect it all to be drinkable again), of pastoral lands to the point where some grazing may be possible again, and so on. It is mainly "dominant paradigm" stuff directed at getting the economic machine and its labour supply running again in areas its operation has severely degraded.

Ecological restoration is *not* an alternative to retaining wilderness, to remnant wildernesses. It is an addition, an attempt (as properly elaborated) to claim back much more of what has been grabbed and degraded or ruined. (In any case, if wilderness were let go, so would restored areas go, for the same developmental reasons.²² But now we can even argue in a fairly democratic way for enlargements.) *Part* of the point of restoration is to increase wilderness regions to viable size, viable natural areas, unfortunately not all pristine wilderness. Important large areas worth trying to retain substantially intact, apart from residual forests, include above all Antarctica, but also what remains of the Arctic, and large parts of the oceans. Further afield, there is of course, the Moon, and certainly some other moons and planets. Exploiters, developers and their scientific henchmen should, as far as possible, be discouraged from tracking heavily through these areas and developing schemes to exploit them. A main message to transmit is again *Humans: Keep Out!*

4. Concluding Unfinished Postscript on Non-Interference and its (Non)Practice.

In the beginning is the beginning of this end. *Let Being Be* is but one of several convergent, but non-equivalent, directives covering non-management practice, or regressively would-be management practices, for natural systems or environments, *not for* disturbed areas. Others, all different, some with ancient pedigrees, include *Follow Nature*, *Practice Tao*, *Do*

²² While wilderness purism is not an anachronism, maybe that sort of label is. For purism is frowned upon, *worsewilderness* is not an entirely satisfactory notion. The problem is partly due to its long history of unfavourable associations and connotation (esp. outside North America: see English dictionaries). But there does not seem to be a good term available, to serve as a replacement. It is worth toying, on and off, with the term *naturalia* (with *naturalea* for natural areas), meaning: substantially undisturbed natural things or equivalent (where *equivalent* allows for restoration, recovery, and the like.)

*what is natural, Do nothing, Proceed with Caution, Nature knows Best.*²³ Along with attempts to extend these directives to all potential areas of environmental management, and thereby perhaps discredit them, have gone regular confusions of these different directives. Resist all these moves. For example, Hargrove has conflated several of these directives under the grandiose heading, *therapeutic nihilism*, which he falsely contrasts with environmental management (in a large chapter more accurately entitled ‘Therapeutic nihilism *or* environmental management’; the title has ‘and’ where we have substituted the contrastive ‘or’). It is in this invalid way that he manages to reach his astonishing result that ‘environmental therapeutic nihilism is ... widely held by most environmentalists’ – a notion they have mostly never encountered, ascribed to them just because they are suspicious of manipulative management. It is a result in terms of which he can then preach to them of the out-datedness, indefensibility and vulnerability of their position (pp.160-1).

Therapeutic nihilism – a notion transferred from medical practice (by way of a devious route through psycho-analytic philosophy) to environmental philosophy – ‘demands full theoretical understanding before factor manipulation [of stock environmental management] begins’, and failing that *nothing* is done, whence the nihilism element. Evident shortcomings of therapeutic nihilism Hargrove correctly emphasizes, above all that there may be heuristic procedures which, while falling far short of offering full understanding, do sometimes facilitate improved practice and may work well (p.160, p.142). Unfortunately for Hargrove's case, for instance against relaxed environmentalists, these shortcomings do not extend to other directives he has conflated with such nihilism. The more satisfactory of them simply do not imply an essential element of “therapeutic nihilism”: do not follow worthwhile heuristic procedures where full understanding is lacking. On the contrary, if the procedures are natural they will normally be followed (if they are not natural, but the setting is one of severe disturbance, they may also be adopted). Moreover, most of them, letting being be in particular, do not imply doing nothing: protection of an area, unobtrusive resistance, and the like, may be among relevant activities (to counter Hargrove p.148). Hargrove, over-enthusiastic about ecological management and engineering, tries to account such activities as, what they are plainly not, sorts of factor manipulation, a stage in ‘creeping factor manipulation’ (p.159)!

Nor need *Letting be* conceal values (so much as relying on commonplace values) it need not even exclude Hargrove's favoured ontological course, which has environmental values hanging right out as the basis of preservationist arguments (p.159ff). For on deep theory, such

²³ Commoner explains this “law” – which appears to encapsulate a maximizing personification, supporting “follow nature”, *not* “do nothing” no therapeutic nihilism – in more straightforward value-laden terms: ‘any major man-made change in a natural system is likely to be *detrimental* to that system’ (see p.148).

defeasible directives always answer back to general value distributions (across worlds).²⁴ Such directives do not of course always afford an infallible guide to situational practice. They may encounter dilemmatic situations, as for instance when wild animals run into disastrous circumstances under natural conditions, as a herd of bison frozen in a river. Then rendering assistance clashes with letting be (cf. p.155). But here the machinery for approaching ethical dilemmas, an integral part of deep theory, can swing into operation. Dilemmas are resolved, so far as they need be, in the round, situationally – proceeding through competing directives back to the value distribution in the concrete situation concerned.

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²⁴ Compare the whole thrust of deep-green theory over the last twenty years, esp. semantical foundations for the theory.

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