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Omniverse in the First Person

Charles Tandy*

§0 Preface

I have decided to write this preface, written after the other sections of the paper have been completed. Thus far I have personally presented my "omni" model of reality to a few folks here and there. At first I was a bit bewildered by the diversity and individuality of their criticisms and comments. But now I think I have detected a pattern: Typically specialist X is willing to allow my notions with respect to specialty X but not to all of my other notions. Perhaps the major exception is backward time travel: Most folks, regardless of specialty, seem to find this difficult or impossible to take seriously. To be sure, some specialists, in their specialization, will disagree with me; and sometimes there are misunderstandings (talking past each other) due to my limited communication skills.

With respect to time travel, I recently spoke with the Australian philosopher William Grey. I interpret his too brief remarks as follows: What I am actually defending is not logically-impossible time-travel but logically-possible world-hopping; Grey believes in neither. Anyway, what I call (practical) time travel (in the backward-travel mode) is defended in a previous paper of mine. On this issue I can only hope you will take time to read my (Tandy, 2007a).

With respect to my general omni model, whether in its "bare bones" or "fleshed out" versions, I am of course not really claiming to have a proof, regardless of what I may seem to say for ease of communication. Rather, I

* Associate Professor, Center for General Education, Fooyin University

offer what might come to be accepted as the default cosmological position. I believe the "bare bones" version should be helpful to folks generally and fruitful to philosophers in particular. I believe this too of the "fleshed out" (retro time travel) version, but more tentatively.

§1 Introductory Remarks

An outline of reality, herein called the "omni" or "omni-universe" or "omniverse" model, is presented and justified below. My self has a sense of Personal (or self) Reality that is influenced by Temporal (or contingent) Reality and by Paragonal (or necessary) Reality in an Omniverse Environment (the omniverse is all of reality). The paper discusses the nature and obligations of temporal personal entities with the ability to reason and be reasonable ("r-beings") in an omniverse environment. A. N. Whitehead and J. Bronowski prove helpful here. R-beings with the limited reason of humans have an obligation to become advanced r-beings, and advanced r-beings have an obligation to advance further and further. As r-beings advance, they outgrow the chauvinism of my-species and my-planet. With perpetually advancing knowledge gained from scientific method and golden rule, r-beings are able to improve world and self. With this in mind, the paper articulates ethical-political and other details or implications for r-beings in the historical position humans find themselves today.

Some readers may more or less disagree with the proposed omniverse account of environment but yet find it possible to more or less agree with the indicated ethical shift "from terrestrial chauvinism to golden rule". On the other hand, the reverse may also be true. Some readers may more or less disagree with the indicated ethical shift "from terrestrial chauvinism to golden rule" but yet find it possible to more or less agree with the proposed omniverse account of environment. (Naturally, I prefer to think of the indicated ethical shift and the proposed omniverse account, as pointing to each other.)

§2 Initial Derivation of the Omniverse Model

I wanted my model to include all ("omni") of reality rather than part of reality -- and my perspective on reality is that of a philosopher rather than a physicist. So I chose a term that should mean all of reality -- not cosmos or universe or multi-verse, as a physicist might do, but omniverse (omni-universe). I will now proceed to derive or justify my omniverse model briefly as follows:

(A) The personal is real;

(B) The temporal is real;

(C) The paragonal is real;

(D) The omniverse is real;

(E) The omni model is unreal;

(F) The omni model is relevant.

(A) The personal is real. Reminiscent of Descartes, I begin construction of the omniverse model by showing to myself that I am real. (You may be able to apply this reasoning to show to yourself that you are real.) To wit: I am aware that I am reasoning; (therefore,) I am aware that I am; (therefore,) I am aware; (therefore,) I am: Therefore→ • I am; • I am aware; • I am aware that I am; • I am aware that I am reasoning. (Accordingly: The personal is real.)

(B) The temporal is real. If it is the case that I am no longer aware (possible examples: dreamless sleep; death), it will nevertheless always be the case that I was aware. My reality (and perhaps your reality) has temporal (contingent) aspects to it (perhaps including experiential blanks). Whether I like it or not, I am a self undergoing experiences in time. (Accordingly: The temporal is real.)

(C) The paragonal is real. It is necessarily the case that 1 + 1 = 2. There are paragonal realities we associate with such mathematical and logical necessities. There are also paragonal realities we associate with ethical values. Event A or decision B may be in my or our objective ("best") interest. Alternatively, event A or decision B may be objectively ("really") harmful to me or us. Such is objective ethical reality even if we are not always certain about the objective ethical status of event A or decision B.

Likewise, we may not be very knowledgeable of mathematical realities. Nevertheless, it seems that mathematical and ethical realities are necessarily the case. (Accordingly: The paragonal is real.)

(D) The omniverse is real. As previously indicated, by omni or omniverse (omni-universe), I mean all of reality. Although all of reality (the omniverse) is necessarily a unique concept-reality unlike any whole or universe or other reality within the omniverse, it seems fair to say that all of reality is real. (Accordingly: The omniverse is real.)

(E) The omni model is unreal. (Here the Oxford philosopher J. R. Lucas suggested I use the word "fallible" rather than "unreal".) I have said that the "concept-reality" omniverse is unique. Nevertheless it must be pointed out that concepts and models (paradigms or theories), as such, are not real (other than being concepts/models). My omniverse paradigm is not the omniverse! At any moment the omniverse may well act to upset my simulation of it. (Accordingly: The omni model is unreal.)

(F) The omni model is relevant. Perhaps you prefer reality to paradigms or models? Unfortunately you do not have much choice in the matter. Let me explain. You interpret the messages you receive as helpful or hurtful based in your favorite paradigm or value-system. Yet a message or its interpretation is open to question. Like it or not, you sometimes receive messages which are illusory or misleading. Thus, if your old paradigm doesn't seem to work, you may search for a new one. If you lack (much of) a paradigm or model (whether old or new), then you have little or no knowledge of reality. Kenneth Boulding (1956) has pointed out that there is a sense in which "there are no such things as 'facts.' There are only messages filtered through a changeable value system." (p.14) And, as "Francis Bacon wisely observed in his *New Method*, 'truth will sooner come out from error than from confusion.'" (Barzun and Graff, 1985: p. 426) In other words, living the life of an ostrich is not an idea to be seriously entertained. (Accordingly: The omni model is relevant.)

§3 Fleshing Out the Omni Paradigm

Of what general kinds of reality are there? There are necessary kinds of reality and there are contingent kinds of reality. Contingent (or temporal) reality includes non-necessary entities such as numerous alternative universes with alternative (contingent) "universal laws". Necessary (or non-temporal) reality includes e.g. mathematical forms and ethical values. See §2 (C) above; also note that Rickert (1902) and Li (2002) offer two very different approaches to defending objective values (valid values or objective interests, respectively). I find each approach to defending ethical paragonals persuasive.

Thus the omniverse may well contain many different kinds of universes and many different kinds of beings. What we experience as things of a "physical" kind may be an experience not available in some other universes or not possible for some other beings. Likewise there may be a variety of kinds of experience or realms of reality not available in our particular universe and not possible for beings like us.

Yet there are all sorts of apparent "realities" that provide us with "impossible" experiences. This includes science fiction/fantasy movies, 3-D holographic effects, virtual reality machines, everyday common illusions as the "broken" stick in water, and the delightful tricks we happily experience at magic shows. Advanced beings could presumably not only engender universes with laws tailored to their specifications, and intervene contrary to those laws, but they could also use those laws and interventions to produce strongly convincing virtual realities or appearances in apparent contradiction to "natural laws" -- and more, even "contradicting" the laws of mathematics and logic. This is perhaps just the sort of thing Grand Magicians or Advanced Beings or Magisters Ludi would enjoy doing. (Indeed, Descartes was famously concerned with the possible mischief of an "evil demon".)

One difficulty we have is our huge ignorance of the omniverse both temporal and non-temporal. Given such immense uncertainty, how could we ever know if we daily live our lives in a real or illusory world? Since "ever" is a very long time, perhaps we should enjoy the very long adventure. So let us ask: What ought our first step be in this long journey much longer than a thousand miles or a thousand years?

First of all, like Hume, I don't think it practically wise for us to extend Humean skepticism to our everyday lives. If we are in a game, we are not likely to win by not playing the game. (That is to say, the present paper does not deal with many important philosophical questions related to issues such as personal identity, the external world, other minds, cause-effect, and free-will.) Although it seems we are presently far from being Magisters Ludi or Advanced Beings or Grand Magicians of the required sort, still we are not totally ignorant of the game. We have some limited knowledge of the omniverse -- and we can see ourselves becoming more and more knowledgeable over time.

On occasion we can use our limited knowledge of necessary realities such as mathematical forms to triangulate and identify mere appearances. The magician or the illusionist may seem to tell us that 1 + 1 does not always equal 2. So when we find such an anomalous appearance of the grosser sort, we try to figure out the trick. We may conclude that the two raindrops, now become one, have a volume equal to the two raindrops. Or we add two units of liquid together and get something distinctly more or distinctly less than two units. In such case we may try to invent a new scientific theory to explain the results -- we do not say that we have falsified the necessary reality 1 + 1 = 2.

Consideration (1): With the help of necessary realities related to Gödel's logical proofs and/or for other reasons (but anyway Gödel will be explained in §7 below), we may conclude that it is certain or likely that the omniverse is infinite, that necessary realities are infinite, and that contingent realities are infinite. Presumably a large percentage (99.99% density of infinity?) of advanced beings would know this as well.

Consideration (2): With the help of necessary realities related to ethical values and/or for other reasons, we may conclude that a large percentage (99.99% density of infinity?) of advanced beings would know of matters related to what we loosely call "the golden rule".

Consideration (3): If we put considerations 1 and 2 together, then we seem to get something analogous to "the veil of ignorance" (hypothetically) posited by John Rawls (1971) for the purpose of identifying proper or just political arrangements. But now we can see (given 1 and 2 above) that the (veil of) ignorance is real, not just hypothetical; it is real not only for us but

for the advanced beings as well. In other words, there is now a real motivating force for "us" (whether human-beings, advanced-beings, advanced advanced-beings, et cetera ad infinitum) to behave toward each other in a "golden" way. (Perhaps we will never be asked to join "the Galactic Club" but rather will automatically become a member of "the Golden Club" when we learn to follow the "golden" way?)

What exactly this all means for our particular planet or our particular universe may not be altogether clear. As Amartya Sen (1999) and John Rawls (1999) have pointed out, though, a people's self-respect and self-development is vitally important to their developmental success. (This is a reason why some resource-rich countries ultimately fail while some resource-poor countries ultimately succeed.) Respect for one's own autonomy and respect for the autonomy of others seem to be related to the necessary realities I have called ethical paragonals or the golden way. How are the infinity (?) of "ethical values" in the realm of necessary reality related to each other? How do advanced beings proceed to attempt to weigh values (and conditions) so as to make optimal decisions with respect to a variety of kinds of universes and kinds of beings? (Alas, these relevant questions are somewhat beyond the scope of the present paper.)

§4 Temporal Reality, Including Time Travel

It seems that it is always reasonable to ask what, if anything, happened before and after event T (e.g., the big bang beginning of a universe). One may imagine the answer: "Nothing happened except (the "arrow" of) time: T-1, T-2, T-3, et cetera ad infinitum; T+1, T+2, T+3, et cetera ad infinitum. In this sense one may say that the whole temporal realm is infinite with respect to both the past "befores" and the future "afters" (perhaps this is related to the so-called "B theory" of time). On the other hand, at least in terms of the reality of human beings and/or advanced beings, we can say we have some limited free will and some limited ability to influence the details of events that take place within the temporal realm (perhaps this is related to the so-called "A theory" of time). Although deaths and other changes that take place within the temporal realm are important to us and

are to some limited extent influenced by us, these deaths and changes should not be confused with the temporality of the temporal realm (the entire environment of infinite "befores" and infinite "afters")! Charles Hartshorne (1951) chose to use the language of Whitehead's process philosophy to express this distinction, as follows (p. 542, emphasis in original):

> The later event prehends the earlier and so contains it, but the converse is not true; and this one-way relationship remains even when both earlier and later events are in the past … no matter how fully their original immediacy is preserved. Obviously, it is not because of fading or perishing that earlier is contained in later, though later is not contained in earlier. It is rather *in spite of perishing*. Were loss of immediacy the last word, how could the faded event in its non-faded vividness, as it was when present, be contained in the new present? Yet such containing is the theory of succession under discussion. It is the reality of the new *as added to that of the old*, rather than the unreality of the old, that constitutes process. (Hartshorne, 1951: 542)

At any epoch in time (very short or indefinitely long), deaths may or may not occur -- the temporal realm is, so to speak, indifferent to such details. And, as just explained, not only is the present real, but the past is real also. With respect to what has been called "practical time travel" -- and matters related thereto -- my previous analysis of the temporal realm (Tandy, 2006) draws the following six conclusions:

- 1. The past exists as an expanding fixed unity.
- 2. The present is the leading edge of the past as it expands.
- 3. The future is not yet fully determined/fixed.
- 4. The underdetermined future as it proceeds to become more nearly past (fixed) is influenced by the expanding fixed unity (the past), including by free agents of good will [and ill will].
- 5. Sooner or later, barring catastrophe, it seems highly likely that technology will advance so that the capacity for forward-directed time travel is possible. [Suspended-Animation (per molecular nanotechnology) and Superfast-Rocketry (per relativity physics) are examples of forward-directed time travel. Note that conclusion 5 is not controversial; yet its profound implications are rarely discussed.]

- 6. Sooner or later, barring catastrophe, it seems likely that technology will advance so that the capacity for past-directed time travel is possible. [Time-Viewing is one example of past-directed time travel.]

A more tentative seventh conclusion was that the concept of intrinsic time or intrinsic history (i.e., the intrinsic-temporality of the time-traveler, as distinguished from either merely-subjective time or literal-clock time) "is especially helpful in characterizing whether time travel did or did not occur in a particular circumstance." (pp. 383-384) If one travels backward in time in the ("many-worlds") omniverse, one does not come from the past but from the future (i.e., from the unique time or history intrinsic to the unique time-traveler). The temporal realm (the omniverse's temporal environment as such) has its own ("arrow" of) time, but it is another (different) matter that (in addition) each temporal entity within the temporal environment has its own unique intrinsic time (history). According to my proposed general-ontological schema, but unlike almost all physical-scientific theories of backward time travel, it would seem that in principle any past time and any universe is a candidate for visitation. (The ethics of time travel or inter-universe travel is another matter.) Moreover, the time-traveler -- a temporal entity having its own unique intrinsic time within (and thus different from) the omniverse's temporal realm as such – may be an atom, a human, a planet, or a universe.

§5 Temporal Entities, Including S-Creatures and R-Beings

Above I have reasoned (or, like a good magician, waved my hands to show) that there are paragonal (non-temporal, necessary) aspects of reality and temporal (contingent) aspects to reality. Although other universes in the omniverse may differ, the following appears to be true of our universe or our little corner of our universe: Within the temporal realm of our tiny region, there are nonpersonal entities and personal entities, as follows:[1]

1 §5 is based on Tandy (2007b), pp. 407-409.

- Temporal nonpersonal entities include: Energy (Quanta); Matter (Atoms); and, Life (e.g., Flowers) (Biosystems).
- Temporal personal entities include: Sentience (e.g., Swans) (S-Creatures); and, Reason (R-Beings). Some r-beings are better at reason (reasoning or being reasonable), than others – to wit: Humble Reason (e.g., Human Beings) (H-Beings); and, Advanced Reason (Advanced Beings) (A-Beings).

Note that in our consideration of to what extent a particular temporal entity is (1) a nonpersonal entity; (2) an s-creature; or, (3) an r-being -- we should obviously not base the evaluation on the species to which the being is said to belong. For example, some individual members of the human species (newborn humans; adult humans continuously severely mentally impaired from birth) do not belong in category (3) above. For example, some individual members of non-human species (some individual non-human animals) do belong in category (3) above. The "real-life" boundaries between the species are not sharp; in addition, the "real-life" boundaries between the three categories above are not sharp. The present "anti-speciesist" paragraph should be kept firmly in mind when correcting or correctly-interpreting the present paper.

One may also note that according to Confucius, *ren* is necessary for true learning as distinguished from mere cleverness. *Ren* may be translated as benevolence or fellow-feeling. Thus perhaps it is wise to identify an r-being with an r-being of the r*en*-being kind.

§6 R-Beings and Reason

Whitehead's *The Function of Reason* (1929) explicitly specifies three desiderata if we are to function as reasonable beings ("r-beings", whether human beings or advanced beings); the three functions of any reasonable being are:[2]

- Living or surviving (as distinguished from dying-to-death or extinguishing-to-extinction).

2 I have here paraphrased Whitehead (1929): See especially Chapter 1.

- Living well (as distinguished from merely surviving).
- Living better and better (as distinguished from just living well).

If we combine this with "golden rulish" (empathy/sympathy) or "*ren*" considerations, then we can apply these reasonable functions or healthy motivations both to individual humans and to humankind (civilization). Thus: Human-beings should strive to become advanced-beings, advanced-beings should strive to become advanced advanced-beings, et cetera ad infinitum. Human civilization should strive to become trans-civilization, trans-civilization should strive to become trans trans-civilization, et cetera ad infinitum. Bostrom and Roache (2007) have emphasized the goal of individual survival for the purpose of becoming better than well. They have also emphasized the special importance of the survival of humankind; if humankind is extinguished, then no human individual will be able to live, to live well, or to become an advanced being.

Reasonable beings ("r-beings") have the ability to reason about the shared purpose of all r-beings, whether human or advanced. Advanced beings may be better reasoners than humans, but they both have, e.g., the capacity to respect each individual r-being and to respect all r-beings as a whole. Inspired by Whitehead's *The Function of Reason*, I will attempt to elaborate.[3]

Advanced or transhuman beings (or the so-called "Singularity") may not be altogether different from lesser r-beings, even those who are as severely challenged emotionally and intellectually as is the case with humans. The range of emotion and intellect is extremely narrow in human beings, but not so deficient as to altogether absolve them of ethical responsibility. A wider range of emotion and intellect means that advanced beings have a greater ethical responsibility than do lesser r-beings.

Within the temporal realm there appear to be two great contrasting tendencies. One is decay (degradation): Things fall apart or simplify. The other is evolution (renewal): Things become more complex or creative. Apart from input by r-beings, evolution is blind or indifferent or anarchic. Fortunately, the self-disciplined creative reason of r-beings is sometimes

3 The following five paragraphs are either based on, or inspired by, Chapter 1 of Whitehead (1929).

able to discipline evolution (regulate matters within the temporal environment) so as to make it sighted or purposeful or ethical. R-beings exercise "moral dominion" (including, sometimes, "immoral" dominion).

Thus: A purpose of r-beings is the exercise of moral dominion and the promotion of diversity. R-beings are engaged in the art of life and living. Rocks or atoms are better at survival than are plants or animals. Yet r-beings consider survival of life important, and are not content just with rocks or atoms. R-beings don't merely live in an environment -- they actively change or regulate their environment. For them the art of living involves not only survival, not only living well, but perpetual advancement or enhancement (i.e., living better and better).

Two major aspects of the ability of r-beings to engage in reasoning have long been abstracted (identified) by philosophers: "speculative" reason and "practical" reason. The first may be identified with the godlike wisdom (or complete understanding) sought by the philosopher Plato. The second with the foxy cleverness (or immediate method of action) portrayed in the fantasy-hero Ulysses.

If we are not careful, successful cleverness may convince us that Plato was a fool. Against such half-way cleverness a diversity of methods or approaches would seem wiser and may generally help guard against trained incompetence or a hegemonic methodology. We must be vigilant: The methodology of a special discipline (the self-discipline of a methodology) should never replace the self-disciplined creative reason of r-beings. The self-disciplined creative reason of r-beings signifies more than a (life of existentialist) rebellion against the absurd; the moral dominion of r-beings constitutes an actual counter-agency not only to hegemonic thinking but indeed to temporal decay. The active purpose of r-beings is to save and remake the temporal world. It is a perpetual striving toward the infinity we call the golden age or the golden rule or the infinite game.[4]

Practical reason, unlike speculative reason, is concerned with staying alive and with ethical behavior. But speculative reason has a disinterested curiosity that desires understanding even of all the omniverse; it assumes

4 The following four paragraphs are either based on, or inspired by, chapter 2 of Whitehead (1929).

life as a given; it seeks better and better life. This better life is a process of betterment in the sense of better understanding for its own sake (disinterested curiosity about all things). "Throughout the generality of mankind it flickers with very feeble intensity." (p. 38) And it "is tinged with bitterness … of an ultimate moral claim." (p. 39)

It is the advancement of mathematics and logic that gives method or discipline to speculation. Thus, instead of mere aphorisms and inspirations, we can produce a variety of systems of thought we call religions, philosophies, and sciences. Such religious, philosophic, and scientific systems must be perpetually open to modification if they are to progress in a reasonable way.

It is the interaction of the old reason (practical reason) and the new reason (speculative reason) that has given us modern science and modern science-based technology. Such interaction may historically soon give us a modern ethics and a modern ethics-based politics. But such advance may be resisted by obscurantism (the old insistence of practical reason that free speculation is dangerous). In any given historical epoch, obscurantism may be practiced by those dominant in religion, philosophy, and/or science.

Speculative reason (e.g., speculations by philosophers during the European Middle Ages) may build up a huge reservoir of apparently unfruitful concepts over many decades or centuries; then, with a little assistance from practical reason and the historically new environment in which the new scholars find themselves, suddenly there is a great breakthrough producing many fruitful results. Unaware that they would have failed without the huge reservoir of concepts built up by speculative reason, they think they are responsible for the "magical" results. Perhaps a bit too harshly, Whitehead explains practical reason's blindness to the major background cause (speculative reason) for its new success (modern science) -- as follows:

> There is a large audience, a magician comes upon the stage, places a table in front of him, takes off his coat, turns it inside out, shows himself to us, then commences voluble patter with elaborate gestures, and finally produces two rabbits from his hat. We are asked to believe that it was the patter that did it. (pp. 57-58)

Speculative reason seeks to understand all methods and to transcend

all method with a higher, comprehensive understanding.[5] This quest for infinity is forever unattainable by r-beings. It is pursued for its own sake.

Speculative reason holds in trust for future generations its growing supply of creative concepts and disciplined constructions. Mathematics was a mere curiosity for many centuries -- until mathematical physics appeared. "The ultimate moral claim that civilization lays upon its possessors" Whitehead advises, "is that they transmit, and add to, this reserve of potential development by which it has profited." (p. 72)

Practical reason can help us live and live well. But speculative reason not only helps us live well -- it helps us live better and better. The objective of the discipline of speculative reason is not stability but betterment. Up to this point in history our ability to reason, with reference to both speculation and practice, has been dismal. "But it is there," observes Whitehead; r-beings already have some limited knowledge "of that counter-tendency which converts the decay of one order into the birth of its successor." (p. 90)

§7 R-Beings and Knowledge

Jacob Bronowski's *The Identity of Man* (1971) explicitly discusses the difference between "men" (selves/minds of some richness) and "machines"; I will use some of his thoughts to provide possible insight into the nature of reasonable beings ("r-beings", whether human beings or advanced beings). Inspired by Bronowski, I will now attempt to elaborate.[6]

We think of all r-beings as "one of us" -- but yet each of us, each self (r-being) is, and wants to be, a free agent different from other r-beings. On the other hand, the nature of machines (as mere mechanisms or formalized operations or algorithms) is to be law-abiding. But r-beings have the capacity to break out of nature via free agency. "My way": An r-being wants to be free to be itself, to be different from others. An r-being may actively decide to behave differently when the same situation occurs a second time simply because it knows it is not the first time.

5 This paragraph and the following two paragraphs are either based on, or inspired by, Chapter 3 of Whitehead (1929).

6 The following four paragraphs are either based on, or inspired by, Chapter 1 of Bronowski (1971).

R-beings turn their growing experience into growing knowledge and their growing knowledge into a growing readiness for action (modification or betterment of self and environment). The r-being is not fixed, but is a process of unending growth. Much of this growth and growing experience happens or is produced inwardly rather than outwardly. The r-being's mind actively works with images and thus has an "imaginary" (fictional/non-existent?) life -- recalling, fantasizing, speculating, foreseeing.

A machine has unambiguous input and unambiguous output. A respirator machine or one's mechanical non-conscious breathing is vitally important; we would die if we had to continuously decide whether to breathe or not! The importance of such unambiguous input and output of air should not be ignored in our analysis of life and world.

R-beings derive knowledge based on two modes of experience. (1) Some kinds of knowledge are formal (or can be formalized): I "hit" my fellow colleague at the symposium. (2) Some kinds of knowledge are informal (or can not be formalized): I "embarrass" my fellow colleague at the symposium. The informal kind of knowledge is self-knowledge: I recognize myself in my fellow r-being. But a machine does not recognize itself in an r-being way: "we cannot now conceive any kind of law or machine which could formalize the total modes of human understanding." (p. 25)

Although the infinity of all future physical science can never be formalized, at any given point in time our (incomplete) science of the workings of the physical world can be (tentatively) formalized.[7] All r-beings, as integral to practical action, form a picture of the world. This picture changes as their experiences grow.

In humans the pleasure and pain centers are found mostly in the (evolutionarily) older part of the brain. Many sensory and sensory-interpretation functions are performed either prior to reaching, or without ever reaching, the human's brain. In terms of capacity to engage in the formal procedures of classical logic and precise calculation, a human-being is far inferior to the machine-computer.

7 This paragraph and the following six paragraphs are either based on, or inspired by, Chapter 2 of Bronowski (1971).

Often humans do not use such a logic of strict certainty (they lack such capacity except on a minor scale). So the human's brain attempts to construct a picture of the world rather than engage in precise calculation. The picture it constructs is not one of certainty and precision. Tentative, fallible decisions are made as to whether this is real or that is illusory. (In recent decades, philosophers have introduced the epistemological idea of "reflective equilibrium.")

These considerations suggest that the newer human brain is not about the precision of calculation so much as about the widening of consciousness. The images in the brain increase (widen); with this widening, the interaction between the brain and the senses widens. Thus both our physical (science) knowledge and our self (r-being) knowledge expand. Our knowledge widens while remaining tentative: "certain answers ironically are the wrong answers." (p. 41)

Thus physical-science is part discovery and part invention; it is a kind of language for describing the physical world. Our images or concepts are the vocabulary. The arrangement of the concepts into "laws of nature" is analogous to grammar. A dictionary-like translation of the grammar tells us the relevant observations to test. Language (and therefore science) is a perpetually living, open, changing process.

The question of whether we should arrange our concepts into grammar (laws) is less interesting than how we form such arrangements. Our science is based on disciplined guesses and generalizations. Our scientific laws are not forecasts but fallible, unifying explanations.

The imaginative processes of discovery differ from the formal (mathematical-logical) display of discoveries. At any given point in time, formal science thus displays itself as a closed system; but science as creative process is an open system. Science begins with imagination and then seeks to implode or minimize the ambiguities it finds. Poetry begins with imagination and then seeks to explode or exploit the ambiguities it finds.[8]

Science helps us gain knowledge of the physical world; the arts help us gain knowledge of the world of self (selves, r-beings). Although an r-being

8 The following six paragraphs are either based on, or inspired by, Chapter 3 of Bronowski (1971).

as a self sees itself uniquely from the inside, our science seeks to provide us all with knowledge of a common external world. By identifying yourself with other r-beings, you may not learn how to reason or how to act -- but you may gain knowledge of yourself.

Science provides us with an "as if" final language, but at every stage the language of the arts is open. The arts cannot be understood unless we understand what it is to be an r-being (self). Both science and the arts begin in the imagination (mental images, not physical sensations). The arts enhance our experiences of being; science enhances our technologies of action.

R-beings have conscious imagination. Only an r-being has the ability to converse with itself. An r-being consciously knows it exists in an environment: "no other animal seems to be able to draw a clear boundary between himself and his environment. His memory is too short and his habits are too strong to make him firmly distinguish what he does from what is happening to him." (p .90)

There is me (myself) and there is not-me (environment). If the young r-being grows up in an environment devoid of other r-beings, then the youngster will have little understanding of what it is to be an r-being (knowledge of self will be extremely limited). Growing up in a culture (most any culture) is better than growing up devoid of culture or r-beings. Having a worldview (most any worldview) is better than not having a worldview. Cultures, worldviews, and r-beings change over time; not infrequently, change is from bad to better (instead of from bad to worse).

An r-being can recall what it no longer sees (perhaps a human gains this ability at about six months of age). For an animal: Out of sight, out of mind. For an r-being: Absence makes the heart grow fonder.

While all biology follows the arrow of time, r-beings are consciously aware of the future and consciously direct their actions with the future in mind. R-beings are aware that they are different from their environment; and R-beings are aware that they are beings living from the past into the future. The two halves of being an r-being are: imagining our future environments with the help of science; and, imagining our future selves with the help of the arts.[9]

The process called a self or r-being is not altogether a machine -- since such a dynamic is not identical to any mechanism (algorithm or code of instructions). Rather, we experience and develop images in our minds. Some of our mental images name particulars, but mostly they name kinds (types). Every creative imagination, like every natural language, necessarily has ambiguities in it. Science uses concepts that apply not to the unique selves of r-beings but to a common physical world. Science seeks to reduce ambiguity. The arts use concepts relevant to the uniqueness of a self and seek to amplify our experiences; poetry has no need to resolve ambiguities because it is about empathy (being), not about provoking action to resolve differences. [9]

In the past we have been more concerned that the members of our tribe have similar beliefs than that the beliefs be true. But in a scientific age of weapons of mass death and destruction we can no longer give truth a back seat. It is possible to create a common coherent philosophy and politics (and common task) for all r-beings that gives both truth and empathy a front seat. Empathy (or sympathy or the golden rule) involves self-respect and respect for all r-beings.

The search for truth about self and environment is a never-ending common duty: "this assumes that the truth has not already been found … [and] that it is not there to be found, once for all." (p. 115) A society that has found the truth is an authoritarian culture. A truth-seeking society values originality, independence, and dissent. Justice and freedom are central to the protection of these truth-seeking values. Tolerance is based on respect for self and all r-beings.

The philosophy of r-beings is derived from physical knowledge (science) and empathetic knowledge (the arts). The two values, tolerance and respect, taken as one, we may call dignity. Dignity serves as an overlap or bridge between the puritan values of science and the intimate values of the arts. Dignity links society and individual; thus the r-being is "the unique and double creature: … the social solitary." (p. 121)

The specialness of the r-being is based not on its experience of the physical world but on its experience of other r-beings. With scientific

9 The following five paragraphs are either based on, or inspired by, Chapter 4 of Bronowski (1971).

knowledge the r-being acts to become the master of creation. But: "The knowledge of self does not teach him to act but to be; … it makes him one with all creatures." (p. 122)

Logical proofs provided by Kurt Gödel and Alfred Tarski in the 1930s have profound implications for our search for knowledge.[10] What is to be said about the symbols of "a formal logical language … comes not from physics and chemistry and biology, but from symbolic logic." (p. 129) During the 1930s the logician Kurt Gödel proved that "a logical system which has any richness can never be complete, yet cannot be guaranteed to be consistent." (p. 130) Also during the 1930s the logician Alfred Tarski proved that "there can be no precise language which is universal." (p. 131) These "Gödel-Tarski" theorems, taken together, I will call "g-t theorems". According to Bronowski,

> …any logical system to which they [the g-t theorems] apply must include the arithmetic of whole numbers as a basic part, and they must be distinguishable from the rest of the continuum of quantities. But with this proviso … they apply to any system of thought which attempts to set up a basis of fundamental axioms and then to match the world by making deductions from them in an exact language -- the language of physics, for example, or the chemical language inside the brain. (Bronowski, 1971: 131)

Thus the classical model (or arrogant ideal or noble dream?) of science is hopeless. Any set of scientific axioms is necessarily incomplete; and, necessarily, any set of scientific axioms must always be open to the possibility that it may be shown to be inconsistent. Any science seeking exactness inevitably and perpetually has these considerable limitations. "That is, only an axiom which introduces a contradiction can make a system complete, and in doing so makes it completely useless." (p.132) At a given point in time, scientific knowledge may seem to have achieved a universal, consistent, closed language. But more wisely, the actual language of scientific discovery is always open, not to be represented in the form of a logical machine.

10 This paragraph and the following six paragraphs are either based on, or inspired by, the "supplement" chapter (the final chapter, following Chapter 4) of Bronowski (1971). The "supplement" chapter serves as an approximate reprint of Bronowski (1966).

Considerations above seem to insist that paragonal realities (e.g., the unlimited realms we identify with mathematics and logic) are infinite and that temporal realities (and the never-ending adventures of r-beings for physical-scientific knowledge) are infinite. It seems that the omniversal or cosmological default position should not be that there are many worlds but that there are an infinity of worlds and an infinity of r-beings. In principle the potential for an r-being to expand its consciousness, and to expand it again and again, is infinite. The omniverse is infinite in an infinity of paragonal, temporal, and personal dimensions.

"Any finite system of axioms can only be an approximation to the totality of natural laws. … [Thus natural laws in] their inner formulation [paragonal reality?] must be of some kind quite different from any that we know." (p. 133) Our formal logic is not the logic of nature; from time to time our system of science must be enlarged. Scientific discovery lies outside our formal logic.

R-beings are imaginative and their imagination is free, beyond the bounds of formal logic. Unlike lesser beings, an r-being has the ability to refer to itself -- accordingly, the natural language of r-beings is not a machine language. Philosophy requires natural language even when it finds machine language useful. Although logic-and-mathematics is often reliable, nevertheless it breaks down when it refers to itself. But philosophy has a more severe problem since self-reference is integral to it. The axiomatic system is only partly suited to predictive fields such as logic, mathematics, and physical science. The axiomatic system is even less suited to non-predictive fields such as philosophy, social science, and the arts and humanities. The self-knowledge we associate with r-beings "cannot be formalized because it cannot be closed, even provisionally; it is perpetually open, because the dilemma is perpetually unresolved." (p. 146)

The r-being is able to use its imagination to understand self-reference in a way not possible by an algorithm or machine. The imaginative logic or creative imagination of the r-being differs from the formal logic of the machine. R-beings engage in personal (self) reference and thus are able to identify with all r-beings (as in the golden rule of empathy). R-beings find their mathematical and scientific knowledge useful for a time, which later

they modify as needed. Provisional science is no substitute for the workings of nature, and summary description is no substitute for the work of art.

In our comparison of science and the arts as practiced by r-beings, we have located differences between the two processes. But we have also identified similarities: both processes involve the free imagination of r-beings, and both processes remain forever incomplete.

§8 From Terrestrial Chauvinism to Golden Rule

Will human r-beings in this local region of this universe soon achieve a higher personhood and become advanced, extraterrestrial, transmortal beings? With the previous considerations (of §1-§7) in mind, I will now attempt to articulate ethical-political and other details or implications for r-beings in the historical position humans find themselves embedded in today -- as follows:

(A) Perhaps we are in transition from human personhood to advanced personhood.

(B) Perhaps we are in transition from terrestrial personhood to extraterrestrial personhood.

(C) Perhaps we are in transition from mortal personhood to transmortal personhood.

(A) From human beings to advanced beings

Above (in §5) I have distinguished nonpersons from persons in the following way:

- Temporal nonpersonal entities include: Energy (Quanta); Matter (Atoms); and, Life (e.g., Flowers) (Biosystems).
- Temporal personal entities include: Sentience (e.g., Swans) (S-Creatures); and, Reason (R-Beings). Some r-beings are better at reason (reasoning or being reasonable), than others -- to wit: Humble Reason (e.g., Human Beings) (H-Beings); and, Advanced Reason (Advanced Beings) (A-Beings).

Although I have spoken above (in §4) of the infinite past and the infinite future, from the specifically human-limited perspective it would seem that almost all of temporal reality is (is to be) located in the future.[11] With reference to our own universe (or our own little corner of it), it seems that non-persons (nonpersonal entities) have dominated our region's known past and that persons (personal entities) may well dominate our region's future. But today's (human-limited) persons are hugely influenced by the past from which they emerged. However, a future person may have the capacity to reinvent oneself, to restructure one's own non-teleological (energy-quanta, matter-atoms, biology-teleonomic) systems and also one's own sentience-hedonic system to conform to the (teleological) results of one's own reasoning or choice, whether moral or immoral, wise or foolish.

Restructuring the energy-system of one's own body might involve advanced subatomic technology as well as insight into reasonable expectations. Restructuring the matter-system, the teleonomic-system, and the hedonic-system of one's own body might involve advanced molecular (nano) technology as well as insight into reasonable expectations. It is of course conceivable that modifying one system might have unknown consequences for the other systems.

I'm not sure we know enough about energy or subatomic technology to yet offer responsible advice about the restructuring of the energy-system of one's own body. However we do have some beginner's insight into the advanced molecular (nano) technology of the future. We may want to begin with modest modifications to our bodies as we gradually learn more. "A little knowledge is a dangerous thing."

Presently I will make a few brief remarks related to the teleonomic-system (biology or life) and the hedonic-system (sentience). The (biology-) teleonomic and (sentience-) hedonic systems of today's human person are structured based on the non-teleological past. This suggests that great changes to these systems are in the long run to be preferred so as to enhance the lives of persons.

11 This paragraph and the following eight paragraphs are based on Tandy (2007b).

Some may believe that a teleonomic system (whether of a rose-flower or of a human) is teleological because it seems to exhibit purposefulness and is goal-oriented. But in fact the teleonomic-system as such is not conscious and is the result of evolutionary adaptation. Although there may be good practical reasons for taking a cautious approach to its modification, from a moral-teleological point of view its improvement is imperative. Thus in a thought experiment (rather different from our actual world context, or so I believe) we can imagine a world context in which, as a practical matter, there may be good reasons for not extending the healthy lifespan of persons from 50 years to 500 years. In the world in which we actually live, however, my sense is that such so-called reasons are not really very good reasons -- we are biased by confusing teleonomy with teleology.

Likewise, many fail to see that our hedonic-system (of pleasure and pain) is also based on the past and should be modified with advice from our system of moral reflection (reasoning). Pleasure and pain, given advanced future technology, could presumably be structured in a wide variety of different ways. (To be sure, a variety of hedonic-systems already exist.) We could structure it so that good behavior is painful and bad behavior is pleasurable. Alternatively, we could structure it so that philosophic reflection and moral behavior are the most pleasurable of pleasures. The point is that "having fun" is neither the only nor highest value, but with future technology we will presumably be able to restructure our system of pleasure and pain to make it more ethical-teleological.

As our own universe (or local region) evolved and became more complex, moral consciousness eventually appeared. Today moral consciousness must learn to unbias or free itself from the teleonomic and hedonic systems of old in order to renovate our blind universe or region. The blade of grass is digesting the dirt, while the insect is eating the blade of grass, while the mammal is devouring the insect. The mammal, caught in a metal trap, sees the human hunter approaching. Our blind universe or region has cruelly set animal against animal -- and humans against mortality.

Here are some of the presumed capacities of advanced beings (or trans-humans) as they renovate (well or poorly) our blind universe or region:

- Use of free-will and great power to pursue wisdom, to learn self-respect, and to respect all persons, past-present-future.

- Insure that no animal kills another animal. This includes both non-human animals (or s-creatures) and human animals (or h-beings).
- Insure that no reflective-person (r-being) must die.
- Insure that no person must experience unwanted serious pain or hardship.

Eventually we may be able to do more than merely retrodict or SIMULATE the past. Eventually we may have the ability to run ancestor history EMULATIONS (via time travel or otherwise). R. Michael Perry (2005) has remarked that it would seem to be immoral to run such ancestor history emulations -- real persons would experience real pains and evils. Instead, as Perry advocates, the golden rule would charge us with the duty to revive our ancestors -- the scientific resurrection of all dead persons in the omniverse's temporal realm (multiverse of all multiverses).

(B) From terrestrial beings to extraterrestrial beings

The fact that humans presently exist together in a single biosphere global village is a rather absurd position to be in if we seek to prevent doomsday and promote flourishing.[12] If something catastrophic happens to Earth's biosphere, then something catastrophic happens to all Earthlings. It is not wise to put all of humanity's eggs (futures) into one basket (biosphere). "Epitaph: Foolish dinosaurs never escaped Earth." In the long run, almost everyone will be living in extraterrestrial space rather than on a single small planet. We should now enforceably ban weapons and weapons-making from extraterrestrial space while it is still within our power to do so.

Advanced Genetic, Robotic, Information, and Nano ("GRIN") technologies are not required for the development of Self-sufficient Extra-terrestrial Green-habitat communities ("SEGs") or independent, self-replicating biospheres in outer space (Seg-communities, 2008). Advanced GRIN technologies certainly will greatly enhance SEG capacities, however.

Self-sufficient Extra-terrestrial Green-habitat communities (SEGs or seg-communities) should not be confused with space stations. Some argue

12 This paragraph and the following 14 paragraphs are based on Tandy (2007c). Also see: Seg-communities (2008).

that if we had chosen to do so, we could have started building SEGs using the "merely super" technology of the 20th century. Indeed, the famous 20th century physicist Gerard K. O'Neill designed such SEGs for the purpose of late 20th century construction. Such SEGs would provide a "green-friendly" environment for humans, animals, and plants superior to the problematic habitats we identify with Earth and other planets. In the 20th century the famous physicist Carl Sagan stated: "Our technology is capable of extraordinary new ventures in space, one of which Gerard O'Neill has described to you… It is practical."

Eventually millions of persons in a single SEG community are possible. The SEGs (seg-communities) would be self-sufficient and could reproduce other SEG habitats in extraterrestrial space at a geometric rate. Accordingly, there is "unlimited free land" in extraterrestrial space -- with a higher quality of life than is possible on the surface of a planet.

SEG communities can be built from extraterrestrial resources mined from asteroids or moons. Rotation of the large and spacious greenhouse habitat provides simulated gravity for the people and plants living on the inner surface. Adjustable mirrors provide energy from the sun and simulation of day and night. Sooner or later, the following would be feasible for SEGs:

- "Unlimited energy" from the sun. (The sun never sets in space.)
- Control of daily weather and sunlight.
- SEGs would be self-sufficient.
- Expansion of the (self-sufficient) SEGs at a geometric rate.
- "Unlimited free land" via SEGs. (Needed raw materials from asteroids and moons are abundant.)

The following metaphorical insights have been widely quoted by SEG experts: "The Earth was our cradle, but we will not live in the cradle forever." "Space habitats [SEGs or seg-communities] are the children of Mother Earth." According to Carl Sagan, our long-term survival is a matter of spaceflight or extinction: "All civilizations become either spacefaring or extinct." According to the "mass extinction" article in *The Columbia Encyclopedia* (6th edition): "The extinctions, however, did not conform to the usual evolutionary rules regarding who survives; the only factor that

appears to have improved a family of organisms' chance of survival was widespread geographic colonization." (For us today, we may call this "the extraterrestrial imperative".)

What political philosophy, then, is "fit" for the extraterrestrial imperative? I suggest "PFIT" -- Peace and Freedom, and Intentional Transparent communities, in extraterrestrial space -- as follows: What seems to me both practical and fair in this context is to think in terms of a new political philosophy or approach to stable peace in the form of an Extraterrestrial Society of Intentional Communities. There would be two sets of liberties and two sets of responsibilities (for "Extraterrestrial Society" and "Intentional Communities" respectively). Each person is free to found new (intentional) communities. Each Community would determine its own membership requirements. Each Community would have its own culture of liberties and responsibilities; a member would generally be free to leave the community. A mechanism or set of mechanisms would be established to insure that each member is fully and properly informed of their liberty to leave the (intentional) community. (I suppose some communities might still allow their members the possibility of experiencing physical pain -- but they would also allow a member to voluntarily leave their community. Too, I suppose banning animal cruelty and serious animal pain would be desirable and feasible.) Note that some ("hermit") communities (SEGs) would consist of only one person.

On old Terra, it was often difficult or impossible to leave one's community -- sometimes expulsion effectively meant the individual's death. The context of the Extraterrestrial Society of Intentional Communities is radically different. For example: The individual person would be transmortal, whereas on old Terra it was often the community or society (not the human individual) that was seen as transmortal.

So at the level of the Society (of Communities) we have: (1) Peace: Weapons, weapons-making, and violence (including animal cruelty and serious animal pain) are strongly effectively enforceably banned; and, (2) Freedom: Every individual person is fully aware of and fully informed of their general liberty to leave their community. This too is strongly effectively enforced. The Society and the communities necessarily work

closely together to fully insure the liberties and responsibilities associated with both Peace and Freedom. Also note that since there is "unlimited free land," this fact will additionally help prevent some old terra-style conflicts and resolve or manage others (this would include some old-style civil conflicts).

At the level of Communities (in the Society) we have: (1) Intentionality (voluntariness): Within the good-faith transparent enforcement of Society's basic principles of peace and freedom, each Community has wide latitude for experimentation. Although there is a general liberty of members to leave the (intentional) Community, this does not necessarily relieve such persons from certain good-faith responsibilities to the Community; and, (2) Transparency: Each Community must strongly, effectively, and transparently help enforce the Society's basic principles of peace and freedom.

I believe the political theory or moral-political approach I have invented above is unique and original. It differs from the "Law of Peoples" conception of John Rawls (1999) in that it primarily chooses a "Law of Persons" model instead. Yet it takes seriously the distinction Rawls makes between a "political conception" and "comprehensive doctrines." In my "PFIT" or "Society of Communities" theory, Society corresponds to a political conception or model, and Communities (SEGs) represent comprehensive doctrines or worldviews.

Like Charles R. Beitz (1999), my theory takes seriously a cosmopolitan-political "Law of Persons" (as distinguished from a social-political "Law of Peoples") approach. It differs from Beitz in methodology and in the questions asked. Beitz finds the question of distributive justice both highly important and practically difficult with respect to present Terrestrials. This is a question I do not raise since in my extraterrestrial world of the future it seems not an issue or one rather resolvable in that easier context of expanded liberty -- there requiring perhaps at most only a bit of good-will and ingenuity.

"Is stable peace possible if each person or each people is passionately convinced their worldview is basically good and correct -- and different worldviews are evil or bad or incorrect?" If you can sincerely and in good faith agree to my political approach above, the answer to this question ap-

pears to be YES, such stable peace is possible. If you can at most only agree to my approach as a temporary compromise, then the answer may be NO.

"If we could enforceably prevent each and every person from killing any person over a conflict (say, a conflict of worldviews) would we do so? If so, how would we resolve our conflicts?" If you can sincerely and in good faith (instead of merely as a temporary compromise) agree to my approach above, then stable peace in extraterrestrial space seems both possible and desirable. This approach, so I believe, realistically outlines a structure of stable peace for World Society and local Communities (SEGs or seg-communities) in extraterrestrial space -- pointing toward conflict management in the new framework and encouraging subsequent projects to invent needed specifics.

The first (temporary, experimental) Extraterrestrial Space Treaty seems doable today. A permanent Extraterrestrial Space Treaty (enforceably banning weapons and weapons-making) seems doable soon (but may not be doable if we wait much longer). A Universal Space Treaty that includes both Extraterrestrial Space and Terrestrial Space may take more time but appears to be a goal worth striving for -- indeed, the striving itself may well improve matters. In the meantime, the previous treaties and upward strivings should make these "final strivings" toward a Good Society more nearly achievable for all -- even if almost everyone lives somewhere other than at the officially protected historical site and popular tourist museum called Earth.

(C) From mortal beings to transmortal beings with a common task?

According to the omniverse model presented above, any purely physical-scientific account of reality must be deficient. I believe my general-ontological framework should prove fruitful when discussing or resolving philosophic controversies -- and helpful to scientists and lay folks as well. The topic we now turn to is the question of personal immortality. On this issue, the "golden goodwill" of A. N. Whitehead (1929) (1941), Albert Camus (1942) (1951), and the omniverse model triumphs over the "midnight madness" of Martin Heidegger (Shaviro, 2009)[13] and numerous others.[14]

Jacques Choron (1973, p. 638) notes that: "The main difficulty with personal immortality… is that once the naive position which took deathlessness and survival after death for granted was shattered, immortality had to be proved. All serious discussion of immortality became a search for arguments in its favor." "In order to be a satisfactory solution to the problems arising in connection with the fact of death, immortality must be first a 'personal' immortality, and secondly it must be a 'pleasant' one."

How shall we deal with the apparent conflict between immortality and entropy? According to the omni paradigm, is entropy a fake? Note that the "dismal" theory of thermodynamics in the form of its second law (the so-called "entropy" law) applies to closed/isolated systems. But given the context of the omniverse model (see, e.g., §7 above, including Gödel's suggestive work), we can now say: all-reality (the omniverse) is not a closed/isolated system. "The entropy concept," according to Kenneth Boulding,

> … is an unfortunate one, something like phlogiston (which turned out to be negative oxygen), in the sense that entropy is negative potential. We can generalize the second law in the form of a law of diminishing potential rather than of increasing entropy, stated in the form: If anything happens, it is because there was a potential for it happening, and after it has happened that potential has been used up. This form of stating the law opens up the possibility that potential might be re-created." (Boulding, 1981: 10)

Again I emphasize that the second law does not really say that (all-reality's) potential is finite. Instead, let me suggest that the second law may be related to the arrow of time or to the fact that "Once I do X instead of Y, X will always be the case"… or whatever the case may be. But my "new default position" claim is that the omniverse is not a closed/isolated system.

Work beginning in the 20th century has laid the foundation for eventual realization of transmortality and more, the onto-resurrection imperative or common task of resurrecting all past persons no longer alive. Develop-

13 Shaviro (2009) focuses on the question of "what if" 20th century philosophy had taken Heidegger less seriously and Whitehead more seriously.

14 This paragraph and the following eight paragraphs are based on Tandy (2008).

ments have already taken us to the threshold of what has been called "practical time travel" -- or what, loosely speaking, we may call "time travel": See §4 above. Once forward-directed time-travel becomes feasible in the 21st century, then we can proceed to address the "hard" problems so as to more fully implement our common task of resurrecting all dead persons (rather than resurrecting a few dead persons via cardiopulmonary resuscitation). The first steps occurred in the 20th century on several fronts, including steps in the direction of suspended-animation, superfast-rocketry, and seg-communities.[15]

Experts tell us that the results of the population explosion (i.e. the size of the human population) will level off sometime in the 21st century (perhaps mid-century). Experts also tell us that current and ongoing industrial-technological activities are dangerously polluting our planet and causing global warming; global warming, in turn, can very easily lead to unprecedented injustices and upheavals in a terror-filled global-village of weapons of mass death and destruction. Presumably we should take global action against global dangers along the lines suggested by Al Gore, Jared Diamond, and other experts; see the Gore-related website about the practical generation of carbon-free electricity: <www.RepowerAmerica.org>; also see the Diamond-related website about "the world as a polder": <www.mindfully.org/Heritage/ 2003/Civilization-Collapse-EndJun03.htm>. But certainly too we can and should engage in additional terrestrial and extra-terrestrial activities to prevent doomsday and improve the human condition. If we are not balanced and careful in our actions, myopia can provide us with badly-needed near-term clarity while preventing us from the broader vision required for survival, thrival, and the common task.

Perfection of future-directed time travel in the form of suspended-animation (biostasis) seems feasible in the 21st century. I believe it even seems feasible to eventually offer it freely to all who want it. Jared Diamond (2005, p. 494) has pointed out that: "If most of the world's 6 billion people today were in cryogenic storage and neither eating, breathing, nor metabolizing, that large population would cause no environmental

15 See: Time-travel (2008); and, Seg-communities (2008).

problems."[16] Too, this might allow them to travel to an improved world in which they would be transmortal. Since aging and all other diseases would have been conquered, they might not have to use time travel again unless they had an accident requiring future medical technology.

The onto-resurrection imperative demands more than immortality for those currently alive. In extraterrestrial space we can experiment (perhaps, for example, via past-directed time travel-viewing) with immortality for all persons no longer alive. Seg-communities (Self-sufficient Extra-terrestrial Green-habitats, or O'Neill communities) can assist us with our ordinary and terrestrial problems as well as assist us in completion of the onto-resurrection project. Indeed, in Al Gore's account of the global warming of our water planet, his parable of the frog is a central metaphor. Because the frog in the pot of water experiences only a gradual warming, the frog does not jump out. I add: Jumping off the water planet is now historically imperative; it seems unwise to put all of our eggs (futures) into one basket (biosphere).

With respect to our common task (the onto-resurrection imperative), I quote Jacques Choron once again:

> Only pleasant and personal immortality provides what still appears to many as the only effective defense against … death. But it is able to accomplish much more. It appeases the sorrow following the death of a loved one by opening up the possibility of a joyful reunion … It satisfies the sense of justice outraged by the premature deaths of people of great promise and talent, because only this kind of immortality offers the hope of fulfillment in another life. Finally, it offers an answer to the question of the ultimate meaning of life, particularly when death prompts the agonizing query [of Tolstoy], "What is the purpose of this

16 This may be an exaggeration in that the production of liquid air/nitrogen requires energy; even so, Diamond would appear to be mostly correct here. But it is also conceivable that all or almost all power plants and related technologies will become carbon-neutral or even carbon-extracting. For example, see one of "Al Gore's websites" related to the practical generation of carbon-free electricity: <www.RepowerAmerica.org>. (Some environmentalists say that the additional step or capacity of carbon-extraction is required -- or is at least desirable to make our lives easier. Whether practical carbon-extraction techniques would or would not require advanced molecular nanotechnology is not immediately obvious to me. Whether carbon-extraction, carbon-offsets, weather-modification, or terra-forming might be used as a doomsday weapon or weapon of mass death and destruction is yet another matter.)

strife and struggle if, in the end, I shall disappear like a soap bubble?" (Choron , 1973: 638)

§9 Closing Remarks

An outline of reality, herein called the "omni" (omni-universe or omniverse) model, has been presented and justified. The paper discussed the nature and obligations of temporal personal entities with the ability to reason and be reasonable ("r-beings") in an omniverse environment. R-beings with the limited reason of humans have an obligation to become advanced r-beings, and advanced r-beings have an obligation to advance further and further. As r-beings advance, they outgrow the chauvinism of my-species and my-planet. With perpetually advancing knowledge gained from scientific method and golden rule, r-beings are able to improve world and self.

With this in mind, the paper articulated ethical-political and other details or implications for r-beings in the historical position humans find themselves today. A political philosophy "fit" for the extraterrestrial imperative was suggested: "PFIT" -- i.e., Peace and Freedom, and Intentional Transparent communities, in extraterrestrial space. In the long run, almost everyone will be living in extraterrestrial space rather than on a single small planet. We should now enforceably ban weapons and weapons-making from extraterrestrial space while it is still within our power to do so. This new "PFIT" political philosophy was explained and defended; "PFIT" is believed to be a feasible approach to achieving stable peace in the form of an Extraterrestrial Society of Intentional Communities (seg-communities).

The paper showed that all-reality, or the infinity of infinities I have called the omniverse, is not altogether reducible to any strictly physical-scientific paradigm. A more believable (general-ontological) paradigm was presented. Within this framework, the issue of personal immortality was considered. It was concluded that the immortality project, as a physical-scientific common-task to resurrect all dead persons, is ethically imperative. The imperative includes as first steps the development of successful antiaging-methods, longterm suspended-animation, Einsteinian superfast-rocketry, and PFIT seg-communities.

As r-beings learn more and more about the infinite game, presumably they will eventually learn how to engender universes with laws tailored to their specifications -- and intervene contrary to those laws. Presumably they could also use those laws and interventions to produce strongly convincing virtual realities or appearances in apparent contradiction to "natural laws" -- and more, even "contradicting" the laws of mathematics and logic. This is perhaps just the sort of thing Grand Magicians or Advanced Beings or Magisters Ludi would enjoy doing. Shall we continue to continue to continue… playing the infinite game?

One difficulty in playing the infinite game is our huge (infinite) ignorance of the infinite omniverse both temporal and non-temporal. The paper's analysis of the situation of r-beings (both human and advanced) in the omniverse environment finds some analogy to "the veil of ignorance" that is (hypothetically) posited by John Rawls (1971) (1999) for the purpose of identifying proper or just political arrangements. It apparently turns out that in the omniverse environment, a kind of veil of ignorance is real, not just hypothetical, for both human beings and advanced beings. Thus it seems that there is now a real motivating force for "us" (whether human-beings, advanced-beings, advanced advanced-beings, et cetera ad infinitum) to behave toward each other in a "golden" way. It also seems that (Rawlsian or political) "justice" is only one "value" among an infinity of "coordinated values" in the paragonal realm of necessary reality.

This coordinated "infinity of paragonals" we may call "the Paragon" or "the Necessary" or "the Required" or "the Good". Some may be tempted to go further (e.g., Whitehead's divine "fellow sufferer" comes to mind): If the only thing that is good absolutely and without qualification is the Good, then does not the Good necessarily have to embody a Good Will?[17] And, like a compassionate encompassing circle, would not such a Good Will necessarily have to embrace the temporal realm? Indeed, in its temporal aspects, would not such a Good Will have to be conceived as perpetually experiencing and expanding?[18]

17 Kant (1785) famously declared: "Nothing can possibly be conceived in the world, or even out of it, which can be called good, without qualification, except a good will." (p. 256)

18 Effectively but not intentionally, it turns out that several philosophic aspects of the omni model are apparently

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explicated in greater detail, and defended more ably, by Lucas (2009). (However, I also believe we take contrary positions on several philosophic issues -- e.g., retro time travel.)

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Regan and Intrinsic Value

Jack Lee*

Evidently, humans are either hurt or helped by the conditions of their environment. There ought therefore, to be some form of environmental ethic. Holmes Roston III claims that an environmental ethic must, illuminate, account for, or ground, appropriate respect for and duty towards the natural environment. Furthermore, it must do this without placing the primary importance on human interests.[1] Given these parameters for formulating such an ethic, simply applying human ethics to environmental affairs would not suffice. How then might we construct such an ethic -- an ethic of environment?

Some philosophers (e.g., J. Baird Callicott) believe that what is needed for responding this challenge is an account of the "intrinsic value"[2] of non-human entities and of nature as a whole. Put more simply, they believe that the natural environment has intrinsic value. Consequently, we should have an appropriate respect for and duty towards the natural environment. This approach however, is rejected by Regan. Although he accepts that an

* Assistant Professor, Graduate Insitiute of Philosophy, National Central University

1 See Holmes Roston, III, *Environmental Ethics: Duties to and Values in the Natural World* (Philadelphia: Temple University Press, 1988), p. 1.

2 John O'Neill argues that the term "intrinsic value" is used in at least three basic different senses:
(1) Intrinsic value1: Intrinsic value is used as a synonym for non-instrumental value.
(2) Intrinsic value2: Intrinsic value is used to refer to the value an object has solely in virtue of its "intrinsic properties."
(3) Intrinsic value3: Intrinsic value is used as a synonym for "objective value" i.e., value that an object possesses independently of the valuations of valuers.
In this article, what is meant by "intrinsic value" is O'Neill's intrinsic $value_1$. O'Neill contends that to hold an environmental ethic is to hold that non-human beings have intrinsic $value_1$: it is to hold that non-human beings are not simply of value as a means to human ends. See John O'Neill, "The Varieties of Intrinsic Value," *Monist* 75, No. 2 (1992), pp. 119-120.

environmental ethic is appropriate, Regan believes that such an ethic *cannot* reasonably be constructed by appealing to "intrinsic value."[3] To explain his demurral, Regan examines four main kinds of the theories of intrinsic value. They are: (1)mental-state theories of intrinsic value, (2)states-of-affairs theories of intrinsic value, (3)end-in-itself theories of intrinsic value, and (4)hierarchical ends-in-themselves theories of intrinsic value. After considering each of these, Regan concludes that none can be appealed to in order to construct an environmental ethic. Let us examine each type of theory in more detail.

I.

A classic example of the mental-state theory is hedonism. According to hedonism, pleasure and pleasure *alone* is good in itself. In this case, a mental state of a particular description, and *only* such a mental state, is intrinsically valuable. This hedonist view is seriously challenged by Regan. He writes: "The error of hedonism…lies…in supposing that *only* pleasant experiences…have value of this kind."[4] Regan may have a point. It is reasonable to suppose that if one accepts that an experience of pleasure can be good in itself, then experiences of awe and mystery can likewise be good in themselves. It is false therefore to claim that the only thing of value in valued experiences is the state of pleasure alone. Furthermore, Regan contends that some peak experiences (which are intrinsically valuable) are anything but pleasant.[5]

Even if we adopt a particular mental-state theory of intrinsic value that can overcome the problem of hedonism as outlined above, we will still be faced with yet another difficulty. Mental-state theories of intrinsic value in general *cannot* consistently recognize the intrinsic value of natural (or superorganismic) entities. Regan explains:

3 With regard to "intrinsic value," Regan assumes that: if something is good in itself, then it is good as an end or has positive non-instrumental value (i.e., it has intrinsic value.) John O'Neill says also that to hold an environmental ethic is to hold that non-human beings are not simply of value as a means to human ends. See Tom Regan, "Does Environmental Ethics Rest on a Mistake?" *Monist* 75, No. 2 (1992), p. 163; and John O'Neill, "The Varieties of Intrinsic Value," *Monist* 75, No. 2 (1992), p. 120.

4 Tom Regan, "Does Environmental Ethics Rest on a Mistake?" *Monist* 75, No. 2 (1992), p. 165.

5 Ibid.

> Natural [or superorganismic] entities as such, assuming they lack the requisite psychological capacities, can have no intrinsic value given a mental-state theory of intrinsic value. Lacking a mind, species, populations and ecosystems lack the capacity to have mental states. Thus, [they] lack intrinsic value…[6]

A mental-state theory of intrinsic value therefore, cannot even recognize the intrinsic value of some individual organisms, such as pine trees. Since Callicott argues that an environmental ethic must provide for the intrinsic value of both individual organisms and a hierarchy of superorganismic entities (e.g., populations, species, biocoenoses, biomes, and the biosphere),[7] a mental-state theory of intrinsic value does not hold much promise as a tool for fashioning an environmental ethic. Let us therefore move on to state-of-affairs theories of intrinsic value.

G. E. Moore's theory is typical of state-of-affairs theory of intrinsic value. In Moore's view, what is intrinsically valuable can exist independent of a person's mental state. Moore believes that certain states-of-affairs -- for example, the beauty of a sunset at a given point in time -- have intrinsic value regardless of whether a "mind" is present or not.[8] Unfortunately, neither Moore's view, nor state-of-affairs theories of intrinsic value in general, are well-suited to the development of an environmental ethic either.

Firstly, state-of-affairs theories of intrinsic value cannot illuminate, account for or ground *respect* for the natural environment. Let us assume, like Moore, that beauty is intrinsically valuable. Even if we make this controversial assumption, it will not avail us. Beauty is not in itself an appropriate object of *respect*. With regard to this view, Regan explains: "Granted, one can admire what is beautiful, one can stand in awe of it, one can enjoy or savor or appreciate it, but the idea that one should *respect the beauty in an object* strains our powers of comprehension."[9] It does not, therefore, make any sense to claim that I might, or should, "respect" a beautiful sunset. By

6 Ibid., p. 166.

7 J. Baird Callicott, "Non-Anthropocentric Value Theory and Environmental Ethics," *American Philosophical Quarterly* 21 (1984), p. 299.

8 See chap. III and chap. IV, in G. E. Moore, *Principia Ethica* (Cambridge: Cambridge University Press, 1903); and Tom Regan, ed., *The Elements of Ethics* (Philadelphia: Temple University Press, 1992).

9 Tom Regan, "Does Environmental Ethics Rest on a Mistake?" *Monist* 75, No. 2 (1992), p. 169.

the same token, we may conclude: It does not make any sense to claim that I might, or should, "respect" a pleasant experience.

Secondly, state-of-affairs theories of intrinsic value cannot illuminate, account for or ground *duties* to the natural environment. According to state-of affairs theories, there are different kinds of intrinsic values, such as beauty and pleasure.[10] This raises the problem of commensurability between various intrinsic values. It perhaps makes sense to say that pleasure is good in itself. It also perhaps makes sense to say that beauty is good in itself. But, to be specific, it makes no sense to say that the pleasure of drinking a cold Coke on a hot summer day is equal to the beauty of a sunset on the beach at the Gold Coast. These two different kinds of intrinsic values cannot be reasonably treated as if they were commensurate with one another. Given this quandary, state-of-affairs theories of intrinsic value do not afford us any theoretical account of our *duties* to the natural environment.[11]

As both Rolston and Regan assert, an environmental ethic must illuminate, account for, or ground appropriate *respect* for and *duty* towards the natural environment.[12] State-of-affairs theories of intrinsic value cannot however illuminate, account for, or ground appropriate *respect* for and *duty* towards the natural environment. Therefore, state-of-affairs theories of intrinsic value are ill-suited to forming the basis of an environmental ethic.

We will allow Regan the last word on the appropriateness of the state-of-affairs theory of intrinsic value as follows:

(1) An environmental ethic is obliged to illuminate, account for or ground appropriate respect for and duties towards *natural entities* (including species and ecosystems).
(2) But species and ecosystems are not states of affairs or summations of states of affairs.

10 Note that while mental-state theories and states-of-affairs theories are conceptually distinct, the latter can include the former. For, as Regan suggests, the idea of a state of affairs is elastic enough to include mental states. Because of this, besides beauty, pleasure can also be said to have intrinsic values. See Ibid., pp. 168-170.

11 See Ibid., p. 170.

12 Holmes Roston, III, *Environmental Ethics: Duties to and Values in the Natural World* (Philadelphia: Temple University Press, 1988), p. 1. See also Ibid., pp. 161-162.

(3) Therefore, a state of affairs theory of intrinsic value is demonstrably not an adequate theory of intrinsic value.[13]

Let us now turn to end-in-itself theories of intrinsic value. Kant provides an excellent example of these theories. According to Kant, rational autonomous individuals exist as ends-in-themselves (or have value in themselves). Put another way, these individuals have intrinsic value. Besides, on Kant's view, the intrinsic value, applied to individuals as ends-in-themselves, is a *categorical* concept. That is to say, either individuals exist as ends-in-themselves or they do not. For Kant, the value is not a matter of degree. Conversely, the theories examined above of mental-state and states-of-affairs suggest that different intrinsic goods can differ in the degree to which they are good in themselves. For example, the hedonist may deny that all pleasures are equally good. Indeed, the hedonist might go on to claim that some pleasures last longer, while others are purer or still, more certain.[14]

Regan suggests a different version of an end-in-itself theory of intrinsic value. Like Kant, he argues that certain individuals have intrinsic value. And he understands the concept of intrinsic value categorically. But whereas Kant limits possession of this value to rational autonomous agents, Regan attributes it to individuals who have a psychological identity over time and thus have an experiential welfare. In short therefore, unlike Kant's theory, Regan's theory acknowledges the intrinsic value of many nonhuman animals.[15] Paul W. Taylor attempts to take this recognition even further. Taylor proposes that each individual living being -- from the simplest unicellular life-forms to the most complex of organisms -- has intrinsic value. Moreover, like Kant, he too interprets intrinsic value as categorical concept.[16]

13 See Tom Regan, "Does Environmental Ethics Rest on a Mistake?" *Monist* 75, No. 2 (1992), pp. 170-171.

14 Likewise, for Moore, a beautiful sunset of which no one is aware has some intrinsic value, while the complex whole consisting of this same sunset plus someone's admiration and enjoyment has yet more intrinsic value. See Ibid., pp. 172-173.

15 See Tom Regan, *The Case for Animal Rights* (Berkeley, CA: University of California Press, 1983); and Tom Regan, "Empty Cages: Animals Rights and Vivisection," in Tony Gilland, ed., *Animal Experimentation: Good or Bad?* (London: Hodder & Stoughton, 2002), pp. 19-36.

16 See Paul W. Taylor, *Respect for Nature: A Theory of Environmental Ethics* (Princeton, N.J.: Princeton University Press, 1986).

Despite the distinguishing differences between Kant's theory and those of Regan and Taylor, each shares this fundamental similarity: Each theory attributes intrinsic value only to *individuals* -- individual rational autonomous agents in Kant's theory, individuals that are the subjects-of-a-life in Regan's theory, and individuals that are teleological centers of life in Taylor's theory.[17] Regardless of the distinctions, the various end-in-itself theories of intrinsic value limits intrinsic value to, and applies only to, *individuals*. And therein lies the concern. To begin with, if an end-in-itself theory of intrinsic value applies and limits intrinsic value only to individuals, then it cannot attribute intrinsic value to natural (or superorganismic) entities, such as populations, species, biocoenoses, biomes, or even the biosphere itself. As outlined above however, an environmental ethic must provide for, or include, the intrinsic value of natural (or superorganismic) entities. Thus, an end-in-itself theory of intrinsic value cannot be employed for constructing an (appropriate) environmental ethic.

Even if an end-in-itself theory of intrinsic value can consistently recognize the intrinsic value of natural (or superorganismic) entities, it fails to ground the differential intrinsic value of what is wild and what is domesticated. It is this consequence that suggests that the theory is inadequate. This point can be expanded on as follows:

(1) According to an end-in-itself theory of intrinsic value, "intrinsic value" is a *categorical* concept.
(2) If "intrinsic value" is a *categorical* concept, it must be false to claim that wild and domestic species differ in their intrinsic value.
(3) However, as Regan (or even Callicott, perhaps) correctly maintains, an environmental ethic must provide for an account of intrinsic value that attributes greater intrinsic value to wild in comparison with domestic species.
(4) Therefore, an end-in-itself theory of intrinsic value cannot be well-suited to an environmental ethic.[18]

17 See Tom Regan, "Does Environmental Ethics Rest on a Mistake?" *Monist* 75, No. 2 (1992), pp. 173-174.

18 See Ibid., pp. 162, 175-176; and J. Baird Callicott, "Non-Anthropocentric Value Theory and Environmental Ethics," *American Philosophical Quarterly* 21 (1984), pp. 299-309. Note that "wild and domestic species differ in their intrinsic value" in (2) can be interpreted *either* individually *or* collectively (or holistically).

A similar problem arises when we consider the case of endangered species. Rarity appears to confer a special value to a species. Indeed, some environmental philosophers suggest that we should attribute greater intrinsic value to endangered species than we do to those species that are more plentiful. Moreover, those philosophers are prepared to sacrifice, for example, large numbers of plentiful species in order to save endangered forms of life. Their view seems reasonable in terms of an "*environmental* ethic." If however, "intrinsic value" means "end-in-itself," their view must be mistaken.

In the face of the above objections, it seems that we should adopt a hierarchical ends-in-themselves theory of intrinsic value. Regan explains this hierarchical theory as follows: The theory must rank intrinsically valuable entities in some hierarchy of value, from the lower (individual instances of domesticated forms of life, for example, such as this tomato and that dog), to the next higher level (individual instances of undomesticated forms of life, let us suppose), then to the next, then the next, the next, and so on. That is to say, on this hierarchical theory of intrinsic value, all members of the hierarchy have some intrinsic value; it just happens that some members have more intrinsic value than others. Given this, it is claimed that: each member in the hierarchy exists as end-in-itself and thus normally is not to be treated as a mere means in order to bring about some desirable outcome. This status will change when and if it is necessary to treat them merely as a means to achieving some other higher end-in-itself.

By way of illustration: If the intrinsic value of a balanced, diversified ecosystem is imperiled by an overpopulation of deer, then we will be permitted to use various means, including lethal ones, to control or regulate the population of deer. If however, there were no conflict of intrinsic values between the two parties, then we would not be permitted to cull the population of deer.[19]

Hierarchical ends-in-themselves theories of intrinsic value are superfluous however, because any duty we have with respect to the natural environment that might be illuminated, accounted for, or grounded, in a hierar

19 See Tom Regan, "Does Environmental Ethics Rest on a Mistake?" *Monist* 75, No. 2 (1992), pp. 177-179.

chy of intrinsic values can be more parsimoniously illuminated, accounted for, or grounded, in a hierarchy of instrumental values. Regan explains:

> It is only necessary to say that "lower" forms of life are not "means" to be used unthinkingly or carelessly but are, rather, to be treated as "mere means" *only when this is necessary* in order to protect *higher-ranking members*. On this analysis…it will be wrong to kill deer if their presence does not threaten a "higher good" (for example, the diversity and sustainability of a local habit) but not wrong to do so if it does.[20]

In any case, hierarchical ends-in-themselves theories of intrinsic value, when provided as an explanation of our duties, fail the test of parsimony.

According to the analysis above, it is concluded that "intrinsic value" *cannot* be appealed to in order to construct an environmental ethic.[21]

Since an environmental ethic must illuminate, account for or ground appropriate *respect* for and *duty* towards the natural environment, and given that "intrinsic value" *cannot* be appealed to in order to construct such an ethic, we as philosophers are obliged to explore other approach(es). For the rest of this article, I will endeavor to achieve part of this task. Rather than appealing to "intrinsic value," an alternative account will be briefly offered below of why we should have an appropriate *respect* for (i) individual living things, and (ii) the collective biological entities.

II.

Before embarking on this task, it is first important to distinguish between the idea of "moral consideration" and the idea of "moral significance." While "moral consideration" is used as a tool of judgment, "moral

20 Tom Regan, "Does Environmental Ethics Rest on a Mistake?" *Monist* 75, No. 2 (1992), p. 178.

21 See Ibid., pp. 179-180. Regan argues that even if there is a fifth, sixth or some other possible theory of intrinsic value, it will succumb to one or other of objections brought against the four considered above:
(1) The supposed theory cannot be either a mental-state or state-of-affairs theory for the reasons given in the above.
(2) Whatever form such a theory might take, it will have to imply *either* that all intrinsically valuable entities are equal *or* that they are not.
(3) If the former, then such a theory will not be able to account for the difference in intrinsic value that is supposed to hold between what is wild and what is domestic.
(4) If the latter, then there simply will be no parsimonious reason for supposing that "lower" members of the hierarchy have "some" intrinsic value in the first place.

significance" is used to compare assessments of moral weight in cases of conflict. It is the difference, for example, between whether a pine tree deserves any moral consideration and the entirely separate question of whether pine trees deserve more or less consideration than a cat, or a human. Indeed, as Kenneth E. Goodpaster suggests, we should *not* expect that the criterion for having "moral standing" at all will be the same as the criterion for adjudicating the competing claims to priority among beings that merit that standing.[22] The priority issues do have to be dealt with for an operational ethical account, but in the interests of clarity they shall be set aside on this occasion.

Here therefore is the pressing question: What makes a being deserve moral consideration? To this question, Goodpaster offers the following answer:

(1) Beings capable of being beneficiaries deserve moral consideration from all rational moral agents.
(2) Beings that have (or can have) interests are capable of being beneficiaries.
(3) Thus, beings that have (or can have) interests deserve moral consideration from all rational moral agents.[23]

According to this argument, "a being's having (or ability to have) interests" is a sufficient condition for the worth of that being to be considered by all rational moral agents. What then is meant by "a being's having (or ability to have) interests"? Simply stated: If a being is one that can meaningfully be said to be "happy or miserable," or be "well or ill," or even "to flourish or to be injured" and so on, then it has interests. In other words, if a being has objective *goods* (or bads) (such as the flourishing of the being), then it has interests. Indeed, it is in a being's interests that it is happy *or* is well *or* that it flourishes. As a result, it is *good* for this being that it is happy *or* is well *or* that it flourishes. Note that "the flourishing of the being," for example, is quite independent of our evaluations or interests and thus should

22 See Kenneth E. Goodpaster, "On Being Morally Considerable," in Michael E. Zimmerman, J. Baird Callicott, George Sessions, Karen J. Warren, and John Clark, eds., *Environmental Philosophy: From Animal Rights to Radical Ecology*, 3rd (New Jersey: Prentice-Hall, 2001), p. 59.

23 Ibid., p. 64.

be regarded as an *objective* state of affairs. The "objective goods principle" may therefore be stated as: *If a being has (or can have) objective goods (or bads), then it deserves moral consideration from all rational moral agents.*

On the basis of "objective goods principle," I will therefore attempt show that individual living things (i.e., animals and plants) deserve moral consideration from all rational agents.

Animals are capable of suffering. It is *bad* for my cat for example, if a young boy cuts its tail off just for fun. My poor cat must be feeling extremely painful during and perhaps even after the event. Similarly, if chickens (or bison) are forced to live in cramped, unsuitable conditions for the duration of their lives, it would be *bad* for them. They would be permanently uncomfortable. It is apparent therefore, that animals can have objective bads. Surely then, animals can have objective goods as well. For example, mild winters are *good* for black bears. Given that animals can have objective goods and bads, and given the "objective goods principle," I contend that animals deserve moral consideration from all rational moral agents. This argument can be briefly put as follows:

(1) If a being has (or can have) objective goods (or bads), then it deserves moral consideration from all rational moral agents (objective goods principle).
(2) Animals are beings that can have objective goods and bads.
(3) Therefore, animals deserve moral consideration from all rational moral agents.

As for plants (or any other forms of life), it is likely that they deserve moral consideration from us as well. Plants are vital objects with inherited biological propensities determining their natural growth. Indeed, we are wont say that certain conditions are *good* (or *bad*) for plants, thereby suggesting that plants can "have" a *good* (or *bad*). For instance, the warm sunshine is good for my orchid.[24] Moreover, a plant can be said to flourish if it develops those characteristics that are normal to the species to which it belongs in the normal conditions for that species. If it fails to realize such characteristics, then it will be described as "defective," "abnormal," "stunted" and

24 On the other hand, mere things (e.g., a stone) cannot have any goods (or bads). They have no "well-being" to be sought or acknowledged by rational moral agents.

such like.[25] In short, plants can have objective goods or bads. With reference to the "objective goods principle," we can therefore conclude that: plants deserve moral consideration from us.

At a bare minimum it would seem, the mere fact that an entity is a living thing and that it has the capacity for objective goods or bads is sufficient for it to receive moral consideration. This being the case, it follows that because animals and plants deserve moral consideration from us, we as rational moral agents should have appropriate *respect* for them.

Discussion of collective biological entities however, requires a greater degree of subtlety. This is because collective biological entities -- colonies, ecosystems and so on -- are possessed of life in only the metaphorical sense. They lack those properties typical of living things -- reproduction, growth, death and the like. However, collective biological entities *do* have goods (and bads). It does make sense to talk about the conditions in which collective biological entities flourish and thus of their goods. For instance, fresh water and fertilized soil might be essential for a certain ecosystem. Correspondingly, we can meaningfully talk about what is damaging to collective biological entities and hence of their bads. For example, the polluted air around the city tends to be bad for the remnants of the original habitat. In short, collective biological entities can be said to flourish (or to be injured).

Note however that the goods of collective biological entities are not reducible to the goods of their members. John O'Neill illuminates this view:

> The realisation of the good of a colony of ants might in certain circumstances involve the death of most its members. It is not a condition for the flourishing of an individual animal that it be eaten: it often is a condition for the flourishng of the ecosystem of which it is a part… Most members of a species die in early life. This is clearly bad for the individuals involved. But it is…essential to the flourishing of the ecosystems of which they are a part.[26]

Collective biological entities -- colonies, ecosystems and so on -- can have their own objective goods (or bads), although they are not possessed of

25 See Ibid., p. 65; and John O'Neill, "The Varieties of Intrinsic Value," *Monist* 75, No. 2 (1992), pp. 129-130.

26 John O'Neill, "The Varieties of Intrinsic Value," *Monist* 75, No. 2 (1992), p. 131.

their own life. Given collective biological entities can have their own objective goods (or bads) therefore, the "objective goods principle" demands that collective biological entities deserve moral consideration from us. Provided collective biological entities deserve moral consideration from us then, we as rational moral agents should have appropriate *respect* for them. It is clear therefore that the scope of our moral respect should further encompass collective biological entities along with humans, animals and plants.

At this point, someone might challenge the "objective goods principle" thusly:

> Why should any being that has (or can have) objective goods (or bads) deserve moral consideration from all rational moral agents? Furthermore, why should we have an appropriate *respect* for beings that have (or can have) objective goods or bads?

To this challenge, we may respond:

> We should recognize individual living things and collective biological entities, as ends-in-themselves. We should have an appropriate respect for them. Such a respect for the natural environment is constitutive of a flourishing human life. Given that we are rational moral agents, were we to lack respect for our natural environment we would be incomplete as we would lack part of what makes for a flourishing human existence. The best human life is one that includes an awareness of and respect for environmental entities with objective goods (or bads).[27]

27 See Ibid., pp. 132-133.

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The Land Ethic and Gleason's Individualistic Concept of Plant Association

Wei Lun Yu*

I. Introduction

The land ethic, primarily functioning as an ethical approach to environmental problems identified in Aldo Leopold's classic book, *A Sand County Almanac*, is one of the foremost pioneering and inspiring attempts to formulate environmental ethics. Leopold's land ethic is to a large extent based on the community concept in ecology. For instance, the premise of the land ethic is that the individual is a member of the land-community of interdependent parts. And the maxim of the land ethic also draws attention to the need to preserve the integrity, stability, and beauty of the land community.[1] The community concept,[2] representing a holistic paradigm holding that biotic communities are integrated and stable, has become problematic since in the late 1940s; a number of individualistic ecologists, such as H. A. Gleason, started arguing that plant associations do exist, but that these eco-groupings are too loosely related to constitute an integrated and stable

* Ph. D. Candidate, HPRC, The University of Queensland

1 It is important to note that the maxim Leopold advocated here is incoherent with the theorization of the land ethic. After enlarging the community concept to encompass all components of ecosystems, such as soils and waters, the maxim of the land ethic should be "to preserve the integrity, stability, and beauty of *the land community*." Compared with the biotic community, the land community is larger since it includes biotic communities and abiotic communities. It is unclear why Leopold adopted a narrower community concept to establish the maxim of the land ethic. However, according to the theoretical structure of the land ethic and the enlargement of the community concept Leopold repeatedly emphasized, it is justifiable to replace "the biotic community" with "the land community."

2 As for a detailed review of the development of the community concept in ecology, see Whittaker, R. H., "Classification of Natural Communities," *Botanical Review* 28(1962): 1-239.

community. Against this background, the aim of this paper is threefold: (1) to briefly show Gleason's individualistic argument and how it would affect the land ethic; (2) to argue that Gleason's individualism will raise, at least, a threefold problem for the land ethic, including (i) how to incorporate ever-developing sciences within the land ethic, (ii) how to engender duties from ever-changing communities, and (iii) how to modify the maxim of the land ethic; and (3) to argue that Leopold's adaptive scientific epistemology, the affirmation of eco-relationships, and a new formulation of the maxim can be replied to the problems raised by Gleason's individualism.

II. Gleason's Individualistic Concept of the Plant Association

Gleason, an American ecologist, published "The Individualistic Concept of the Plant Association," in 1926 and 1939.[3] These two essays were largely ignored in the first half of the 20th century. However, after World War II, Gleason's individualism, in virtue of some potent confirmation from the field studies on prairies, gained growing recognition and became a leading trend in ecology.[4] Some even argue that this is a paradigm shift from holism to individualism in ecology.[5] This background shows that Gleason's individualistic theory played an influential role in inspiring following ecologists to question the community theory.[6] A quick survey of Gleason's individualistic concept of the plant association can be found in

3 See Gleason, H. A., "The Individualistic Concept of the Plant Association," *Bulletin of the Torrey Botanical Club* 53(1926): 7-26; and Gleason, H. A., "The Individualistic Concept of the Plant Association," *American Midland Naturalist* 21(1939): 92-110.

4 A detailed discussion of Gleason's individualism on ecology can refer to McIntosh, R. P., "Plant Communities," *Science* 231(1958): 115-120; McIntosh, R. P., "The Continuum Concept of Vegetation," *Botanical Review* 33(1967): 130-187; McIntosh, R. P., "H. A. Gleason - 'Individualistic Ecologist' 1882-1975: His Contributions to Ecological Theory," *Bulletin of the Torrey Botanical Club* 21(1975): 253-273; and Nicolson, M., "Henry Allan Gleason and the Individualistic Hypothesis: The Structure of a Botanist's Career," *Botanical Review* 56(1990): 91-161.

5 Pickett, S. T. A. and Ostfeld, R. S., "The Shifting Paradigm in Ecology," in R. L. Knight & S. F. Bates (eds.), *A New Century for Natural Resources Management* (Washington, D.C.: Island Press, 1995), 261-279; Fiedler, P. L., White, P. S., and Liedy, R. A., "The Paradigm Shift in Ecology and Its Implications for Conservation," in S. T. A. Pickett, R. S. Ostfeld, M. Shachak, and G. E. Likens (eds.), *The Ecological Basis of Conservation: Heterogeneity, Ecosystems and Biodiversity* (New York: Chapman and Hall,1997), 83-92.

6 See Moravec, J., "Influences of the Individualistic Concept of Vegetation on Syntaxonomy," *Vegetatio* 81(1989): 29-39.

his 1939 paper, in which he concisely presented his individualistic argument with seven theses. They are as follows:

1. The ordinary processes of migration bring the reproductive bodies of a single plant or a species of plant into many places.
2. The ordinary processes of migration bring the reproductive bodies of various plants into the same place.
3. Of the various species which reach one spot of ground, the local envi ronment determines which may live, depending on the individual physiological demands of each species separately.
4. On every spot of ground, the environment varies in time, and conse quently the vegetation varies in time.
5. At any given time, the environment varies in space, and consequently vegetation varies in space.
6. A piece of vegetation which maintains a reasonable degree of homo geneity over an appreciable area and a reasonable permanence over a considerable time may be designated as a unit community. Within such an area and during such a period similarity in environmental selection tends toward similarity in vegetation.
7. Since every community varies in structure, and since no two communities are precisely alike, or have genetic or dynamic connection, a precisely logical classification of communities is not possible.[7]

A summary of this argument is as follows:

(1) The formation of vegetation units is due to the interaction of individual species' migration and the environmental selection. (Theses 1, 2, and 3)

(2) The interaction of individual species' migration and the environmental selection varies in time and space. (Theses 4 and 5) Therefore, (3) the formation of vegetation units, though exists, varies in time and space. (Theses 6 and 7)

According to this argument, a possible impact of Gleason's individualistic community model on Leopold's ecological account is his reconsideration of community integrity and stability. According to the land ethic, when addressing the community concept, Leopold explicitly stressed five ideas:

7 Gleason (1939): 107-108.

interdependency (e.g., food and energy interdependency), health (e.g., the health of the land, understood by Leopold as the capacity for self-renewal), integrity, stability, and beauty. Compared with Gleason's individualistic argument, we can discern, firstly, that the ideas of health and beauty are not addressed in Gleason's argument, and, secondly, that the other three ideas are related to Gleason's individualism in different ways. On the one hand, Leopold's stress of interdependency is positively recognized by Gleason's emphasis of the interaction between each species' migration and the environment's selection. On the other hand, Leopold's account of integrity and stability is likely to be, if not rejected, reformulated by Gleason's statement of time and space variation within communities. Thus, in order to show how Gleason's individualism constitutes a counter-example to Leopold's ecological account, a way to consider Gleason's individualism can be to highlight how Gleason regarded integrity and stability.

I first show how Gleason reformulated integrity. Despite the fact that integrity has been variously defined by various ecologists who have different concerns,[8] a general definition of community integrity can refer to the maintenance of the community structure as complete or undivided. To argue against the community structure as being complete or undivided, Gleason invited us to think of how component species appears and disappears in a community. Imagining a simplified community originally consisting of species A, B, and C, and later replaced by species X, Y, and Z. Gleason illustrated this transition process as follows:

> …species X, Y, and Z must have been derived from some neighboring area or areas…. In this neighboring area species X, Y, and Z may or may not have been living together. **In these original stations the environment**

8 For instance, John Cairns defines integrity as "the maintenance of the community structure and function characteristic of a particular locale or deemed satisfactory to society." See Cairns, J., Jr., "Quantification of Biological Integrity," in R. K. Ballentine and L.J. Guarraia (eds.), *The Integrity of Water: Proceedings of a Symposium, March 10-12, 1975, Washington, D.C.* (Washington, D.C.: Office of Water and Hazardous Materials and U.S. Environmental Protection Agency, 1975): 171; And James R. Karr avers that the concept of integrity implies "an unimpaired condition or the quality or state of being complete or undivided." See Karr, J. R., "Measuring Biological Condition, Protecting Biological Integrity," in G. K. Meffe and C. R. Carroll (eds.), *Principles of Conservation Biology* (Sunderland, MA: Sinauer, 1997): 283. The difference between these two definition of integrity, as McIntosh notes, is that "[Cairns' definition is] a substantially anthropocentric meaning. By contrast, [Karr's definition is] with little or no influence from human actions." See McIntosh, R. P., "Ecological Science, Philosophy, and Ecological Ethics," in Jim Hill and Wayne Ouderkirk (eds.), *Land, Value, Vommunity: Callicott and Environmental Philosophy* (Albany: State University of New York, 2002): 66.

> **was variable, their seed production was variable, and the migration of these seeds was controlled largely by those inexplicable factors which we call chance….** The plants of the earlier association, which we may designate A, B, and C, eventually reached the end of their time-period and disappeared. **Their disappearance may or may not have been simultaneous**. The particular environmental changes which facilitated the entrance of X, Y, and Z may not have been the changes which caused the loss of A, B, and C. The former may have entered first, so that at one time the association consisted of all six species, or entry and disappearance may have been more or less serial, so that the association passed through successive stages of A, B, C; X, B, C; X, Y, C; and finally X, Y, Z.[9]

The formation of communities, for Gleason, is dependent upon how the individual physiological demands of each species separately interact with the environment (see Thesis 3). The community structure is merely a contingent combination of variable species' physiological demands and the variable environment. Therefore, each component species, such as A, B, C, X, Y, and Z, is not inseparable as an integrated entity. As the environment and species' physiological nature vary over time and space, the community structure will thus change. The integrity of the community structure, as Gleason suggested, is only a result of chance existing to a reasonable extent of time and space.

After showing Gleason's reconsideration of integrity, I now turn to stability. It too has been defined variously.[10] Nevertheless, before the concept of stability became diverse, it was traditionally related to the balance or equilibrium of nature,[11] and widely utilized by ecologists to "characterize a stage of a community perpetuating itself barring disturbance."[12] One conspicuous problem with the stability concept, noted by Gleason and many other ecologists, is that stability does not make clear the scale or the duration under consideration. Gleason said:

9 Gleason (1939): 99, emphasis added.

10 V. Grimm and C. Wissel identify 163 definitions of 70 stability concepts, and boil down these 163 definitions to 6 classes. They are: (1) constancy, (2) resilience, (3) persistence, (4) resistance, (5) elasticity, and (6) domain of attraction. See Grimm, V. and Wissel, C., "Babel, or the Ecological Stability Discussion: An Inventory and Analysis of Terminology and a Guide for Avoiding Confusion," *Oecologia* 109(1997): 324-26.

11 McIntosh (1985), 186.

12 McIntosh (2002), 72.

> If our lives were measured by days instead of years, we can imagine an ecologist saying, "I have seen three generations of Galinsoga on this spot of ground. Evidently we are dealing with a stable environment and Galinsoga will live here forever." He would be wrong. With our knowledge of vegetational conditions actually extending over about three centuries, we now say, "Oaks have occupied this spot of ground for three hundred years. Evidently we have here a stable environment and the oak will live here forever." If our lives were seventy centuries instead of seventy years, would we not see that we were again wrong?[13]

One of the main difficulties of assessing community stability is that we lack methods lasting enough to observe different time-scales of environmental variations. For example, Gleason claimed that there are two classes of environmental variations which are unpredictable and unquantifiable. The first is fluctuation, "illustrated by our irregular alternation of cold and warm, of dry and wet years, of late and early seasons."[14] Because of the irregularity, this kind of environmental variations is unpredictable. The second is "cumulative environmental changes which progress over a period of years or centuries or ages,"[15] such as the silting up of a pond. Because it often progresses slowly over a long period of time, this kind of environmental variations is immeasurable. Consequently, without proper means of predicting and measuring environmental variations in different time-scales, using the concept of stability to describe communities, as Gleason warned, is at the risk of being wrong.

To sum up, this section exhibits Gleason's individualistic argument and elucidates how the individualistic community concept would affect the concepts of integrity and stability. Based on this, what I will do next is to show how Gleason's individualism raises a threefold problem for the land ethic.

III. The Problems for the Land Ethic Raised by Gleason's Individualism

I now turn to reply to some -- but by no means all -- of the salient problems with the role of ecology in the land ethic. My discussion of the

13 Gleason (1939): 97.

14 Gleason (1939): 95.

15 Gleason (1939): 95.

problems raised by Gleason's individualism is threefold: (i) how to incorporate ever-developing sciences within the land ethic, (ii) how to engender duties from ever-changing communities, and (iii) how to modify the maxim of the land ethic. I will further develop this threefold problem in order.

To begin with (i). How to incorporate ever-developing sciences is always a difficult problem and one encountered by many philosophers. As Robert Kirkman points out, "many environmental philosophers relate to the natural sciences as they relate to the philosophical tradition…. Selective science, like selective philosophy, has its dangers."[16] One reason why relying on the sciences is dangerous is because "however useful [the sciences] might be, the tentative truths of the sciences rest within a much larger and deeper uncertainty."[17] Based on this, Philip Cafaro claims that one of Kirkman's meritorious points is that "philosophers who pin their ethics too closely to particular scientific theories are at the mercy of future changes in science."[18] The entanglement of Leopold's land ethic with ecology is a typical example. In light of the land ethic, in order to extend moral consideration toward nature, Leopold utilized ecology as an intellectual subject guiding people to perceive the eco-relationships, such as the membership of the land community of interdependent parts. Based on these eco-relationships, Leopold elaborated the premise and maxim of the land ethic, which are:

1. The individual is a member of the land-community of interdependent parts.
2. A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.[19]

However, because Leopold pinned his ecological explanation too closely to the holistic paradigm of the community concept, once the paradigm shifted to individualism, Leopold's ecological account, including the eco-relationships and the premise and maxim of the land ethic, is at the mercy of the individu-

16 Kirkman, R., *Skeptical Environmentalism: The Limits of Philosophy and Science* (Bloomington: Indiana University Press, 2002), 76.

17 Kirkman (2002), 74.

18 Cafaro, P., "Review of Skeptical Environmentalism: The Limits of Philosophy and Science," *Environmental Ethics* 26(2004): 101.

19 Leopold, A., *A Sand County Almanac, and Sketches Here and There* (New York: Oxford University Press, 1949), 203, 224-225.

alistic turn in ecology. Therefore, a tight entanglement with paradigm-shifting ecology will require the land ethic, if defensible, to have a good strategy to resist the uncertain development of ecology.[20]

To further address the specific impact of the uncertain impact of ecology on the land ethic I will go to consider (ii) and (iii). According to the land ethic, Leopold utilized two ecological concepts, the biotic community and the land pyramid, to demonstrate eco-relationships, such as the human membership of the land community. And based on these eco-relationships, Leopold asserted the premise and maxim of the land ethic. Moreover, because Leopold embraced the holistic model of the community concept, he viewed communities as integrated and stable entities, and thus the eco-relationships among communities are regarded as integrated and stable as well. However, if communities are not integrated and stable, then the eco-relationships among them will not be integrated and stable as well. Consequently, ecological individualism raises a question of whether the premise and maxim of the land ethic are defensible if the eco-relationships are not integrated and stable.

The questionable premise and maxim will lead the land ethic to confront the questions (ii) and (iii). Regarding (ii), the community concept in the premise of the land ethic is conceived as integrated and stable. And based on the premise, the duties and obligations established by the land ethic are derived from the integrated and stable land community. However, after the community paradigm changed to individualism, the land ethic will encounter a problem of how to generate duties and obligations if the land community is not integrated and stable but ever-changing. Likewise, regarding (iii), if the land community is not conceived as integrated and stable, then the maxim of the land ethic emphasizing integrity and stability must be, if not abandoned, at least modified. Therefore, the question of how to properly modify the maxim of the land ethic must be taken seriously.

20 Norton has a general explanation of the relationship between uncertainty and sciences. He says: "On close look the 'problem' of uncertainty is really a grad bay of more or less related problems, all resulting from the fact that our finite knowledge will always fall short of any ideal of 'full' knowledge upon which the base everyday decisions. Uncertainty, in this sense, is just a general label for all the failures of our scientific models." See Norton, B. G., *Sustainability: A Philosophy of Adaptive Ecosystem Management* (Chicago: The University of Chicago Press, 2005), 101.

So far we know Leopold's ecological account, at least, raises a threefold problem. Nevertheless, these three aspects of the problem all converge toward one concern: "from whence can we make the land ethic adaptive to the individualistic development of ecology?" A resolution of this concern with its three problematic aspects, I propose, should include Leopold's adaptive scientific epistemology, the affirmation of the eco-relationships, and a new formulation of the maxim of the land ethic.

IV. A Reply to the Problems Raised by Gleason's Individualism

I begin with adaptive scientific epistemology, which is proposed to resolve the question of how to incorporate ever-developing sciences in the land ethic. When Callicott defends the diversity-stability hypothesis in the land ethic, he says:

> The science that informed Leopold's land ethic may be out of date, but Leopold's scientific epistemology seems to be much more advanced than that of some of the contemporary deconstructive ecologists.[21]

The main reason why Callicott exalts Leopold's scientific epistemology is because he notes Leopold's caution in asserting the diversity-stability hypothesis. For example, Leopold averred that "these creatures are members of the biotic community, and if (as I believe) its stability depends on its integrity, they are entitled to continuance."[22] And according to this statement, Callicott observes:

> Leopold's scientific scruples are evident in the parenthetical phrase "as I believe." He does not, that is, state the dependence of stability on diversity (or integrity, that is the presence of the characteristic species of a biotic community in their characteristic numbers) as a well-established fact, but as his own well-educated opinion.[23]

I share a basic agreement with Callicott's point, but I will go on to extend this point since there is a clue suggesting that Leopold's caution applies not only to the diversity-stability hypothesis, but also to ecological science generally.

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21 Callicott, J. B., *Beyond the Land Ethic: More Essays in Environmental Philosophy* (Albany, N.Y.: State University of New York Press, 1999), 125.

22 Leopold (1949), 210.

23 Callicott (1999), 123-124.

This clue is Leopold's distinction between ecology and ecological situations. As Leopold said, "an ethic may be regarded as a mode of guidance for meeting *ecological situations*."[24] Ecology is a branch of science which studies ecological facts, but the complexity of ecological situations has not been entirely disclosed by ecology. Ecological situations are, as Leopold said, "so new or intricate, or involving such deferred reactions, that the path of social expediency is not discernible to the average individual."[25] This points out that the land ethic aims at disclosing intricate ecological situations to people, and ecology is merely a means to proffer information for understanding these situations. However, Leopold was aware that this tool cannot guarantee the achievement of the aim because ecological situations are too complex to be understood by ecological scientists. For instance, when speaking of the biotic mechanism of communities, He said:

> The ordinary citizen today assumes that science knows what makes the community clock tick; the scientist is equally sure that he does not. He knows that the biotic mechanism is so complex that its workings may never be fully understood.[26]

To point out the inadequacy of science is the first step. To finalize an adaptive scientific epistemology needs the second step, which is to reduce the impact caused by the inadequacy of science. To do so Leopold needed two things: distinction and alternative. The distinction needed is between the land ethic and ecology. As mentioned above, the aim of the land ethic is to guide the public to understand ecological situations, and ecology provides a means to achieve this aim. Hence, the land ethic and ecology are distinct and the linkage between them lies in ecological situations. However, although the land ethic and ecology are connected by ecological situations, they seek ecological situations with different purposes. The land ethic is an ethical theory in pursuit of norms, and ecology is a scientific subject in pursuit of the truth. Thus, on the surface, the land ethic aims at guiding people to meet ecological situations, but in fact its ultimate goal is not to provide truth, but to lead the public to act appropriately. How can ecological situations generate normative

24 Leopold (1949), 203, emphasis added.

25 Leopold (1949), 203.

26 Leopold (1949), 205.

force? The answer to this, according the previous survey, is because of the eco-relationships among ecological situations. It is in virtue of eco-relationships that people can extend their moral sentiments toward nature. Finally, through the distinction, I can clarify two important points. Firstly, ecology is merely a means, and this suggests that there can be other means. Once ecology fails to achieve the aim, we can appeal to other means. Secondly, to assess whether ecology fails or not requires a precise understanding of the aim of the land ethic. According to the distinction, I suggest that the ultimate goal of the land ethic is to provide guidance to meet eco-relationships, based on which we can accurately determine whether ecology, after the individualistic turn, can achieve this goal or not.

I now turn to the alternatives. One may ask whether Leopold provided alternatives; the answer to this, I suggest, is "yes." There are two alternatives. One is in "The Land Ethic," and there is another mainly in "Conservation Esthetic." I first deal with the former, which is "animal instincts." Said Leopold:

> An ethic may be regarded as a mode of guidance for meeting ecological situations so new or intricate, or involving such deferred reactions, that the path of social expediency is not discernible to the average individual. Animal instincts are modes of guidance for the individual in meeting such situations. Ethics are possibly a kind of community instinct in-the-making.[27]

As mentioned above, Leopold's intention, in the land ethic, is to establish normative principles, so when he referred to ecological situations and animal instincts, these two things should be ethically understood as the eco-relationships and community instincts. Hence, immediately after this passage, Leopold continued to explain how community instincts can guide eco-relationships. He said:

> All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts. His instincts prompt him to compete for his place in that community, but his ethics prompt him also to co-operate (perhaps in order that there may be a place to compete for).[28]

27 Leopold (1949), 203.

28 Leopold (1949), 203.

In short, community instincts guide people to find their places in communities via competition and cooperation. This echoes Leopold's account of the eco-relationships. For the place of people in communities, in other words, is humans' community membership; competition and cooperation, constitute interdependency. For instance, in food-chains and food-webs, species competition and cooperation form the food-interdependency. Therefore, besides ecology, Leopold's community instincts provide the first alternative way of guiding people to appreciate the eco-relationships among ecological situations.

The second alternative is "perception." By investigating Leopold's earlier works, such as "Some Fundamentals of Conservation in the Southwest," Norton finds that perception plays a significant role in Leopold's thought. For example, in the final section, "Conservation as a Moral Issue," Leopold said: "Possibly, in our intuitive perceptions, which may be truer than our science and less impeded by our words than our philosophies, we realize the indivisibility of the earth."[29] Here Leopold explicitly expressed his inclination to intuitive perceptions since they are truer than science and less impeded than philosophy. Although some scholars may suggest that significant ideas here were later abandoned by Leopold,[30] his faith in the veracity of perception, at least, is an exception. It is preserved in "Conservation Esthetic." When speaking of various components of outdoor recreation, Leopold said:

> The perception of the natural processes by which the land and the living things upon it have achieved their characteristic forms (evolution) and by which they maintain their existence (ecology). That thing called "natural study."[31]

Here Leopold affirmed that perception can lead people to naturally study evolutionary and ecological facts. Moreover, as he originally thought that perception is truer than science, Leopold seemed to suggest that perception is more fundamental than ecological science. He said:

29 Leopold, A., "Some Fundamentals of Conservation in the Southwest," *Environmental Ethics* 1(1979): 140.

30 Callicott, J. B., *In Defense of the Land Ethic: Essays in Environmental Philosophy* (Albany, N.Y.: State University of New York Press, 1989), 88-89; and Flader, S. L., *Thinking Like a Mountain* (Lincoln: University of Nebraska Press, 1974), 143-144.

31 Leopold (1949), 173.

> Ecological science has wrought a change in the mental eye. It has disclosed origins and functions for what to Boone were only facts…. The incredible intricacies of the plant and animal community…were as invisible and incomprehensible to Daniel Boone as they are today to Mr. Babbitt…. [But] Let no man jump to the conclusion that Babbitt must take his Ph.D. in ecology before he can "see" his country. On the contrary, the Ph.D. may become as callous as an undertaker to the mysteries at which he officiates. Like all real treasures of the mind, perception can be split into infinitely small fractions without losing its quality…. Perception, in short, cannot be purchased with either learned degree or dollars; it grows at home as well as abroad, and he who has a little may use it to as good advantage as he who has much.[32]

Perception is surely a supplement to ecological science since it can provide guidance within ecological situations. However, the merit of perception is more than its being an alternative to ecology. Perception should be regarded as a more fundamental guide in ecological situations than ecology. What the land ethic aims at is to provide guidance for people to appreciate the eco-relationships among nature, and thus generate "love, respect, and admiration for land."[33] To engage with nature, such as through the perception of natural processes, is more straightforward than participating in academic discussions. As Leopold suggested, the learning process of ecological knowledge should not only take place in lectures about ecology, but also can and should occur in a wide range of circumstances, including our direct engagement with nature.[34]

To sum up, the awareness of the inadequacy of ecological science and the two alternatives constitute an understanding of Leopold's adaptive scientific epistemology. Therefore, whatever the development of ecology turns out to be, community instincts and perception are vital components in people's natural talents to appreciate nature.

After replying to (i), I now turn to (ii), which is the question of how to engender duties from ever-changing communities. In his reply to this ques-

32 Leopold (1949), 174.

33 Leopold (1949), 223.

34 Leopold (1949), 224.

tion, Callicott makes two points. Firstly, he asserts the existence of interdependency by quoting Donald Worster's "principle of interdependency." Worster says: "No organism or species of organism has any chance of surviving without the aid of others."[35] Secondly, Callicott utilizes the multiple and dynamic composition of human communities, such as Stevens Points, to provide an analogy with ever-changing biotic communities, and concludes:

> …if paradigmatic human communities are sufficiently robust to engender civic duties and obligations both to fellow members and to such communities per se, then biotic communities, which are not less robust than paradigmatic human communities, are, by parity of reasoning, also sufficiently robust to engender analogous environmental duties and obligations.[36]

I share a basic agreement with Callicott's points, especially his (and Worster's) affirmation of interdependency, and I will further develop them according to my own interpretation of the land ethic. Callicott is insightful in analogizing loosely grouping human communities to poorly bounded biotic communities, but this analogy is too general to fully explain why human and biotic communities are robust enough to generate analogous duties. The decisive reason why human and biotic communities can generate analogous duties, I suggest, is because they both possess analogous interdependency. One of Leopold's crucial strategies for establishing the land ethic is to explain an ethic as a process of evolution. In "Outlook," he said: "I have purposely presented the land ethic as a product of social evolution because nothing so important as an ethic is ever 'written.'"[37] The purpose of Leopold's strategy is to provide a way of extending ethics to include nature. The extension of ethics can be compared to the extension of railway, in which humanity is like a train, which needs two things to reach a new destination: new tracks and fuel. Track represents the relationship responsible for guiding people across the old boundary towards a new destination. Fuel stands for motivation which is responsible for generating energy to enable the train (humans) to reach the new destination. Therefore, I suggest that two fundamentally important elements for the extension of ethics are relationship (moral track)

35 Worster, D., *Nature's Economy: The Roots of Ecology* (Garden City, New York: Anchor Books, 1994), 429.

36 Callicott (1999), 132-133.

37 Leopold (1949), 225.

and motivation (moral fuel). In the case of the land ethic, these two elements are the eco-relationships and sentiments (e.g. love). This framework illuminates one very important point. The duties of the land ethic, as an extended ethic, are generated from the reciprocity of relationships and sentiments. Hence, the merit of Worster's principle of interdependency lies in its affirmation enabling the eco-relationships to be ethically adaptive to ecological individualism. Although communities may not be integrated and stable, once the interdependent relationships are affirmed, as Worster and Callicott claim, the duties of the land ethic are basically secured since in virtue of the eco-relationships people can extend their moral sentiments to nature.

Notwithstanding, to say that the duties of the land ethic are basically secured does not imply that duties from individualistic communities are the same as duties from holistic communities. Different relationships generate different duties. For example, duties derived from parental-filial relationships must differ from duties derived from friendship. Thus, although the duties from ever-changing communities can be substantiated, the land ethic still needs to revise or even give up some duties which are too closely tied to the holistic community model, such as the duty of preserving the integrity and stability of the land community. This will lead us to (iii), which is the question of how to modify the maxim of the land ethic.

Before addressing (iii), it is important to note one thing. The reason why the maxim the land ethic requires modification is not because integrity and stability are entirely abandoned, but because of the vagueness of these two concepts. Ecological individualism, though powerful, does not completely obliterate the concepts of integrity and stability. For example, McIntosh observes that "the term integrity was absent from most scientific ecological literature until the 1960s, but has increased since then."[38] Also, Shrader-Frechette and McCoy's review of Lewontin, Holling, and Orians suggests that "in the late 1960s and early 1970s a wide range of concepts, with a variety of applications, could be found under the umbrella of 'ecological stability.'"[39] Their observations demonstrate that integrity and stability do not disappear

38 McIntosh (2002), 66.

39 Shrader-Frechette, K. S. and McCoy, E. D., *Method in Ecology: Strategies for Conservation* (Cambridge: Cambridge University Press, 1993), 37.

from the discourse of ecology after individualism became popular in the 1950s. However, after the challenge of individualism, ecologists who seek a precise definition indeed find variously defined integrity and stability are vague. Therefore, Leopold's loose usage of these vague concepts will make his maxim too equivocal to be a reliable guide.

One way to avoid the vagueness is to abandon the original maxim and reformulate a new one. As Callicott observes, "the individualistic-dynamic paradigm in deconstructive community ecology seems to undercut two [integrity and stability] out of three of the land ethic's cardinal values."[40] As a result, he invokes "scale" as a new normative key, and reformulates the maxim as such: "a thing is right when it tends to disturb the biotic community only at normal spatial and temporal scales. It is wrong when it tends otherwise."[41] Callicott's attempted reformulation is admirable, but his new maxim can be more ethically straightforward if his new normative key – scale -- is substituted for the capacity of the land for self-renewal.

The reason why the capacity of the land for self-renewal is more ethically straightforward can be illustrated by questioning Callicott's supporting claims. The first question is that the supporting claims to which Callicott appeals do not explain why being "naturally abnormal" is equal to being "land-ethically wrong." For example, in the case of mass extinction, Callicott says that "normally, speciation out-paces extinction," so "the current *rate* of extinction is wildly abnormal."[42] Here he clearly explains that the reason why the current rate of anthropogenic extinction is abnormal is because extinction outpaces speciation. By the same token, in the case of global warming, he also claims that "we may be causing a big increase of temperature at an unprecedented rate,"[43] but without any additional argument, he further avers that "that's what's land-ethically wrong with anthropogenic global warming."[44] With these two cases, Callicott, at best, demonstrates that anthropogenic perturbations are naturally abnormal or unprecedented, but the

40 Callicott (1999), 125.
41 Callicott (1999), 138.
42 Callicott (1999), 136.
43 Callicott (1999), 136.
44 Callicott (1999), 136.

reason why being naturally abnormal is equivalent to being ethically wrong is obscure.

In reply to the first question, Callicott may appeal to other environmental philosophers, such as Leopold, Stewart Pickett, and Richard Ostfeld. However, this appeal remains questionable because scale, in light to those philosophers' accounts, is not the most ethically straightforward. For example, in "The Land Pyramid," Leopold wrote that "evolutionary changes…are usually slow and local. Man's invention of tools has enables him to make changes of unprecedented violence, rapidity and scope."[45] Leopold's statement here, as the above examples, only exhibits that the measure of rate and scope can "ecologically" judge whether human-made changes are unprecedented. To know Leopold's ethical measure needs to review Leopold's complete argument. He said:

> When a change occurs in one part of the circuit, many other parts must adjust themselves to it. **Change does not necessarily obstruct or divert the flow of energy**; evolution is a long series of self-induced changes, the new result of which has been to elaborate the flow mechanism and to lengthen the circuit. Evolutionary changes, however, are usually slow and local. Man's invention of tools has enabled him to make changes of unprecedented violence, rapidity, and scope.[46]

In light of this statement, Leopold seemed to argue that rapid and widespread human-caused changes can be land-ethically wrong if they obstruct or divert the self-adjustable circuit of the land, such as energy flows and food chains. The land community does not merely stand for a place all natural entities reside in, but also represents a series of mechanisms (e.g. energy flows and food chains) all entities rely on. To damage the self-renewable capacity of the land is land-ethically unacceptable since it will fatally threaten all of natural entities and the land community to which we belong. Similarly, Pickett and Ostfeld note that:

> …an inference [any human-caused flux is justifiable] is wrong because the flux in the natural world has severe limits… Two characteristics of

45 Leopold (1949), 217.

46 Leopold (1949), 216, emphasis added.

> human-induced flux would suggest that it would be excessive: fast rate and large extent.[47]

Their note implies that fast and far-reaching human-induced flux is naturally excessive, but the reason why excessive human-made flux is ethically wrong is because it goes beyond the limit of natural flux. That is, in Leopold's words, to obstruct or divert the flow of energy. Therefore, according to Callicott's supporting examples and quotes, the self-renewal of the land community seems to be more ethically straightforward than scale, especially in the case of the land ethic. Based on this, a new reformulation of the maxim of the land ethic, I suggest, can be: *a thing is right when it tends to preserve the capacity for self-renewal of the land community. It is wrong when it tends otherwise*.

This new summary moral maxim is advantageous because it echoes other significant concept in the land ethic, such as sustainability and land health. For example, in addition to describe the land as self-adjustable, Leopold also mentioned that the circuit of the land is "sustained."[48] Also, in the beginning of "Land Health and the A-B Cleavage," Leopold said:

> A land ethic, then, reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity.[49]

Because of these echoes, the new maxim is well-matched in the land ethic. However, the new maxim can be criticized since it also suffers from vagueness. One apparent problem of the new maxim is how to define the self-renewal of the land. In the face of the imperfect understanding of nature, human beings, at this point, indeed are unable to define the self-renewal of the land without vagueness. However, unlike the vagueness of integrity and stability, the ambiguity of the self-renewal of the land is detected by Leopold. He said: "biotas seem to differ in their capacity to sustain violent conversion."[50] Due to this observation, he suggested that:

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47 Pickett and Ostfeld (1995), 273-274, emphasis added.

48 Leopold said: "The circuit is no closed; some energy is dissipated in decay, some is added by absorption from the air, some is stored in soils, peats, and long-lived forests; but it is a sustained circuit, like a slowly augmented revolving fund of life." See Leopold (1949), 216.

49 Leopold (1949), 221.

50 Leopold (1949), 218.

> Whatever may be the equation for men and land, it is improbable that we as yet know all its terms. Recent discoveries in mineral and vitamin nutrition reveal unsuspected dependencies in the up-circuit: incredibly minute quantities of certain substances determine the value of soils to plants, of plants to animals. What of the down-circuit? What of the vanishing species, the preservation of which we now regard as an es thetic luxury? They helped build the soil; in which unsuspected ways may they be essential to its maintenance? Professor Weaver proposes that we use prairie flowers to re-flocculate the wasting soils of the dust bowl; who knows what purpose cranes and condors, otters and grizzlies may some day be used?[51]

In the face of the imperfect understanding of the self-adjustment of the land, not only can we make effort to understand this capacity, we also should be cautious since the effect of our behaviours on nature could be unintended harm. Therefore, although the new maxim also suffers from the vagueness, it is still defensible because Leopold already provided resolution for the vagueness.

V. Conclusion

In conclusion, I have briefly showed Gleason's individualistic concept of plant association, and argued how Gleason's individualism affect Leopold's land ethic. Based on this, we know that although ecology is an important aid, its uncertain development, such as the individualist turn, also threats the land ethic. In reply to the three problematic aspects of Leopold's ecological account, I suggest that Leopold's adaptive scientific epistemology, the affirmation of eco-interdependency, and a new formulation of the maxim can make the land ethic adaptive to the challenge of ecological individualism.

51 Leopold (1949), 220.

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自環境與經濟的衡平
論因應全球暖化的能源政策

林瑞珠 *、李宗棠 **

一、前言

氣候變化已是影響當代人類生活的重大課題。隨著全球氣溫及海水溫度升高，不但海平面因冰山融化而上升，據「政府間氣候變化小組」所發表之《2007 年氣候變化綜合報告》（又稱 Fourth Assessment Report，簡稱 AR4）評估，世界各地降雨分布將急遽改變，部分地區將因降雨減少而爲水資源不足所苦，部分地區則將因降雨增加洪澇頻仍[1]，不但自然生態系統受到威脅，海岸土地流失、工業用水短缺及農地乾旱等問題，更將衝擊世界各地數以百萬計的人民的安全與經濟活動。根據 2009 年由中研院、臺灣大學及中國科學院組成之兩岸團隊所發表之研究報告，全球溫度每增加 1 度，臺灣前 10% 強降雨就會增加約 140%，而前 10% 小雨則會減少約 70%。強降雨的增加可能導致洪水、土石流更加頻繁、嚴重；中、小雨是保持土壤濕潤及地下水的關鍵水源，其持續性減少將招致乾旱的威脅[2]。誠如《聯合國氣候變化框架公約》（United Nations Framework Convention on Climate

* 國立臺灣科技大學教授

** 英國愛丁堡大學法學碩士

1 IPCC, Climate Change: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC, Geneva, Switzerland (2007): 49.

2 Liu, S. C., C. Fu, C.-J. Shiu, J.-P. Chen, and F. Wu (2009), Temperature Dependence of Global Precipitation Extremes, Geophys. Res. Lett., 36, L17702, doi:10.1029/2009GL040218.

Change，以下簡稱氣候公約）前言所揭示，氣候變化及其不利影響已是人類共同關切的問題[3]。

對氣候變化的政策回應通常植基於科學界對氣候變化成因的研究與分析。因應氣候變化的對策概括分爲「調適」（adaption）及「減緩」（mitigation），其中「減緩氣候變化」的主要方法則是減少石化燃料的耗用，亦即調整能源結構。據 AR4 指出，自前工業化時代以來的人類活動所產生的溫室氣體是氣候變化的主要成因，其中又以二氧化碳的影響爲最[4]。而儘管溫室氣體的排放始於前工業化時代，1970 年到 2004 年之間卻增加了百分之七十的排放量，其中使用石化燃料所產生的二氧化碳佔相當大的比例，於 2004 年，使用石化能源所產生的二氧化碳佔溫室氣體排放的百分之五十六點五[5]。基於前述科學研究與分析，調整目前過度依賴石化燃料的能源結構，成爲面對氣候變化的政策制定者的首要之務。

然而，對國家或其他享有政策制定權限的政治實體（polity，非國家政治實體之顯例如歐洲聯盟及蘇格蘭）而言，制定因應氣候變化的能源政策意味著對既存社會經濟活動及公共資源分配進行調整，亦即以建制性的事實權力形塑一個事實秩序，而此一事實權力的行使必須符合法規範秩序的基本要求方可被正當化，其所形塑的事實秩序方可被維持延續。誠如法哲學家 MacCormick 所說，「法律既是規範秩序亦是建制秩序。作爲規範秩序，它仿造了道德的某些特質，並某種程度上必要地與道德連結；作爲建制秩序，它必要地與政治連結，並構成政治的一部份，同時，良善的政治對維持令人滿意的實證法體系而言是必要的」[6]。在因應氣候變化的情境下，科學、政治、法律及對環境與後代的道德義務可比喻爲金字塔底部的四個端點，而能源政策

3 United Nations Framework Convention on Climate Change (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107 (UNFCCC) Preamble.

4 See note 1 above, 36.

5 *Ibid*.

6 MacCormick, Neil, *Questioning Sovereignty* (Oxford: Oxford University Press, 1999):15.

可比喻爲金字塔的上層結構，能源政策的制定、落實、延續與正當化，均無法與四個端點所構成的底部結構分離。

工業革命以來，人類社會經濟活動已高度仰賴石化燃料，若以公部門權限對此能源結構所進行的調整，不論是透過發展再生能源、發展能源效率技術、推動溫室氣體減量、或對溫室氣體排放量設限管制，都不免以類型或功能爲區分，對產業部門進行選擇性的支持或抑制，進而使部分經濟活動參與者受益、使另一部分經濟活動參與者的利益受損，而衍生出利益衡量的問題。是以，溫室氣體減量政策對經濟發展之主要影響，在於調整能源結構所增加之生產、運輸及民生成本。

二、溫室氣體減量之國際規範發展趨勢

氣候變化既在全球範圍內發生，且影響及於世界各國，則關於減緩氣候變化及溫室氣體減量之對策及責任分配，自應由各國在國際合作的架構下共同決定。本章研析國際法上關於溫室氣體減量之規範架構，以及國際社會關於溫室氣體減量規範之晚近論辯。

（一）聯合國氣候變化框架公約與京都議定書

1992 年 6 月，《氣候公約》在巴西里約熱內盧舉行的聯合國環境與發展會議上開放簽署，截至目前爲止，已有 192 個締約方。《氣候公約》第 2 條揭示其目標在於「將大氣中溫室氣體的濃度穩定在防止氣候系統受到危險的人爲干擾的水準上。這一水準應當在足以使生態系統能夠自然地適應氣候變化、確保糧食生產免受威脅並使經濟發展能夠可持續地進行的時間範圍內實現」[7]。然而，《氣候公約》本文並未明定具拘束力的溫室氣體減量目標、推動機制及各締約方所應分擔的減量配額。因此，當時有學者認爲《氣候公約》只設定了「軟性目

7 See note 3 above.

標」及「漏洞百出的時間表」[8]。舉例而言，《氣候公約》並未規定「明確而具拘束力的關於二氧化碳及其他溫室氣體排放量於 2000 年減至 1990 年水準的承諾」[9]以實現其第 4 條第 2 項第 b 款所聲言之目標。《氣候公約》簽署後若干年，有學者指出，「由於其爲巨大政治壓力及妥協的產物，而具有許多缺失，包括軟性目標，以及模糊化對其承諾之解釋的迂迴用語」[10]。

1997 年 12 月，爲實現《氣候公約》第 2 條所揭示之最終目標，在日本東京舉行的第三次締約方大會（COP-3）正式通過《京都議定書》[11]，議定書並於 2005 年 2 月生效。學者指出，《京都議定書》的核心在於具法律拘束力的溫室氣體控制目標及與之相連的彈性機制（flexibility mechanism）[12]。

在溫室氣體控制目標方面，《京都議定書》第 3 條第 1 項明定了此一目標的二項要件：(1) 具法律拘束力之承諾要求附件 B 締約方[13]應「個別地或共同地確保其在附件 A 中所列溫室氣體的人爲二氧化碳當量排放總量不超過按照附件 B 中所載其量化的限制和減少排放的承諾和根據本條的規定所計算的其分配數量」；(2) 附件 B 締約方應「在 2008 年至 2012 年承諾期內這些氣體的全部排放量從 1990 年水準至少減少 5%」。由於減量目標具體明確，第二要件相當於附件 B 締約方之溫室氣體排放總量上限[14]。

8 Sands, Philippe, “The United Nations Framework Convention on Climate Change,” *Review of European Community and International Environmental Law* 1(1992): 270-274.

9 *Ibid*.

10 Campbell, Karen, “From Rio to Kyoto: The Use of Voluntary Agreements to Implement the Climate Change Convention,” *Review of European Community and International Environmental Law* 7(1998): 159.

11 Kyoto Protocol to the United Nations Framework Convention on Climate Change (adopted 11 December 1997, entered into force 16 February 2005) (1998) 37 ILM 22

12 Yamin, Farhana, “The Kyoto Protocol: Origins, Assessment and Future Challenges,” *Review of European Community and International Environmental Law* 7 (1998): 113-117.

13 即《氣候公約》之附件一締約方。

14 See note 12 above.

而所謂「彈性機制」，則是《京都議定書》爲促使締約方以自己執行、資助或購買排放減量的方式達成第 3 條第 1 項所定之量化排放限制及減量承諾（QELRC）所創設之三種機制[15]：(1) 聯合執行（JI）：議定書第 6 條允許締約方使用在另一附件 B 締約方境內因溫室氣體減量或封存計畫而產生之「排放減量單位」（ERU）以達成其 QELRC，惟此類計畫須得相關締約方同意，並必須能夠產生額外的 ERU[16]；(2) 清潔發展機制（CDM）：議定書第 12 條允許附件 B 締約方以在開發中國家投資符合《氣候公約》最終目標之永續發展計畫的方式，取得「排放減量權證」（CER）以作爲其達成 QELRC 目標之一部份，其目的在於導入私部門投資氣候友善的發展計畫[17]；(3) 排放交易（ET）：議定書第 17 條允許附件 B 締約方爲達成其 QELRC 目標而參與碳排放交易，但此類交易必須是締約方達成排放限制及減量目標的輔助措施。爲實現並管理碳排放交易，《氣候公約》締約方大會於 2005 年制定《京都議定書第 17 條排放交易之程式、規則及指導》[18]，爲碳排放交易之管理提供規範基礎。

（二）國際規範之發展趨勢

由於《京都議定書》第 3 條第 1 項所定之第一承諾期（first commitment period，始於 2008 年）將於 2012 年屆滿，《氣候公約》締約方預定於 2009 年 12 月在丹麥哥本哈根舉行之第十五次締約方大會商定新方案，以承繼《京都議定書》，繼續落實《氣候公約》減少溫室氣體之最終目標。基此，2007 年 12 月，在印尼峇里島舉行之第 13 次締約方大會通過《峇里島行動計畫》（Bali Action Plan）[19]，包

15 *Ibid*, 121.

16 *Ibid*, 121-122.

17 *Ibid*, 122.

18 See Decision 11/CMP.1 on Modalities, Rules and Guidelines for Emissions Trading under Article 17 of the Kyoto Protocol.

19 See Decision 1/CP.13 Bali Action Plan FCCC/CP/2007/6/Add.1, 3.

括長期碳排放減量合作行動（第 1 點第 a 項）、強化國家及國際減緩氣候變化行動（第 1 點第 b 項）、強化調適行動（第 1 點第 c 項）、強化科技發展及移轉（第 1 點第 d 項）、強化支持減緩氣候變化及調適行動之財源提供及投資（第 1 點第 e 項）。第 1 點第 a 項宣示於第十五次締約方大會達成新協議之目標。

2009 年 10 月在泰國曼谷舉行之聯合國氣候談判在爭議中落幕，並未就「後京都時代」之溫室氣體減量規範達成共識。《氣候公約》締約方於 2009 年 11 月在西班牙巴塞隆納舉行哥本哈根大會前最後一輪談判，惟與會各方並未達成共識，使新協議能否如期於 2009 年底締結充滿不確定性。

整體而言，開發中國家強調其追求經濟成長之權利，而對已開發國家所提之減量義務提出質疑。首先，開發中國家提出「歷史性氣候正義」（historical climate justice）的觀點，主張以西方國家爲主的已開發國家自工業革命時代以來約兩百年的溫室氣體排放始終存留在大氣層，是爲已開發國家之「歷史債務」，因此在哥本哈根簽定的新協議應給予開發中國家財務援助，而不應設定開發中國家之強制排放減量目標。有學者則認爲：(1) 不僅已開發國家本身受惠於其歷史上之溫室氣體排放，中國大陸、印度等開發中國家亦受惠於已開發國家在歷史過程中所發展之科技及經濟模式；(2) 計算確切之「歷史排放量」及其爲已開發國家帶來之優勢實過於複雜而近乎不可能；(3) 不應將國家視爲集成之整體，而忽略人類整體之排放權係奠基於人類之個體性，且當代已開發國家公民無法爲過去世代之生活方式負責[20]。基此，學者提出妥協方案，主張給予開發中國家人均排放量計算公式以外之額外排放權，同時給予已開發國家較少之排放權，亦即以差異化之排放權分配，有限度兼顧歷史排放及調適成本[21]。

20 Ekardt, F., Exner, A.K., and Albrecht, S., “Climate Change, Justice, and Clean Development -- A Review of the Copenhagen Negotiating Draft,” *Carbon and Climate Law Review* 3 (2009): 261- 268.

21 *Ibid*.

其次，排放總量上限及排放量計算方式亦是論辯焦點。開發中國家反對以國家爲單位設定溫室氣體排放總量上限，而主張採人均排放量之計算方式。然而，有鑑於中國大陸、印度及巴西等開發中大國人口眾多，學者認爲，若採人均排放量之計算方式，氣候變化問題將永無解決之日[22]。學者遂建議，應同時提供開發中及已開發國家誘因，鼓勵使用低排放燃料及低排放密集製程與運輸系統，有配額系統的綠色發展計畫勢必較排放上限有效[23]。

另外，智慧財產權法與溫室氣體減量政策間之潛在衝突亦在論辯之列。有論者主張專利法或已成爲綠色能源科技擴散之障礙，在世界貿易組織（WTO）《貿易相關智慧財產權協定》（TRIPS）之體系運作之下，更使科技研發能力較弱的開發中國家面臨經濟發展與減緩氣候變化的兩難。然而，亦有學者主張專利法固然須因應氣候變化等環境議題而被調整，但卻未必與環境目標相衝突，並且兩者能夠相輔相成[24]。

囿於篇幅，本文無法逐一介紹國際社會關於新氣候協議之議題與論辯，僅能擇要簡析如上。儘管如此，藉由觀察上述論辯，吾人不難發現，關於減緩氣候變化之政策辯論，主要係集中於「經濟發展」與「溫室氣體減量」之辯證關係，蓋後者之推動，不免對前者造成結構性之影響，如何在兩者間取捨並取得平衡，不啻是減緩氣候變化成敗之所繫[25]。

22 Pritchard, Robert, "Climate Policy on the Road to Copenhagen," *International Energy Law Review* 7(2008): 257-258.

23 *Ibid*.

24 Derclaye, Estelle, "Should Patent Law Help Cool the Planet? An Inquiry from the Point of View of Environmental Law: Part 1," *European Intelectural Property Review* 31(4) (2009): 168-183.

25 因本文截稿之時（2009 年 12 月 15 日），正值《氣候公約》於哥本哈根舉行第十五次締約方大會，以美國、歐盟爲首的已開發國家，與以中國大陸爲代表的開發中國家，於排放減量目標及財務援助等談判議題陷入僵局。儘管美國國會通過溫室氣體控制法案、美國總統歐巴馬矢言於哥本哈根大會之末壓軸出席以對各方施加必須達成協議之壓力，且有歐盟提出七十億歐元援助承諾、中國大陸提出頗具雄心之減量目標，然於此時間點上，吾人尚無法就大會結論預爲揣測，故關於哥本哈根之進程，留待後續爲文探討。

三、溫室氣體減量與綠色能源發展

能源耗用既係溫室氣體之主要排放源，則國際社會因應氣候變化之政策焦點，自然亦集中於減少能源耗用所產生之溫室氣體排放。然而，自古以來能源即是人類經濟活動之重要元素，工業革命以來，能源耗用不但發生於農業、工業產品之生產及運輸，甚至資料儲存及傳輸、乃至於社會關係之維繫，亦須耗用來自電力系統之能源。申言之，當代人類文明實係建築於規模龐大的能源供給網絡之上，倘不削弱「能源使用」與「溫室氣體排放」之相關性，則人類將面臨「氣候浩劫」與「文明倒退」之兩難抉擇。既然現實上已難降低人類對能源使用設備之依賴，則減少能源使用所產生溫室氣體排放之唯一方法，即是發展綠色能源，亦即以溫室氣體排放量較低之再生能源取代傳統石化能源，以及推廣能源效率較高之設備以減少整體社會之能源耗用量，此即世界各國減緩氣候變化之政策總以綠色能源發展爲核心之故。惟政府介入能源部門、推廣綠色能源，涉及管制措施、公共資源分配及差別待遇等課題，須有經濟學上證據證明綠色能源之發展需要政策支持，做爲政府對綠色能源提供支持體系之正當化基礎。於茲試以經濟學之觀點，說明相關觀點如下：

（一）綠色能源之定義

所謂「綠色能源」（green energy），係指對環境友善、污染較低之能源來源及能源使用，在探討減緩氣候變化之情境下，通常指有助於減少溫室氣體排放之「再生能源」及「能源效率」科技與產業而言。我國經濟部《綠色能源產業旭升方案》[26] 以再生能源產業及能源效率產業爲其推動綠色能源之政策主軸，加拿大安大略省《綠色能源與綠

26 行政院第 3141 次會議決定准予備查，行政院公報第 15 卷第 82 期，2009 年 5 月 1 日。方案網址（2009 年 12 月 11 日查訪）：http://www.ey.gov.tw/public/Attachment/9559315271.pdf

色經濟法》亦採此說，將發展再生能源及推廣能源效率並列爲該法之立法目的[27]。

而所謂「再生能源」（renewable energy），各方定義不盡相同，若參酌歐盟立法定義[28]，係指取自「可再生之非石化來源」之能源，包括風能、太陽能、空氣熱能（aerothermal）、地熱能（geothermal）、熱泉能（hydrothermal）、海洋能、水力、生質能、垃圾掩埋沼氣（landfill gas）、廢水處理廠沼氣（sewage treatment plant gas）以及生物沼氣（biogases）。我國《再生能源發展條例》第 3 條第 1 款則以「可永續利用」爲標準，定義再生能源爲「太陽能、生質能、地熱能、海洋能、風力、非抽蓄式水力、國內一般廢棄物與一般事業廢棄物等直接利用或經處理所產生之能源，或其他經中央主管機關認定可永續利用之能源」。再生能源對於減緩氣候變化之重要性在於，以溫室氣體排放量較低之能源利用型態取代石化能源，藉由減少石化能源耗用，減少總體能源耗用所產生之溫室氣體。

「能源效率」則係指以較少之能源耗用達到同樣之能源使用效益，藉以降低對能源之需求，進而減少因使用能源而排放之溫室氣體。舉凡建築、照明、空調、交通工具或工業機具，均有應用能源效率科技之空間，例如更有效率利用燃料的省油汽車等。在經濟部《綠色能源產業旭升方案》中，我國發展較成熟之能源效率科技及產業，以 LED 照明設備爲主，其能以較少之電力耗用達到同樣之照明效果，一般認爲，LED 之普及使用將可大幅減少照明設備之電力耗用，進而減少因生產電力而排放之溫室氣體。

27 Sagan, Maria, “Canada: Ontario’s Green Energy Act: leading the way to a greener future,” *International Energy Law Review* 6(2009): 206.

28 Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC [2009] OJ L140/16.

（二）綠色能源與環境外部成本

綠色能源做爲「環境導向」能源供給及使用之代名詞，其所代表之科技與產業，即不免受到所謂「環境外部成本」（environmental externality costs）之影響。「外部成本」存在於私部門之利益或成本計算不同於社會對利益或成本之估算之情形，而污染所造成之損害（亦即環境成本）係由社會整體承擔，不會反映於市場交易之定價機制，因此屬於外部成本之一種，稱爲「環境外部成本」[29]。任何能源開發均產生環境外部成本，但環境外部成本並不會反映在能源市場之定價機制，因此，對環境造成較多損害之能源類型或能源使用方式，其市場價格並不因環境外部成本較高而較不具競爭力；反之，對環境友善之能源類型或能源使用方式，其市場價格亦不因環境外部成本較低而較具競爭力。

對綠色能源之發展而言，環境外部成本實係主要之市場障礙（market barriers）。以再生能源爲例，經濟學家 Anthony D. Owen 便指出，任何減慢新科技在市場上擴散之速率的因素皆屬市場障礙，而燃煤及天然氣等石化能源發電之成本顯著低於再生能源發電，在環境外部成本不反映於電力定價機制的條件下，石化能源發電之價格優勢構成再生能源發電之市場障礙[30]。然而，若將石化能源發電排放溫室氣體之環境外部成本內化於電價，則部份再生能源發電項目則能夠取得相當的價格優勢；而隨著再生能源科技進步及規模經濟（economies of scale）的達成，再生能源發電的單位成本更可望在未來數個十年之間進一步降低[31]。

因此，將排放溫室氣體之環境外部成本內化爲能源供給及使用之成本，成爲推動綠色能源科技及產業發展之重要策略。蓋唯有於扶植綠色能源科技進步、單位成本降低之同時，除去石化能源因環境成本之外部性而取得之價格優勢，方能有效降低對石化能源之依賴，進而

29 Jonathan Koomey and Florentin Krause, “Introduction to Social Externality Costs” in Frank Kreith and Ronald E. West (eds), *CRC Handbook of Energy Efficiency* (CRC Press, 1997): 153.

30 Owen, A.D., “Renewable Energy: Externality Costs as Market Barriers,” *Energy Policy* 34(2006): 632-642.

31 *Ibid*, 642.

減少因耗用石化能源而產生之溫室氣體排放。不論藉由直接課徵碳排放稅或其他措施間接提高排放溫室氣體之財務負擔，內化二氧化碳排放之環境外部成本對於消除綠色能源科技及產業發展所面臨之市場障礙，應有普世之有效性[32]。

（三）綠色能源與定價公共財

所謂市場失靈（market failure），係指市場本身並未有效率地分配資源而言，亦可被解釋爲「單純個人利益之追求導致無效率之結果，而可由社會利益之觀點加以修正」[33]。市場失靈之成因之一即「外部效應」，亦即經濟活動未考慮其對整體社會所造成之影響，例如前節所述石化能源發電未將溫室氣體排放納入成本計算之情形，而使資源未被配置於對整體社會最爲有利之生產或服務提供活動。

對綠色能源而言，做爲「未定價成本」（unpriced costs）之環境成本，以及做爲「未定價公共財」（unpriced public goods）之環境效益，皆是市場失靈之成因[34]：(1) 由於市場價格並未計入石化能源所帶來之社會成本，未定價之溫室氣體排放及環境汙染成本並未反映於石化能源之價格，進而使石化能源被過低定價，並使其耗用量多於社會性之理想狀態[35]；(2) 能源效率及潔淨能源科技進步所帶來之環境效益屬公共財而勢必溢出於公眾、出資者之競爭對手及經濟體之其他部份，非由其出資者所獨享，且由於公共財無法定價，亦即無法使其出資者獲得經濟上之利益，故而環境效益無法被視爲發展綠色能源之誘因[36]。申言之，綠色能源與石化能源間存在著市場競爭關係，但石化能源所造成之環境成本及綠色能源所帶來之環境效益皆未反映於其市

32 *Ibid*.

33 Krugman, Paul, and Wells, Robin, *Economics* (New York: Worth Publishers, 2009 2nd edn), 15.

34 Brown, M.A., "Market Failures and Barriers as a Basis for Clean Energy Policies," *Energy Policy* 29(2001): 1197, 1200-1202.

35 *Ibid*, 1200.

36 *Ibid*, 1201.

場價格，亦即石化能源之負面效應與綠色能源之正面效應同時被市場忽略，因而使綠色能源處於相對不利之競爭地位。

爲扶植綠色能源科技及產業發展，並最大化溫室氣體減量之整體社會利益，學者認爲，應以公共政策介入解決抑制綠色能源投資達到社會理想程度之市場失靈問題[37]。政府介入能夠除去或補償市場不完美性（market imperfection）及市場障礙，將使市場能夠更有效率地爲社會整體利益而運作[38]。針對美國能源市場及潔淨能源政策所進行之經濟分析亦指出，強而有利的能源科技研究發展計畫，輔以一系列旨在克服市場失靈及組織障礙之公共政策，將能有效回應綠色能源發展所面臨之挑戰[39]。解決綠色能源市場失靈問題之公共政策概有以下各類[40]：(1) 碳排放交易體系：允許排放源減少碳排放至法定上限或購買排放權證，此一機制使溫室氣體排放所造成之外部環境成本內化爲經濟活動之財務成本，進而反映於產品或服務之市場價格，藉以減輕環境成本外部性做爲市場失靈成因之問題；(2) 政府投資綠能研發：藉由政府資金投入綠色能源科技之研發，促進綠色能源科技進步以提高其市場接受度；(3) 再生能源比例標準及租稅減讓與石化能源發電廠溫室氣體減量標準；(4) 工業及運輸業能源效率及溫室氣體減量計畫；(5) 建築物能源效率標準及標章計劃。

然而，爲避免政府介入資源分配之無效率問題，荷蘭學者更進一步建議應以投資者觀點分析爲促進再生能源等綠色能源科技擴散而設之政府支持體系（support system），亦即以投資者之風險與獲利性之觀點評估扶植綠色能源之法制之妥適性[41]。

37 *Ibid*, 1203.

38 *Ibid*.

39 Brown, M.A., Levine, M.D., and Koomey, J.G., “Scenarios for a Clean Energy Future,” *Energy Policy* 29(2001): 1179-1195.

40 *Ibid*, 1180-1182.

41 Dinica, Valentina, “Support Systems for the Diffusion of Renewable Energy Technologies—an Investor Perspective,” *Energy Policy* 34(2006): 461-477.

四、代結論：環境與經濟間之衡平考量

誠然，人類文明係建基於自然環境之上，不但人類社會生活與經濟活動所需之資源須仰賴大自然的供應，一旦地球氣候因溫室效應而劇烈變化，超出適於人類生存及文明存續之界限，則降雨嚴重失調及氣溫急遽改變，將使大規模的人道悲劇及文明毀滅成爲人類集體之厄運。然而，做爲個體，吾人或可要求自己爲減少溫室氣體排放而大幅度改變原有生活方式，甚或拒絕使用耗用能源之現代科技器具，但政府尚難要求人民恪遵同樣之環境倫理標準。

現代國家之任務繁多，不僅環境保護，舉凡經濟發展、社會安全、醫療衛生及文化教育等，亦皆屬公部門必須介入之範疇。其中，從「政策一致性」（policy coherence）的觀點言之，環境保護與經濟發展如何取得平衡，實係值得探討之課題。蓋經濟發展若以過度之環境破壞爲代價，則不但社會成員之健康及福祉將受威脅，長久而言，經濟發展之成果亦將被環境問題所抵銷；另一方面，環境保護政策若不考量經濟體系之承受能力，則不但將使經濟活動因成本過度提高而難以爲繼，務實而言，亦不免使環境政策失其政治基礎。因此，政府制定溫室氣體減量等環境政策，須考量其對總體經濟之衝擊，亦即使兩者達到衡平。

在此背景下，公部門介入矯正前述綠色能源之市場失靈問題，促進綠色能源科技擴散，以逐步調整過度倚賴石化燃料之能源供給結構，應是較能兼顧「環境保護」與「經濟發展」兩大政府任務之作法。綠色能源發展初期固然需要大量公部門資金挹注，以解決籌資不易之問題，表面上看來，似乎將排擠投入經濟發展之政府預算；然而，長遠而言，隨著綠色能源科技持續擴散，相關產業將趨於成熟，發揮創造就業機會及經濟產值之作用。易言之，綠色能源不但爲經濟活動提供對環境傷害較小之能源來源，且其本身亦能創造經濟價值，允爲環境保護與經濟發展兼籌並顧之可行策略。

此外，綠色能源政策之制定，應以實證研究爲基礎，確保公部門資源投入溫室氣體減量效果最佳、最具普及化潛力之科技項目。例如，於選擇再生能源政策之推廣對象時，應審慎評估其整體環境影響，歐盟最新再生能源立法 Directive 2009/28/EC 即明定認定生質燃料爲再生能源之標準，規定生質燃料之生產必須確保生物多樣性及保護罕見、瀕臨絕種物種與生態系，以及減少溫室氣體[42]。再如，我國選擇再生能源之發展項目時，即考量臺灣位處熱帶與亞熱帶之地理條件，有鑑於臺灣除基隆、蘇澳、宜蘭等少數地區外，其他地區終年日照數多在 1500 至 2200 小時間，恆春、台南更高達 2500 小時，日射量年平均每日每平方公尺達 3000 至 4300 千卡，《綠色能源產業旭升方案》選擇太陽光電爲再生能源之重點產業。

綜上，本文以爲，溫室氣體減量之環境政策目標，並非不能與經濟發展兼籌並顧，綠色能源即係衡平環境與經濟之可行政策工具。惟綠色能源科技之擴散，遭遇環境外部成本未能反映於石化能源之定價、環境效益亦未算入綠色能源之市場價值等「市場失靈」問題，需要政府政策介入矯正。而政府擬定綠色能源政策時，除應從投資者之角度檢視支持體系外，尚應以關於整體環境衝擊與客觀發展條件之實證研究爲基礎，以確保相關政策措施能有效實現調整能源供給結構、減少溫室氣體排放之目標。

42 See note 28 above.

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永續發展與行善的誘惑 *

徐佐銘 **

一、導論

1972 年，聯合國發表「斯德哥爾摩人類環境宣言」，指出人類的經濟發展，已對環境造成傷害，並主張「自然保育，包括野生動植物，因此應該納入經濟發展計畫的重要考慮。」[1] 同年，唐妮菈米道斯（Donella Meadows）等人合著出版《成長的極限》一書。作者在 2004 年第 3 版出書時，以「人類生態足跡」的概念，說明在 2000 年時，經濟發展已經超過地球承載能力的 20%。[2]

1987 年，聯合國的世界環境與發展委員會發表「我們共同的未來」報告，提出「永續發展」（sustainable development）的理念與實踐。[3] 此時，人們已注意到，爲了永續發展人類的經濟，必須同時兼顧環境保護。時至今日，經濟發展與環境保護「平衡」與「雙贏」之說，已成主流論述。在 1980 年代，「企業社會責任」（corporate social responsibility, CSR）的概念，隨著永續發展論而興起。[4] 此後，經濟與環保雙贏論，逐漸演變成經濟、社會、環境「三贏」的理論架構。[5]

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** 淡江大學通識與核心課程中心副教授

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4 參見林宜諄編著，《企業社會責任入門手冊》（台北市：天下遠見，2008），頁 90-91。

5 Marc J. Epstein 著，李芳齡譯，《企業永續發展指南》（台北市：天下雜誌，2009），頁 40。

儘管雙贏與三贏之說，都以「互惠的利他主義」的模式，亦即，訴諸「投資環保可能獲利更多」，來勸說企業主實踐環保的利他行爲；然而，許多企業主仍然猶豫不前。主流的論述認爲，這是因爲企業主對於「投資環保將獲利更多」這個「事實」缺乏認知，或是不懂得實踐的「策略」之故。換言之，不重視環保投資，可說是「反應遲鈍」。[6] 愛普斯坦（Marc J. Epstein）在〈從爲何到如何〉序文裏主張，永續發展的價值已普受肯定，現在只剩「如何做」的問題。[7]

基本上，我肯定雙贏或三贏這種訴諸互惠的利他主義，同時贊同行動實踐的重要性。雖然我也肯定將 CSR 定位在「義務」的意義與重要性，然而，本篇論文將借用彼得杜拉克（Peter F. Drucker）的小說《行善的誘惑》的概念來論證，在永續發展與 CSR 的論述上，有時將實踐環保的利他行爲定位在「超義務」的美德，亦有其不容忽視的意義。同時，我將論證利他的道德情操之重要性。

二、義務與美德

爲了說明義務與美德的不同，底下我將引用林火旺在《倫理學》一書的區分。他將行爲分爲四類，第一類是義務或責任，是對的行爲，一定要做，比如說實話。第二類是錯的行爲，一定不可以做，例如說謊。第三類是無關對錯的行爲，可做也可不做，像選修輔系。第四類是超義務的行爲，比如幫助他人，這類的行爲遠超過道德的要求，屬於聖賢行徑，並非個人的義務或責任。[8]

根據這樣的區分，利他主義的行爲，像捐款、讓座、當義工，「大致而言」都屬於第四類的行爲，是種美德，但由於超義務，因此不是義務。誠然，我們會發現第四類與第一類的行爲，都具有道德上的正

6 同上，頁 57。

7 同上，頁 12。

8 林火旺，《倫理學》（台北市：五南，2004，第二版），頁 20-21。

面意義，但要求每個人一定要捐款、讓座或當義工，似乎又有些強人所難。儘管一方面，有些人會認爲，像捐款這類的行爲是「如此富於意義」，以致於我們實在忍不住想把它說成是義務；然而，另一方面，一旦我們把利他主義推展得比較極端而徹底時，又會發現要求個人散盡家財以利他人，似乎也不合理。

我之所以說像捐款這類的行爲，大致而言歸屬於第四類，用意在於顯示出，將義務與美德做個區隔，並且把美德說成超義務，雖然暴露了上述的難題，但同時也呈現這種區分的優點。事實上，無論是企業主或一般個人，所謂的環保實踐，到底應該做到什麼程度，我認爲，這個令人困惑的問題，跟我們到底應該把環保實踐視爲義務還是美德，有相當程度的關聯。

此外，就美德而言，我將主張，利他行爲的「動機」與利他行爲的「結果」，各有其意義與重要性。在本篇論文裏，我將特別論證利他行爲的動機的重要性。尤其是在可能利他而不利己，亦即非互惠性的利他之情況下，我將指出，在主流論述將 CSR 定位在義務，並轉化爲法律概念，因而相對削弱道德意義時，重新肯定利他主義，這種不同於獲利評估理性判斷的道德情操之重要性。不僅如此，我將論證這種道德情操有其相當重要的積極面，由於這個積極面，使它在永續發展與企業社會責任的論述與實踐上，都有其不容輕忽的意義。

三、經濟、社會與環境的互競

在永續發展初期的論述上，根據經濟發展與環境保護的「平衡論」與「雙贏論」，到底環保實踐要到什麼程度，才能夠說與經濟發展平衡或雙贏？或是，在平衡與雙贏的天秤上，究竟我們應該更偏袒哪一方？這些問題，老早就爭論不休，令人困惑。高爾（Al Gore）在《不願面對的真相》一書裏，有幅插圖畫著一個天秤，左邊的砝碼是一堆金條，右邊的砝碼是整個地球，令人印象十分深刻。高爾說：「沒有

了地球，我們要如何享用那金條呢？」[9] 顯然，在經濟與環保的天秤平衡上，高爾賦予地球更多的砝碼。

儘管經濟發展與環境保護的平衡論與雙贏論頗受歡迎，有些學者仍然不願意當騎牆派，而標示出自己的立場。立場愈鮮明，明顯偏袒經濟發展或環境保護的一方，愈有可能被另一方的支持者視爲「敵人」，並且被貼上「激進分子」的標籤。美國前總統老布希就曾在 1992 年的總統選舉上，批評高爾說：「這傢伙是個環保極端份子，寧願爲了貓頭鷹讓美國人失業。」[10] 在國內學者當中，李永展也是熱烈支持環保，立場鮮明者。他主張，只強調平衡不具意義，甚至有可能誤導，應該在環境保護的基礎上談經濟。[11] 蕭新煌等人的立場較爲溫和，但仍主張應該賦予環境保護優先地位。[12]

當企業社會責任隨著永續發展論興起之後，經濟與環境的平衡與雙贏論，逐漸演變成經濟、社會與環境的三方平衡與三贏論。儘管主流論述一如以往看待雙贏論般，樂觀地認爲這種三方的平衡與三贏，最終仍將利於經濟與企業主；然而，顯然的，三方要達成所謂的「平衡」，且三方都要有「贏」的感覺，難度必然比起雙贏要高許多。儘管愛普斯坦熱烈支持三贏論，卻也坦承要平衡經濟、社會與環境三方，「的確是艱巨挑戰」，因爲三方看似相互牴觸且利益互競。[13]

我認爲，愛普斯坦相當成功地指出三贏的困難所在。他的分析，也爲我們提供相當好的檢視架構。三贏比起雙贏，其困難度之所以大大提高許多，是因爲在原先的經濟與環保這兩項需要兼顧與平衡的項目之外，又增加社會這個項目。「社會」這個項目所需平衡與顧及的，就是現今所謂的「利害關係人」。光是利害關係人這項，就已經是既複雜又棘手，因爲它包括所謂的「掌權者」，比如政府、主管機關、

9 Al Gore 著，張瓊懿、欒欣譯，《不願面對的真相》（台北市：商周，2007），頁 271。

10 Gore, Al, *An Inconvenient Truth: A Global Warming*, (California: Paramount Pictures, 2007), DVD.

11 李永展，《永續發展：大地反撲的省思》，（台北市：巨流，2003），頁 49。

12 蕭新煌等人，《永續台灣 2011》，（台北市：天下遠見，2003），頁 18。

13 Marc J. Epstein 著，李芳齡譯，《企業永續發展指南》，前引書，頁 20-23。

股東與董事會；及「事業夥伴」，比如員工、供應商、產業公會；及「顧客群」，包括個人、企業、教育機構或政府部門；以及「外部影響力」，像社區人士、媒體與意見領袖。[14] 愛普斯坦指出，企業公司所面臨的困難是「該如何管理各利害關係人團體彼此間的互競利益？」。[15]

愛普斯坦這個分析，我認爲，真是一針見血。的確，員工可能期待公司能夠賺更多的錢，以便能夠回饋到員工自己的紅利或福利上；股東可能期待公司壓低員工的薪水；員工與股東可能會聯手漠視社區當地居民的福祉；員工、股東與社區當地居民也可能聯手耗損自然資源。這些利益的互競，不但包括在地的，也包括全球的。隨著跨國企業的興盛，利益的互競也衍生出跨國的衝突。

管理學大師彼得杜拉克在 1973 年的《管理學：任務、責任、實踐》一書裏，就提醒企業的管理人要注意社會責任（social responsibility），因爲公司在合法經營生產時，必然對人們、自然環境與社會環境產生衝擊。[16]

雖然杜拉克提到經濟會對自然環境產生衝擊，但在 1973 年那個年代，以及在他的書裏，他認真考慮的只有社會這個層面。同樣是二元平衡，只不過他所謂的社會責任，並非經濟與環境的二元平衡，而是經濟與社會的二元平衡。

杜拉克花了相當多的篇幅，在討論「所得不平等」這個社會議題。他指出，就「受雇人」的所得來看，美國平均低所得與平均高所得的比，就稅前來比，是 1 比 4，若考慮稅後及福利，則爲 1 比 3。杜拉克駁斥大眾的看法，他說美國是世界上所得最平等的國家。他還進一步主張，當國家與個人的所得增加時，高低所得將更趨平等。同時，

14 同上，頁 48。

15 同上，頁 20。

16 Drucker, F. Peter, *Management: Tasks, Responsibilities, Practices*, (New York: HarperCollins, 1993,[1973]), 312.

他也立場鮮明地爲美國以及資本主義辯護。他以中國與蘇聯這兩個共產主義國家爲例，指出中國的低高所得比爲 1 比 6，蘇聯爲 1 比 7。[17]

杜拉克雖然指出了社會責任對企業公司及管理人的重要性，然而社會責任這項，卻在他所謂的管理三大任務當中排名第三。排名第一的，亦即管理的首要任務是獲利。他主張，對任何機構，包括商業機構以及像醫院、大學這類非商業機構來說，就算不累積資本，至少也要維持現狀，否則這個機構就會難以爲繼。[18]

與杜拉克相似，愛普斯坦也對資本主義充滿信心。在他熱烈支持經濟、社會與環境三方平衡與三贏的基本思考模式下，獲利仍然是永續發展最終的目標。他在書裏舉了全球一百家企業在三贏上成功的例子，其中包括道氏化學公司。這家公司預計在未來十年內投資近 10 億美元的環保經費，預估將可創造 30 億至 50 億美元的營收。[19] 愛普斯坦認爲，企業永續發展的成功關鍵在於，找出對經濟、社會與環境三方都有利的交集領域。[20] 在他所提出的「企業永續模型」裏，環保實踐都必須能夠「提高公司的競爭力」以及「提高公司的獲利」，才算是成功的經營管理。[21] 換言之，永續發展的關鍵在於三贏的理性評估計算。愛普斯坦說：「永續流程的產出最終必須轉化成可用貨幣衡量」。[22]

相對於杜拉克與愛普斯坦對資本主義的信心與支持，唐妮菈米道斯等人則主張，經濟的成長是有極限的，因爲它不但耗損自然資源，而且，排放的廢物也對自然環境造成傷害。[23] 此外，全球貧富不均，也導致惡性循環，因爲貧窮國家在資本主義的剝削體系下，由於所得

17 Ibid., 369-370.

18 Ibid., 40-41.

19 Marc J. Epstein 著，李芳齡譯《企業永續發展指南》，前引書，頁 41。

20 同上，頁 22。

21 同上，頁 26-37。

22 同上，頁 63。

23 Meadows, Donella, Jorgen Randers and Dennis Meadows, *Limits to Growth: The 30-Year Update*, *op. cit*., 51-52.

偏低，很難養活自己，以致於覺得必須多生小孩，指望他們爲家庭賺錢，因而人口不斷增加。然而，人口增加本身卻是許多環境惡化的主因之一，因爲這不但造成每人分配到的自然資源變少，而且，爲了滿足眾多人口的需要，往往會迫使他們去開發更多的自然資源。[24]

李永展認爲，全球的貧富不均，除了反應社會不公，還投射出環境問題。貧窮國家多半被迫開發自己的自然資源，以解決迫在眼前的生計問題，因而使本國的環境惡化，然而開發的最終利益卻又大多被富有國家所享用。他認爲，問題的根源在於資本主義，因爲它「天生就是一種擴張系統」，價值都以獲利來計算。[25] 李永展指出，1980 年代，當國際貨幣基金與世界銀行推動金援貧窮國家時，卻強制要求接受金援國家要去除國家的管制，使經濟私有化與自由化，這個做法其實是擴大全球的貧富差距。[26] 他批評那些對永續議題最有影響力的富有國家，在論述時卻經常避談資本主義的問題根源。[27]

比較愛普斯坦與李永展的論述，我們會發現，儘管兩人都一致主張所謂永續發展，包括經濟、社會與環境三個永續層面，然而，兩人對於這三個永續層面的側重、對資本主義的評價、以及論及永續的策略上，都有相當大的差異。在談永續發展與國家競爭力的關係時，胡憲倫等人的論述頗似愛普斯坦，他們認爲，政府有責任監督與促進台灣產業的永續發展，因爲如此做將有助於提昇台灣整體的國家競爭力，使台灣成爲更有競爭力與更有活力的經濟體。[28] 李永展在論及國家競爭力時則指出，傳統上在論及一個國家的競爭力時，主要衡量的項目是經濟成長率，根據這樣的評比項目，2001 年的《世界競爭力報告》顯示美國與新加坡分居前兩名。然而，這兩個國家的生態足跡卻

24 Ibid., 89-98.

25 李永展，《永續發展策略》（台北市：詹氏，2004），頁 4-10。

26 同上，頁 5。

27 同上，頁 10。

28 胡憲倫、許家偉、張瑜真，〈台灣產業永續發展欠缺的一塊拼圖：兼談國家責任競爭力指數〉，《永續發展產業》第 36 期（2007 年 12 月），頁 143-150。

相當高，並呈現出生態赤字。李永展肯定新的世界競爭力報告，已將生態足跡列入國家競爭力的評比項目裏。[29]

從以上的分析，我們得知，雖然永續發展的實踐與策略要平衡經濟、社會與環境，似乎已成共識；然而，由於這三個平衡項目的利益互競，勢必引發取捨的難題。我們自然會問，對於企業主而言，有何「誘因」能夠引發他們實踐環保的決心與熱情？底下我將借用杜拉克的小說《行善的誘惑》，來分析這個問題。

四、行善的誘惑

在《行善的誘惑》這本小說裏，海恩森瑪曼神父，是美國一所天主教大學聖主隆大學的校長。[30] 身爲校長，他對學校的「管理」方式，深深影響學校未來的發展與走向。但另一方面，由於位居管理高層，他的一舉一動，不但會影響許多的「利害關係人」，同時也經常成爲這些利害關係人談論的對象。當然，有些背後的談論是支持或讚美，令他開心，但有些批評，卻令他困擾。

森瑪曼神父雖然本身是虔誠的天主教徒，又是聖主隆這所天主教大學的校長，但他領導這所大學的基本理念，卻有相當世俗的一面。他認爲，「天主教大學」這五個字的發展方向，應該是「大學」，而非「天主教」。換言之，他認爲，提昇學校的學術研究與教學能力，且有效幫助學生畢業之後能夠順利找到理想的工作，比弘揚天主教的宗教精神更加重要。[31] 森瑪曼這個治校理念，在校園裏引起相當兩極的道德評價。一方面，許多神父教授或修女教授批評森瑪曼的想法，有違當初創校弘揚上帝之光的精神。這些具有神職人員身分的教授視

29 李永展，《永續發展策略》，前引書，頁 23-24。

30 Peter F. Drucker 著，吳程遠譯《行善的誘惑》，（台北市：遠流，2009），頁 26。

31 同上，頁 42-44。

另一批不具神職人員身分的教授爲「新人類」。另一方面，新人類則視這些神父修女爲守舊派的「山頂洞人」。[32]

基於治校理念，森瑪曼網羅了歐巴洪馬。歐巴洪馬原本是一所著名大學的名牌地質學教授，獲得產業界的巨額贊助，無論是學術研究或是產學合作，他都頗負盛名。當歐巴洪馬被網羅到聖主隆大學以後，果然不負眾望，吸收許多一流的年輕學者前來任教，且吸引許多十分優秀的學生來就讀博士班。當這些學生拿到博士學位以後，立刻被產業界或學術界聘去。然而，歐巴洪馬也是聖主隆大學第一號麻煩製造者。[33]

對於森瑪曼的治校理念，經濟系系主任利偉貴神父深不以爲然。他說：「經濟學這門學問，是一種道德的修練。它的目標是達成更美好、更公平和更天主的社會。那些挾著數學分析技巧的『新人類』們使經濟學變得像個妓女。其實他們唯一能數學化的就只有股票市場了。因此股票市場成爲他們心目中理想的、公平的經濟模型，而他們則變成大企業資本主義的小嘍囉，可真糟糕透了。」[34]

儘管有這些批評的聲浪，但由於森瑪曼新穎的治校手法，使聖主隆大學的聲望顯著提昇，以致於「山頂洞人」雖有不滿，仍不致於跟他公開決裂。更何況，森瑪曼向來擇善固執，只要他覺得自己是在做一件對的事情時，對於別人的批評，他通常不予理會，也不會放在心上。到底什麼事困擾著森瑪曼？

原來，這只是一件芝麻小事。化學系初級教授馬丁豪樂維，由於研究表現不佳，再加上教學評鑑不佳，儘管學習進度落後的學生對豪樂維頗爲滿意，但優秀的學生卻抱怨教得不夠好，系評審最後決定不續聘豪樂維。豪樂維的太太寫了一封陳情書給森瑪曼，爲她的丈夫喊冤。她在信中說，他的丈夫教學十分認真，尤其對學習進度落後的同

32 同上，頁 128。

33 同上，頁 120-121。

34 同上，頁 133。

學更加照顧。她認爲，她的丈夫比起那些只顧做研究卻沒有把心放在學生身上的教授，更像一位好老師。[35] 豪樂維太太這封被許多教授視爲胡言亂語的信，卻令森瑪曼寢食難安。這封信的內容，隱約刺痛了森瑪曼向來引以爲豪的治校理念。他向來認爲，在大學的學術殿堂裏，「能力」既然勝過一切，自然也應勝過「德行」。難道他這個想法是錯的？

森瑪曼知道他無權推翻化學系系評審的決議，但他開始同情起馬丁豪樂維了。他想起哈麗碧翠絲拓女子學院的校長麥科樂女士，有一次向他抱怨由於她們學院的學生素質普通，很難吸引科學類的老師前來任教。麥科樂強調，前來教科學的教授只需要教淺顯的科學課程就可以了，但必須要有良心，願意全心全力來教這些將來進不了優秀研究所的學生。[36] 幾經思量，森瑪曼撥了電話給麥科樂，向她推荐豪樂維前往任教。[37]

原本以爲，這樣的安排應該是皆大歡喜，卻沒想到，森瑪曼這個舉動，引起聖主隆大學一些教授強烈的不滿，甚至不惜公開決裂。歐巴洪馬認爲這是管理階層的濫權，危害大學教授治校，「畢竟，沒人規定大學校長需要替被炒魷魚的助理教授找工作的呀。」[38] 奧默利主教也不贊成森瑪曼的做法，他說：「我們需要幫助森瑪曼。他錯的只是受不了做好人做善事的誘惑，表現得像個教徒、像神父，而不是像個官僚。」[39]

以上簡述杜拉克《行善的誘惑》這本小說的重點，據此我將展開底下的分析。我認爲，杜拉克對於森瑪曼的「擇善固執」，其實有隱約的負面評價。這點從杜拉克描寫湯姆馬丁「腳踏實地、處事圓融，

35 同上，頁 37。
36 同上，頁 50-51。
37 同上，頁 52。
38 同上，頁 123。
39 同上，頁 198-199。

總是帶著一種精緻、恰到好處的禮數」[40]，可以嗅出馬丁與森瑪曼不同的管理風格，並透露出小說作者杜拉克對小說人物的不同評價。

森瑪曼幫豪樂維推荐教職，被說成是「行善的誘惑」，我認爲頗富深義。小說裏暗示，由於森瑪曼只考慮到要幫助馬丁豪樂維，而忽略了其他相關人士的感受，以致於原本可能是一件「行善」，卻由於沒有照顧到其他「利害關係人」，不符合管理學原理，而導致最後反而招惹人怨。儘管如此，「行善的誘惑」一語卻也點出了行善的背後，可能是由道德情操這個動因所發動的，它是一種忍不住想要幫助別人的利他主義。

申永順與吳佩諭以台灣的資訊產業爲研究對象發現，受訪者在經濟、社會與環境這三個面向的永續管理績效上，總平均不到 50 分。[41] 胡憲倫等人認爲，台灣產業大多是被動因應法律，而沒有積極主動推展企業社會責任，以致於沒有將企業社會責任轉化爲競爭力。[42] 愛普斯坦指出，「永續發展的管理不僅是規避風險與遵守法規，還必須被視爲可以帶來創新機會和競爭優勢。」[43]

愛普斯坦強調企業在實踐永續發展時，應具有前瞻性。他將「道德」列爲永續流程九大原則之首，而有道德的公司會要求自己比法規更嚴的標準。[44]

五、結論

由以上的分析，我們得知，愛普斯坦所謂具有前瞻性的公司，雖然其行善的誘惑可能來自於理性的獲利評估，然而，也有可能來自於道德情操。

40 同上，頁 73。

41 申永順、吳佩諭，〈我國企業永續管理現況與績效評比之研究：以電子資訊產業爲例〉，《永續產業發展》第 44 期（2009 年 6 月），頁 61。

42 胡憲倫、許家偉、張瑜真，前引文，頁 24。

43 Marc J. Epstein 著，李芳齡譯，《企業永續發展指南》，前引書，頁 37。

44 同上，頁 44。

既然被動地遵守現行法律，並非推行永續發展的最佳策略，亦非企業社會責任的最佳之道，那麼，那些願意「率先」且「具有前瞻性」的優秀企業楷模，是如何具有行動的決心呢？我認爲，除了高超的獲利評估理性判斷之外，來自於道德情操，那種行善的誘惑，也有其不容輕忽的重要意義。

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自然步調與企業實踐永續發展之道

程進發 *

一、前言

在永續發展與環境倫理相關的系列專著中，如果要以較簡潔的方式，將它的歷史脈絡、關切的主題、主要的概念，以及建立的操作典範表達出來；那麼，首先必須能夠符應底下的條件：(1) 由自然資本的理論所揭示的觀點，地球環境是一個有限、閉合的系統。(2) 肯定人類與其所生存的整全系統的可永續性，那是在一種社會經濟與生態上的尺度。(3) 任何與上述觀點相契合的政策決定或操作模式，即有助於或強化永續性的行動都是值得追求與分享的。

本文解釋「自然步調」（The Natural Step, TNS）的概念，並以企業依循自然步調實踐永續發展爲進路，例示國外兩個企業經營案例，論述它們在組織中遵循自然步調的理論框架的過程與成果，基本上就是符合上述三個條件。此外，藉納翠斯（Brian Nattrass）的說法，如果各個案例都是一齣與虎共舞的舞碼的話，那麼自然步調的創始人羅伯特（Karl-Henrik Robèrt）博士可喻爲馴獸師，甚至是諸多璀璨明星極欲合作的名導。爲什麼呢？因爲：

1. 他創造了自然步調的框架內容以及語言，並有效地整合與凝聚。
2. 熟悉如何應用於環境與企業永續發展的模式，以及不同領域部門的具體合作方案與軌道。
3. 他善於診斷與激勵企業經營者。

* 靜宜大學通識中心兼任助理教授

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本文舉出西圖公司（CH2M HILL）與惠斯勒（Whistler）度假勝地，它們在各自的舞台中都有不同的突出展現，但有共同的特性而被揀選爲研究案例。[1] 因爲：(1) 他們深知全球經濟、生態以及社會系統的健康是整體連結在一起而無法獨立的。(2) 他們了解合理的經濟、策略與管理決策，和社會利益是相互依賴的關係，而政府機構所採行的，總是忽視了這種關係。(3) 他們以一種更寬廣的社會責任來運作，那是建立在「作對的事」之上；作對的事必須是深植於每一個公民、共同體或 21 世紀國家的組織之核心價值信念底下，假如我們要創造一個活潑和富裕的未來，以及整體上可以永續實踐的，那就是作對的事。(4) 他們都堅持永續的方向，並且自覺地對各自的組織與共同體的改革承擔起責任。

一般而言，基於企業利益可以將企業社會責任分爲三種類型：[2] 一是必須負責的，它指的是對消費者來說是必要的，而且是法律要求的，如果企業忽視它們，這將直接影響企業的生存，其次是應該負責的，這是企業長期存續所必須的，通常法律並不明載，但卻是社會所期許的，如果企業忽視它們，這將使企業遭受聯合抵制或撤資等，第三是可以負責的，社會並不期待，法律或市場也不會施壓，如果企業忽視它們，並不會遭到制裁，但可以幫助企業獲致較好的聲譽。目前，大部分的公司仍然滿足前兩種類型，主要是因爲政府法規或消費者的期望。儘管上述的分類可以很清楚的解釋目前企業對於企業社會責任的因應，但仍然無法清楚地標示或指出該企業與永續發展的實踐之間的具體影響是什麼。本文將透過企業向自然步調學習永續發展的過程，同時看到企業具體的改變及其成果，另一方面自然步調提供出的框架是一種限制性條件，一旦企業將此底限基礎設定出來，實踐軌道以及後續的故事、舞碼即有可能被展演出來。

1 Brian Nattrass and Mary Altomare, *Dancing with the Tiger- Learning Sustainability Step by Natural Step* , (Canada: New Society Publishers) , 8.

2 György M´alovics, No´emi Nagyp´al Csig´en´e, Sascha Kraus, “The role of corporate social responsibility in strong sustain ability” *The Journal of Socio-Economics* 37 (2008), 914.

二、永續發展的概念與自然步調的理論框架

從 1987 年聯合國世界環境與發展委員會公佈永續發展的定義，再到 1993 年里約地球高峰會的「21 世紀議程」中，公開全球永續發展實踐綱領的計畫與行動後，它幾乎成爲一個超越國界、領域所共同關注的焦點議題；本文在此並不嘗試陳述永續發展的脈絡，而是聚焦於企業如何應此一趨勢及其成果，特別是運用自然步調的概念及其框架，展示企業如何落實的發展軌跡。再者，本文的論述基本上與諸多的綠色思潮是相容的，它們包括霍肯與羅文斯夫婦（Paul Hawken & L. Hunter Lovins）的自然資本論（natural capitalism）、布朗（Lester Brown）的生態經濟（eco-economics）、班娜斯（Jannie M. Benyus）的生物模擬（biomimicry），以及麥唐諾與布朗嘉（William McDonough & Michael Braungart）從搖籃到搖籃（from cradle to cradle），以及包括由斯密特 • 布雷克（Friedrich Schmidt-Bleek）發起的團體十倍數俱樂部提出提升資源生產率，以拯救日益嚴重的資源耗竭觀點。[3]

企業經營與永續發展有許多可行的論述進路，若以經濟學中整體的資本理論來說明永續發展之意，則可以被表述爲：至少如當代人所擁有的資本爲未來世代提供相同的機會，若就生態面向而言，則要維持自然資源爲人類社會提供必要的功能，它包括能源、消化、支持生命與人類健康與幸福等四項功能。這整體資本則包括了自然與人文資本。就整體資本與永續發展之間的嵌結議題，學者將永續發展區分爲弱意（weak）與強意的（strong）永續發展；弱意的永續發展是指，自然資本由於創造人文資本而遞減，而整體資本可以被維持，因而，要滿足永續發展的標準是足夠的；相反地，強意的永續發展則嚴厲地

3 在本文的論述中或會再提及它們是企業在擬定實踐計畫或評估時會應用的理論、方法，此外尚包括如LCA(Life-circle assessment)、DFE(Design for Environment)、EF(ecological foot printing)、EMS(Environmental management system)、LEED(Leadership in Energy and Environmental Design)。參見 Brian Nattrass and Mary Altomare, *Dancing with the Tiger-Learning Sustainability Step by Natural Step,* (Canada: New Society Publishers), 21-24.

指出，自然資本無法（或僅在一個有限度）透過人文資本來取代，而且可能會遭受不可逆的傷害，因此，不僅有必要維持總量，能用的自然資本也要維持數量。[4] 在霍肯與布朗的論述中，都已證明自然資本的有限，以及在目前的現況已經跨越過了安全的界線，在維持社會經濟發展過程中，使得其支持生命系統的功能變得困難。因此，當我們在談論關於永續發展的議題時，我們是根基於強意的永續發展。

企業落實永續發展之道的指標，近年來已明顯地被標示爲企業社會責任（corporate social responsibility）的績效考量；具體而言，已形成對三重基線：即財務、社會與環境三方面的考量。何謂「企業社會責任」？根據「世界企業永續發展委員會」的說法是「企業承諾持續遵守道德規範，爲經濟發展作出貢獻，並且改善員工及其家庭、當地社區整體、社會的生活品質。」[5] 關於企業社會責任主題，被討論的主要議題包括：公司人員的權益與人權、消費者權益、股東權益、經營資訊揭露及公司治理、供應商關係、社區參與、環境保護、遵守政策法令等。這些內容具體地標示出社會大眾對企業經營有更多的要求與期許，而企業經營者無論如何要因應此一趨勢，對於企業的健全與較佳的經營，有必要重新對各種資本，包括：財務、自然、人文、社會與倫理資本做整合運作，雖然有學者仍然評論不夠精確，但企業的永續議題已經轉變爲三重基線的關注。

從這些內容看來，企業界爲永續發展推衍出的界定，一個永續的企業「必須將未來世代、多樣性、動物保護、人權、生命週期影響，以及諸多原則，例如公平、負責、透明、開放、教育與學習，和地方行動等納入考量。」[6] 當然，我們仍可提出質疑這些原則如何納入

4 György M´alovics, No´emi Nagyp´al Csig´en´e, Sascha Kraus, “The role of corporate social responsibility in strong sustainability” *The Journal of Socio-Economics* 37 (2008), 908.

5 林宜諄（編著）《企業社會責任入門手冊》（台北：天下遠見，2008），頁 26-27；葉保強《企業倫理》（台北：五南圖書出版，2005），頁 326-328。

6 引自 György M´alovics, No´emi Nagyp´al Csig´en´e, Sascha Kraus, “The role of corporate social responsibility in strong sustainability” *The Journal of Socio-Economics* 37 (2008), 908.

企業實務？以及如何精確地檢測強意的永續展之原則應用在公司的實務過程？因爲就實務的概念而言，它們似乎無法標示出什麼樣的條件必須滿足、要克服什麼？以及什麼特性才能真正決定一個生態永續的組織？這些問題的確會發生在不同公司的治理過程，就不同公司的企業操作需要作一系列與整體的計畫執行與修正等，它們的解答不會相同，本文將以實踐自然步調的概念作爲例示，它們如何能夠成功地作爲典範案例。

自然步調既是一個組織，也是一種理論。[7] 它提供了一個簡易、但精確的架構，它整合了環境議題到現實企業的框架，以推動公司朝向可永續的發展。依原初的創造者說法，此一架構提供了一個整全系統的觀點，一個企業不需要否定既存的，也不會失去任何東西，就可以處理複雜的企業操作，而且此一架構又提供了一個共通的語言，它聚焦於永續發展的進程與完成目標。霍肯說：「自然步調並不是要人成爲專家，它毋寧是相信每一個人都知道如何去解決環境的問題，正如他們可以了解自己以及界定他們自己一樣。」[8] 或者如納翠斯的說法，每一個作爲永續企業中的成員，他是協助創造永續的公司，孕育進化的公司誕生的人，他說：「自然步調的架構最偉大的力量在於一個事實：它爲永續發展的討論帶來一種進化的觀點。」[9] 所謂進化的觀點主要在談論兩個焦點，即如何重新界定人的角色，以及企業公司對待生態環境的嶄新觀點。因此，要探索企業與環境之間的永續議題，則人或說企業體首先就要對環境有一種正確的覺知，「進化的意識要求每一個人類系統，不論是公司、家庭、社群或國家，都要對其系統之設計與重新設計負起責任，以便能夠守護歷經億萬年所創造的生態平衡……。對大部分的公司而言，這需要嶄新的思考方式，以及在所有

7 參見其網站 http://www.naturalstep.org/

8 Paul Hawken, “Taking The Natural Step”Context,Summer,1995.http://www.context.org/ICLIB/IC41/Hawken2.htm

9 Brian Nattrass and Mary Altomare, *The Natural Step for Business-Wealth , Ecology, and the Evolutionary Corporation* (Canada: New Society Publishers, 2001), 188.

組織層級中有提升的改革和創造力，一家進化的公司的命脈即在於，自然步調的系統條件與結構建構了有效的工具，以及作爲刺激創造性的過程與進化系統的設計。」[10]

自然步調的框架建立在兩個基本的前提之上，一是倫理的前提，即破壞地球未來支持生命的能力根本上是錯誤的，二是生物物理與社會的前提，即人類無法忍受環境持續的惡化。事實上自然步調的框架之科學背景並不是新的，它是從最基本的科學原理來發揮力量，自然步調的創造者羅伯特即是從細胞生物學的專業觀點出發，他認爲要了解創造一個永續的人類社會究竟需要什麼，我們就必須從支持與限制生命的物理學定律開始；在地球所有生物的演化脈絡，循環原理控制著細胞、組織，甚至是社會的新陳代謝，儘管是很基本的科學原理，但是其關涉到永續發展，以及日復一日的個人生活和企業決策，就沒有被普遍地認識到。

自然步調基本的四個科學原則是：

1. 物質與能量不能被創造或消滅，這是根據熱力學第一定律：物質守恆定律。綜言之，地球是一個閉合系統，我們所有大量的物質與四十五億年前相同的量，換言之，沒有任何東西消失，只不過是以另一種形式存在著。
2. 物質與能量趨向分散，這是根據熱力學第二定律。任何被引入社會的物質都將早或晚進入到自然系統裡。在一個閉合系統裡面，每一物質都朝著「熵」（entropy）行進。
3. 物質的質量是依其濃縮與結構來描述其特徵的。這意謂著我們所消耗的是物質的濃度純度與結構，因爲物質與能量不能被創造或破壞，而生物或經濟上的價值正是從其濃縮與結構來辨別的。如一滴墨汁掉入水槽中，它的經濟與功能價值隨即消失。

10 Brian Nattrass and Mary Altomare, *The Natural Step for Business-Wealth , Ecology, and the Evolutionary Corporatio*, (Canada: New Society Publishers, 2001), 191. 或進一步參考其網站 http://www.sustainabilitypartners.com/html/home.html

4. 地球內淨增的物質質量是由太陽所驅動的過程，光合作用是物質質量惟一最大尺度的生產者。而人類與其他的動物總是消費過度或多過我們所創造的，亦即如前述之人類對自然資源、物種、污染等都已超過警戒線。

自然步調的概念架構可以用來作爲強意的永續發展的判準，[11] 關於自然資源永續使用則可以演繹出三項原則，即：可再生資源之利用不能超出其再生的水平、 非再生資源的消耗速度不能超過發展出可替代再生能源的速度，以及不能超出自然環境的吸收能力與再生能力。基於上述的科學律則，羅伯特歸納出四個系統條件作爲第一序的原則，並以之作爲滿足永續發展的系統條件，即：「在一個永續社會裡，自然（界）不會系統地增加：(1) 從地殼中榨取物質。(2) 社會中產生物質的濃度。(3) 人爲方法的破壞。(4) 在那個社會中人類需求皆能得到滿足。」[12] 它的第一序原則是透過反面的表述，即：在一個永續社會中並不會發生的人類行動，以展示系統性的理解人類可永續的行動，並成爲在複雜的社會系統中發展計畫架構的根據，它們是一個社會必須滿足的最低的環境判準。前三項指出：人類的作爲會降低、終止與破壞地球生命所仰賴的自然循環，而第四個框架條件則指出：社會不可能期望滿足前三個條件，如果人類社群滿足其基本需求的能力正系統地逐漸被削弱時。企業如何滿足這四個系統條件而朝向永續發展呢？底下以兩個實例說明。

11 György M´alovics, No´emi Nagyp´al Csig´en´e, Sascha Kraus, “The role of corporate social responsibility in strong sustainability” *The Journal of Socio-Economics* 37 (2008), 909-910.

12 Brian Nattrass and Mary Altomare, *The Natural Step for Business-Wealth, Ecology ,and the Evolutionary Corporation* (Canada: New Society Publishers,2001),.22-24. 或 *Dancing with the Tiger-Learning Sustainability Step by Natural Step ,* (Canada: New Society Publishers), 272-273.

三、落實自然步調的兩個典範：西圖公司與惠斯勒度假勝地

羅伯特極爲肯定納翠斯將自然步調的理論應用到商業之上，並且認爲他完成與解答了諸多有關企業與生態環境之間的整合、策略問題，甚至已經形構出一套可以依循的模式。[13] 納翠斯在第一本專著中已有例示堪稱永續發展的企業，在那裡使用諸如進化的公司（evolutionary corporation）、進化的旅程（evolutionary journey）等說法，在本文引用的著作案例中則有進化的舞碼（evolutionary dance），雖有不同，然其指涉的主題內容都是永續發展的實踐，當然也有進化出現新的挑戰，即面對諸多生態系統病症的事實，這也可說是全人類另一章「與虎共舞」難題。[14]

納翠斯將企業實踐永續發展的過程喻爲與虎共舞的過程，爲了讓企業與所有分享者能夠深刻地參與其中，他首先舉出菲莉（Julie Reder Fairley）所說的故事其中之一：伊央烏的舞蹈（Ianu's Dance）來表達故事都有其特性。[15] 伊央烏的舞蹈的故事在描述這個非洲小女孩，由於她的許多長輩教導她關於生命的課程，若如，教她尊重所有的存在物，發現工作的意義，甚至教導她去探索與歌頌內在美；由於這些教導，孩童就在她的內在心靈產生某些律動，而她也發現這舞蹈就是她自己對生命禮讚的方式。

納翠斯藉由故事的概念與意義來說明每一個文化與次文化都有其根本的故事，這些故事統合與界定文化，並且提供了一種理解、意義與目的；故事描述與解讀我們的不同，它更揭示出一種什麼是普遍的。而當我們在說故事時，其實也是在結合教導、學習、分享與理解

13 Brian Nattrass and Mary Altomare, *The Natural Step for Business-Wealth , Ecology, and the Evolutionary Corporation* (Canada: New Society Publishers,2001), ⅩⅥ .

14 Brian Nattrass and Mary Altomare, *Dancing with the Tiger-Learning Sustainability Step by Natural Step* (Canada: New Society Publishers).

15 Ibid., 44-45.

我們的差異。因此，當納翠斯以這樣的意思來表述永續發展的所有內涵之際，事實上正是說不管故事是我們個己的生活經驗或是全球性的挑戰，或是對當前問題可能的解決之道，它都幫助我們對歷練，以及創造出與他人共享的意義。關於永續發展的故事，它是一個旅程；因此，雖然堪稱典範案例，它們仍然是在這一個旅程的起步或過程中，它們並非真正完美，如我們一樣還有漫長的路要走。惟可以強調的是，在這些企業組織中，有人了解他們的工作的重要性，而且採取許多極爲不同的作法。頗爲弔詭的是，永續發展是共同的善，他又提醒我們最終是走向「老虎的領域」，甚至，我們不選擇與虎共舞，最終還是會如老虎一般，會面臨永續與生存的問題。

永續發展既是一與虎共舞的過程，它必有複雜的舞碼；因此，我們常會反省到爲什麼永續發展的概念很難界定，不容易運用它，以及去學習有力、優雅與熟練地舞出此一新的舞碼所必要的步驟。納翠斯爲我們揭開此戲碼，讓我們更清楚它既是一藝術，也是一科學，唯有透過每一個人心智、靈魂與意志，永續發展的改革才能深入到我們的企業、政府，最後在我們的生活世界中實現出來。[16] 面對新舞碼必要有新的舞步，對這一個生疏，並不受到歡迎的永續之舞，納翠斯認爲必須克服三個嚴厲的挑戰。[17](1) 目前人類生活與自然之不永續關係是處在一種全球性的尺度。(2) 我們必須改變思維模式並成爲一位系統性的思考者。(3) 針對上述之難題，即：爲什麼永續發展的概念和系統性的思考很難界定，而且不容易運用它，這是因爲我們沒有共同的語言去描述或理解這些詞項或它們代表的現象，而我們正處於發展、學習、使用與分享這些語言的濫觴。

爲什麼必須先克服上述共同的難題？其用意在於我們的決定與行動都是在強化全球可永續社會的可能性，亦即聚焦於將自然步調與永續發展的可能性兩者嵌結起來。依納翠斯之意，西雅圖定義（Seattle

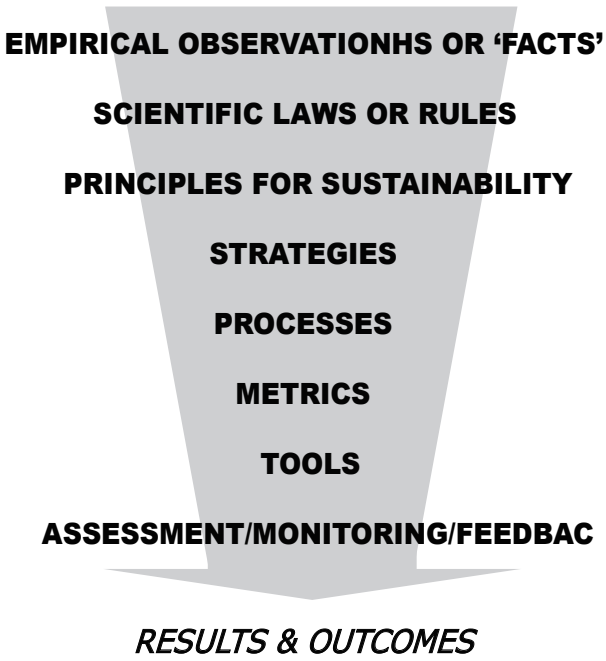
16 Ibid., 12.

17 Ibid., 14-17.

definition）是最簡潔，且能夠表達永續發展本質的界定：「依自然的方法改進生活的品質。」[18] 此一定義與自然步調的四種系統條件的指導原則是能夠相容的。

再者，從自然步調的概念著眼有助於勾勒出社會經濟生態系統的聯結關係。納翠斯認爲要檢視一種所謂系統的進路是關注於系統之內的各種連結關係，因爲系統中的部分是依照核心原則連結起來而被界定的。於是，他再提出一個可永續發展圖示（Sustainability schematic, 下圖）來說明此一連結，甚至可以說它就是學習舞蹈如何編組起來圖示。從自然步調的框架條件作爲第一序的原則到此一圖式，正如欲成爲一個好的球員，首先必須懂得規則與目標，之後的策略與技巧都從這第一序原則產生。

Sustainability Schematic



18 Ibid., 17.

利用此一可永續發展圖式，我們就可以看到在諸多原則、策略、過程、行動、方法、衡量與結果之中的連結，同時愈能看出永續發展是一個社會經濟生態系統一個突現的性質。然而，我們有這些可永續發展圖式，它並不會自動地將如何作轉化應用於這些模式；因此，自然步調就發展出針對永續性的 A-B-C-D 模式，應用在複雜系統的計畫中，此一 ABCD 四項組合亦可以解釋爲學習逐步的永續發展舞碼的舞步。[19]A-B-C-D 模式如下說明：

A-Awareness: 逐漸認知爲什麼我們當前的社會經濟系統是無法永續的。

B-Baseline mapping and analysis of your current reality: 畫出底線與分析、評估目前的實況，進而理解在一個全球的社會經濟系統與生態系統之間的可永續的關係，它所必須的最小成功要素是什麼。

C-Clear and compelling vision: 創造出（或想像）腳本可以看出你的組織是在一種能夠滿足系統條件的永續社會當中。

D-Down to action: 在此以一種回顧法（back-casting）的計畫方法來決定你要使用的策略，以及用什麼工具與行動來進行，況且要依什麼步驟與系統來衡量你的進程，最重要的是在心中熟記以四個系統條件作爲指南，來決定你的行動與其結果是否有助於社會的永續性。

納翠斯舉出生態哲學家麥西（Joanna Macy）的一個觀點來表達我們這一世代是一個偉大的轉向（the Great Turning），我們從一個仰賴消費資源的工業社會，轉向到一個生命永續的社會。儘管如此，他仍然認爲大部分的人都還是昏昧的，不知道自己的無知，而他就是要就是一方面現狀然認爲大部分的人都還是愚昧的，不知道自己的無知。他指出企業如何向自然步調學習永續之道，從不永續現狀跳脫、

19 Ibid., 24-27.

超越。事實上，我們可以發現他的兩部著作中，都對照出從現狀到理想境界的過度階段的差異；例如，他指出一個證據是愈來越多的公部門或非營利事業的單位組織，它們對於環境的永續發展以及社會企業責任等概念漸愈清晰，並建立相關的政策或操作部門。[20] 同樣地，此一現象也出現在企業組織當中，它就是永續發展的學習曲線，學習曲線對於企業而言是特別受用，它也代表著從愚昧狀態轉化爲成長進步的圖式。[21] 底下例示自然步調的兩個典範案例即歸聚在運用自然步調的學習、轉化與前後的對照上。

A 案例：惠斯勒渡假勝地——它是我們的未來 [22]

此案例在於突顯一個社區，它如何自覺地決定生態、社會與經濟上的永續性來做爲社區未來的福祉與富裕的基石，透過幾個關鍵性的組織來說明如何引導永續之舞，並邀請其他的人參與他們的社區。惠斯勒的案例除了作爲例示自然步調的條件框架外，它也可以作爲生態旅遊的典範，對於環境監管與環境倫理兩者，在實踐過程中將經濟利益與自然價值的權衡，創造出一個值得參照的模式。

（一）早期採納自然步調的實踐者（The Whistler Early Adopters of TNS）

早期採納自然步調的實踐者即是在惠斯勒最早接受 TNS 爲共同的語言的團體。具體而言，他們體現出下列五項行動：

1. 形成一個「學習型團體」（learning community）一起合作並運用自然步調的架構來發展一個如何了解永續發展的共同心理模式。
2. 在團體中提倡一種邁向永續發展的共同訊息。

20 Ibid., 38-39.

21 Ibid., 40.

22 Ibid., 140-188.

3. 發展共同的訓練課程。
4. 發展出工具箱（toolkit），其中有指導手冊與物資，便利和指導在家庭、大小組織與學校中落實永續發展。
5. 建構永續發展資源團體的網路，及提供分享學習經驗的文件。

他們也自我期許成爲卓越的山岳休閒社區，並提出環境宣言、環境策略，甚至自然步調的創始人羅伯特到此體驗與提出建言。在 2000 年 5 月早期自然步調的實踐者開始聚會與簽定備忘錄，他們也得到 RMOW 的支持。其中有一位成員瓦倫（Dave Waldron），他提出團隊的協議與制度，於是讓早期自然步調的實踐者更清楚進行他們的行動。若如在 2000 年 11 月舉辦一個精進團隊工作坊，讓所有的成員能夠熟悉在組織中如何運用 TNS 的架構來發展與操作。兩個月之後，他們完成了適合組織文化與需求的計畫，並將永續發展的認知系列提供給他們的員工。甚至是更積極地吸納家庭、企業、學校與遊客的策略，讓他們了解企圖心與永續發展的遠景；在 2000 年 12 月即邀請超過 300 名代表參加「第一屆惠斯勒永續發展饗宴」，其目的正是宣示與激勵連結 TNS 的架構操作永續發展的組織。

在 2001 年春天，早期自然步調的實踐者完成了基礎工作，同時開始著手設計發展團體工具箱。並在四月舉辦「想像與說故事（Envisioning & Storytelling; E & S）的工作坊」，其目的在於協助創造一種激勵地訊息，特別是針對正邁向永續發展目標途中的團體，此一工作坊的創立者保羅 • 史密斯就感受到驚人的成果，而且此一工作坊促成了 Blackcomb 與 Whistler 結合爲度假旅遊公司。直至目前爲止，他們已經協助超過 100 個休閒發展區域，幫助他們想像未來遠景與傳說他們的故事，在這些經驗之後再加上他對大自然的熱情，史密斯更暗自設想一種和諧的樂章 -- 環境永續、經濟永續、文化與社會永續，他深深受此吸引，因爲它可以容易與和諧地調節每一個人；後來「E & S 工作坊」出版電視劇情結的影片，“Whistler. It’s Our Nature”，即是如此呈現出來。

納翠斯在 2001 年 7 月帶領他們舉行一個 20 人的精進工作坊，目的是進行永續發展的理論與實踐之系統思考，除了精進與強化之外，更培養一些人作爲團體的人力資源，可以從事協助中小企業、學校和家庭進行永續發展的落實，總共有 11 具體的教育訓練內容。此外，甚至有一些領航計畫（pilot project），包括：棲地改善團隊（實踐 AWARE 的計畫）、環境基金會、能源探索、捐助黑熊家庭計畫（也是當地引以爲傲的一項重要資源）、森林土壤與水流域管理、實行綠化（5 年 1.5 億加幣的計畫）、森林空地、廢棄物管理、惠斯勒費爾蒙連鎖城堡飯店（FCW，永續發展政策——承諾與策略，先是「綠色夥伴」的觀念得到超過九成以上員工的認同與實踐的結果，讓他們能夠成爲全世界百大的飯店）、惠斯勒旅遊、AWARE 等。

（二）惠斯勒費爾蒙飯店（FCW）

惠斯勒費爾蒙飯店提出永續發展承諾與策略，並決心成爲餐旅業與費爾蒙連鎖企業的環境永續之領導者，他們將自然步調的四個系統條件作爲指導原則。在 2000 年三月自然步調創辦人羅伯特博士接受邀請至此演講，並與總經理討論關於永續發展的議題，所有主管都參與相關的教育訓練，以及 2000 年 12 月的「第一屆惠斯勒永續發展饗宴」。此後惠斯勒費爾蒙飯店在四個方面受到媒體的關注，即：廢棄物管理、能源管理、社區慈善團體，以及更永續服務的發展，其中也包括供應鏈的管理亦是減少環境衝擊的重要策略。到了 2002 年在自然步調的四個系統條件方面，他們已經聚焦在可永續的能源、可永續的物質流程（material flow），以及在組織中和他們的涉利者、供應商、消費者的溝通與能力，包括建構自然步調架構與永續發展的知識，以及他們是如何透過這四個基礎而能夠滿足社會基本需求。

惠斯勒費爾蒙飯店提出的永續發展策略，更具體地說，即是「承諾維持自然生命系統是我們不斷改進的指導原則。」而且是根據自然步調的系統框架作爲依據標準，包括：避免廢棄物再流入地球閉合循

環系統中、增進資源運用以提高生態效益、激勵和使用革命性、卓越的技術，與可替代、再生的資源，以及發展革命性與低污染的分類服務、避免使用對環境有害的東西（甚至當我們不能確定其環境影響面時），以及再投資自然資本。再者，透過公平與尊重員工、來賓、社區鄰居做爲指導原則，承諾培養一個健康又充滿活力的社會，包括：經濟支助與非現金實物捐獻於社區發展、透過社區前瞻性的學習、義工與先進技術貢獻給社區作爲成長能力的資源、與惠斯勒社區的團體和費爾蒙飯店其他資源共同運作並分享永續發展的學習過程，以及創造更多可永續的旅遊產業所需要的產品。事實上，惠斯勒費爾蒙飯店這些策略都具體地指向永續發展的三重基線之指標，透過這些強化、教育與創舉，費爾蒙的人員藉由尊重、負責、平衡、同情、熱誠與整合等指導性原則，就更有能力執行政策。若如，費爾蒙公關主任就說：「邁向永續發展使得企業變得有意義，而且將我們成功的好處展示出來，我們更將我們的故事說給其他的企業並激勵他們也採行同樣的步驟。」[23]

（三）惠斯勒市政府旅遊局 The Resort Municipality of Whistler（RMOW）

惠斯勒市政府旅遊局主要的職責是將 Whistler2002（願景計畫）與 WES（環境策略）以及早期自然步調的實踐者串聯起來，並爲政府推動綜合永續發展計畫。事實上，它也負責計畫用地的環境監管、水資源與交通等，其中利益則回饋到 Whistler. It's Our Nature 與發展團體工具箱。此外，RMOW 的一個任務是扮演有力的領導與支援角色，幫助社區發掘與累積共享的價值與未來遠景，甚至是一種催化與激勵的角色。他們曾經將成員分爲 14 組作永續發展的訓練，讓他們熟悉四個系統框架的操作，檢視是否支持或反對每一個系統條件，以及創造出回饋系統，於是他們就很清楚他們的意見最後會變成什麼，

23 Ibid., 176.

出現什麼結果；在實踐的過程中有成員認爲較大的衝突莫過於優先性的問題，而市政府的挑戰是對於影響社會行爲的改變。事實上，團隊以及夥同其它部門的合作，並成爲學習型組織是最能夠激勵人心的，他們也認爲簡單的 TNS 架構是一個非常有效，且讓人投入的方式，其中包括上述的影片、工具箱與系列演講等陸續出現。市政府首席顧問 Godfrey 曾說：「我個人對於未來的觀點是成爲頂級的山岳度假社區，並成爲目前永續發展的模範。我更想讓人們在分享我們是誰、我們做什麼、我們如何去做，以及我們真正落實所談論的，他們會感到十分愉悅；我也不只是想要當惠斯勒市政府的一個成員，我更想與惠斯勒成爲一個整體。」[24]

（四）Intrawest

這是一個總部設在溫哥華的滑雪度假旅遊公司，執行長的 23 歲兒子 Joey 也是早期自然步調的實踐者成員，此外該公司其中一個負責經營與環境資源的主管 DeJong 說到，在 1993 之前，他完全不清楚所謂環境主義或落實環境監管，直到發生一件漏油污染事件之後，這是他生命的轉捩點，他自覺對山岳有完全的責任，並讓他成爲大自然的學生。他說：「你必須採行最好的生態自然生命的財產清單，了解它需求的是那些東西，而且，(1) 絕對地減少從中取得任何東西，(2) 儘可能仿效它，以及 (3) 假如你能夠看到有益於形成自然生命的聯結關係，幫助強化它。」[25] 顯然，他使用 TNS 的理論框架，甚至他曾對於 TNS 提出評論道：最具影響力的大事，莫過於 TNS 將每個人凝聚在一起，這是惠斯勒眾多改變中最有價值的東西。

24 Ibid., 159.

25 Ibid., 164.

（五）惠斯勒旅遊

惠斯勒旅遊是向世界宣傳惠斯勒四季休閒旅遊的機構。執行長 Denbak 長期支持自然步調的實踐者，並且具備結合監管與復育惠斯勒自然環境的經驗，在 2001 年十月召開惠斯勒旅遊委員會，會議中提出一項新的任務，他評論道：有一種對環境產生負面影響的旅遊方式，相反地，也有一種趨勢是對環境逐漸關懷的旅遊產業，此一趨勢對旅遊產業有明顯而直接的意義；惠斯勒旅遊扮演前瞻性的重要角色，而此一委員會承諾做什麼呢？它與 RMOW 和 FCW 共同主辦邀請自然步調創辦人羅伯特博士初訪惠斯勒。在 2001 年一月納翠斯促成資深的經理人制定出一個永續發展的遠景與使命；他們揭示出永續發展的遠景是：「透過觸動每一個體驗惠斯勒的人的心與靈魂來改變世界。」，而其永續發展的使命是：「我們將成爲惠斯勒經驗的代理人，我們將改變旅遊的面貌，以促成復育與保護的自然世界中所有的物種生命。我們將提升員工、社區成員與來賓的生命價值來重新界定成功。」[26] 執行長 Denbak 也曾說：「環境是我們的產物，它是我們銷售的，也是造就惠斯勒獨一無二的地方。我們的訪客告訴我們這就是爲什麼他們選擇惠斯勒而放棄其它旅遊地的重要原因。」[27] 甚至，他綜結評論自然步調的四個系統原則提供了無可駁斥與健全的基礎，並且能夠成功地運用在任何企業中，並認爲惠斯勒旅遊的永續發展政策不必擔慮會影響企業，成千上萬人的決策會與他的價值觀作出一致的決定，亦即在旅遊業中的消費者不會只考量飯店住宿、舒適、行程，他們也會考慮業者的環境紀錄。

26 Ibid., 178.

27 Ibid.

（六）惠斯勒住民環境協會（AWARE）

惠斯勒住民環境協會是透過保護自然襲產與邁向環境永續來改善惠斯勒社區的生活品質之志願性組織，會長 Mitch Rhodes 說：此一協會是惠斯勒社區在 1988 年創行循環利用計畫時成立的，成功之後，此一組織即成爲惠斯勒社區的環境良知。在 1990 年代惠斯勒處於迅速擴展的年代時，它常是孤單的奮戰者，直到今天它仍然執行循環利用與蠕蟲堆肥等工作，當然他們也積極參與其他團體。包括 WES，交通規劃與 Whistler2002 等。他也認爲惠斯勒有機會、有責任爲全世界的人提供永續發展的模式與訊息，他以身爲 **Whistler. It's Our Nature** 其中一員感到驕傲。對於 AWARE 而言，最重要的工作是保護南岸山的荒野地，以及對於社區計畫的發展，除了提供必要的意見外，該協會常扮演著最後的防線；此外，他們也主動地作棲地復育的紮根工作，只是 Rhodes 曾經提到一種感嘆，AWARE 肩負著諸多的環境議題，但卻沒有相對的經濟資源護持。

B 案例：西圖公司 CH2M HILL[28]

此案例的特殊性在於全球性的操作策略與其影響力度執行長 Ralph Peterson 說：「我個人認爲，永續發展的概念確實爲人類轉向一個較安全、可永續以及公正的未來，提供了最好的基礎與整合的主題。」[29] 科技的角色與相關專業技術爲當代社會推向永續發展的過程不能被過度膨脹，然而，我們會提問的問題，亦如西圖公司必須面對：科技與相關專業對於永續發展，其角色與責任是什麼？

在 2000 年國際工程顧問聯盟的年度研討會議提出相同的主題：「永續發展：新時代的挑戰」。世界工程組織主席 Jose Medem

28 CH2M 公司名稱的形成是根據三個學生與一個老師的名字字母之首字結合 .，然後在 1971 年與加州的 Clair A. Chill & Associates of Redding 合併爲 CH2M HILL；1946 年於美國成立，共有 24000 名員工，分布在世界 116 國家，公司主要是爲客戶提供全方位的服務項目，從設計、開發、融資到項目的管理、運行和維護。Ibid., 192-93.

29 Ibid., 189.

Sanjuan 集合了全世界超過八十位工程師提出共同宣言：「一個工程師必須謹記在心，人類都在關注永續發展，我們應該支持永續發展，更致力於爲未來世代的生態永續世界所需要的技術與政策。」[30] 工程師也必須將環境、科技、經濟與社會發展視爲一個共同爲完成工業與生態永續發展之相互依賴的概念。他同時指出永續發展的概念與原則爲工程師提出一個重任，亦即改變我們的操作方式。納翠斯認爲實現此一重任就促成了一個有趣之與虎共舞的舞碼。

西圖公司進行與虎共舞之舞碼是緣於客戶的觀點要求而進行專業的服務形成的。通常客戶認爲相關、重要的，以及其成本效益考量底下的難題，西圖公司必須仔細地傾聽與傳達出客戶想要的，如果客戶並沒有要求永續發展的指向，或者甚至他們拒絕計畫中有關永續發展的部份是重要的，那麼可能的情況是失去了這個案例的生意，或無法從永續發展的觀點尋求最好的決策。依照納翠斯的隱喻說法，這是工程師與虎共舞的一種情況。

另一個嚴厲的考驗或說另一隻虎共舞的情況是：工程師與其工程、計畫和設計專業的「筒艙結構」（slioed structure）[31] 共舞，其癥結即在於無法從一種整全系統觀點檢視問題。由於要滿足客戶提出需求與問題，它是一項高難度的調控技術，需要對未來趨勢做分析與綜合；西圖公司更要建構起國際化的知識與能力，才能夠滿足上述的需求，以及教育與客戶溝通，甚至是一些潛在客戶並未看出這些需求與解決方案和他們所關心的問題之間的相關性。於是，專業服務團隊如何和這些常有真實衝突的老虎共舞呢？

創辦人之一 Jim Howland 帶領團隊近 30 年，他留下許多膾炙人口的遺產，包括 12 頁以漫畫式的記事本，這種黃皮書勾勒出許多有價值的事物，至今仍爲許多公司沿用。他曾說過一句話：「客戶是國

30 Ibid., 190.

31 Ibid., 191.

王…或是皇后，每一個都是重要的！」[32] 在 2001 年西圖公司操作環境的案例大幅暴長並超過過去 20 年的量，額度將近西圖公司的年度收入的一半，它已經從一個工程團隊變成一個全球性的計畫輸出團隊，爲全世界國家的公部門或私人企業客戶提供全方位的服務，包括管理、設計、技術、開發、融資等，而關於永續發展的操作案例則是近十年來的事。

在 1980 到 1990 年代西圖公司開始有一些新的氣象，逐漸變成在這個專業領域的佼佼者之一；如果說，水與環境是西圖公司的兩個強項，能源與交通則是它迅速成長的來源，而讓西圖公司成爲最具潛力的公司則是它能夠爲永續發展提出有效的解答。西圖公司邁向永續發展的過程，事實上是來自於員工的專業知識，以及他們的熱情、關懷、興趣與特性，而且並不是一種從上而下的驅動模式。這些專業人員總是處理一些源自於人類的影響或依賴環境的事物，不論是環境建物或提供水源、處理廢水、運輸系統的建設、避免放射汙染，以及有風險的廢置場等。他們認爲傳統專業工程的科技進路已無法處理這些問題，因爲它們都太過於狹隘了，那些解決方案並不是真正的整合，且足以擔負起跨越諸多理論的知識；由於長期以來，它們都被視爲片段個別的問題，所以客戶不會要求從一種整全的系統觀點來推論或思索。

從 1990 年起西圖公司便投注於永續發展議題，現在是西圖公司永續發展執行小組（CH2M HILL sustainable Development Practice Group）的靈魂人物 Linda Morse 回想，正當她在整合廢棄物管理與環境議題時，有一些書籍、文章與對談激起了她致力於永續發展議題的興趣；她同時體認到永續發展是一個重要的、必須被重視的全球性議題，她更認爲西圖公司有潛力在此一極爲複雜的領域中出類拔萃，以及在一種整體論者的意義底下，能夠將一個公司對環境的全面性影響作更完整的盡舉和揭示。於是，西圖公司就形成了一個關注永續發展

32 Ibid., 193.

的非正式團體，有點類似「鼠鼬工廠」（skunk works）的高度靈活操作小組[33]，他們彼此交換著有關永續發展的概念如何與西圖公司連結在一起，共同探索「如何將我們的作爲與成果結合在一起」，他們有很強的學習企圖心，與自我焠煉的思想與價值，以及探索如何嵌結到西圖公司的價值和提供的服務上。他們在逐漸增長自己的能力與理解如何將永續發展應用到西圖公司時，一直刻意地保持低調，然當得到正面的回應與永續發展的概念確實能爲客戶增加價值的成果出現後逐漸曝光，這個小組受到執行長 Peterson 的肯定與激勵，此時他們也常常在網路上分享與提供新的知識。

在 1997 年西圖公司於新墨西哥 Santa Fe 由自然步調組織所主導舉辦爲期一週的永續發展工作坊課程。Morse 回憶道：「這是一次非常重要的經驗，不僅讓我們更清楚永續發展的自然步調框架，所有有興趣的人透過學習聚集在一起，且讓我們理解如何將這些理念與原則帶回到自己的企業裡面，不論是公司、顧問團、非營利事業或公部門中的永續發展的領導群而言，它確實是一個受益匪淺的經驗。」[34]她將這個知識帶回西圖公司，並在公司內部開始與同僚分享，以及少數幾個有興趣的客戶。她評估說：「我們通常回到客戶的需求是什麼的問題上，那就是在我們作眾多決策的主導，永續發展已經與客戶的需求連結在一起了。」[35] 在 1998 年西圖公司正式成立了永續發展工作小組。

西圖公司看來是依序整合邁向永續發展，雖然是由下而上的茁長方式，漸漸得到領導者的支持與承諾，執行長 Ralph Peterson 就是在 90 年代開始談論起永續發展概念，以及陸續公布西圖公司的永續發展報告書，進行承諾邁向永續發展的外部溝通和內部的教育訓練等。在 1992 年里約地球高峰會時，西圖公司就積極分享有關永續發展議題

33 Ibid., p.197.

34 Ibid., p.198.

35 Ibid.

的討論與對話，它也是「世界商務委員會」WBCSD（World Business Council for Sustainable Development）最初的成員，並且扮演一個非常主動的角色，其中 Maurice F. Strong 是董事會中有關國際事務的顧問。

此外，具體落實永續發展的作爲，包括：自行設計綠化課程並從公司做起，讓員工在公司與家庭都能夠改善品質。透過有效的使用資源與監測來降低所謂的環境足跡。在公司內部發起「邁向永續的工作環境」，並架構出行動方針，有：減少使用紙張、減低垃圾量、採用環保用品、透過植栽行動補償碳排放、公司員工參與社區地球日學校和在地非營利組織的環保行動等。西圖公司又在網路上創出一種獨特的成長課程「綠芽」（GREEN! Leaf; Growing Real Environmental Efforts Now!），用來肯定和激勵員工參與環境和社會責任的各項行動，加拿大西圖公司的七個辦公室都有綠化團隊以促進內部的永續發展；此外，財務上的誘因也有效地刺激同事對於永續發展原則在公司或家庭實務上的運用。以及由 Andrea Ramage 所開辦的一個領航計劃，它的目的是點醒員工對於實踐永續發展的認知、減少公司消費自然的資源、降低環境足跡，以及從年度之減少成本中獲利。直到 2002 年止，已有超過 200 位員工參與領航計劃。

作爲一個跨國際、科際整合的公司，真正發揮其影響力是將永續發展的理論整合爲客戶服務，西圖公司這一連串的案例，簡述如下：

（一）耐吉（Nike）奧勒岡與海外

從 1998 年便與之合作，包括各種污染源處理（其中包括全球水源使用和廢水處理的諮詢顧問）與開發永續產品等。特別是在六個國家 45 家包商工廠對於減低污染與節省製作成本的成功案例，證明了在污染防治與改善商業製成之間相關性。甚至如 Nike 製鞋部門永續發展的負責人 Phil Berry 說西圖公司也是這些廠商後續的環境改善之

主要的合作夥伴，最近西圖公司則與耐吉共同創造耐吉的企業責任報告書，也包括永續發展指標。

（二）北卡羅來納勒傑恩（Lejeune）海軍陸戰隊營地

是全世界最大的海軍訓練基地之一，約莫可以容納 144,000 人在此從事訓練活動。西圖公司與之合作計劃是在環境永續發展的操作手冊（指南，ESGM）與提供本地與海外計畫和執行永續發展的訓練影帶。西圖公司的計畫主持人 Allen Davis 回憶指出，在此一基地的重要副手 Bob Warren，他花了三十年的時間在環境汙染防治、保護與增進當地棲息的動植物物種。而 Warren 則說要進行永續發展是需要投資在學習上，他指的是閱讀與研究，而不只是工作。他甚至提到一位朋友介紹給他的隱喻：「工作是汗水，而承諾則是血液。」並且認爲永續發展必須要進入到血液裡，必須思考前所未有的更大格局裡，永續發展就是一個嶄新的典範，做小的計畫並不會激起任何人的熱情；因此，不僅是要讓永續發展進入到你的血液裡，你還要有足夠的大無畏來設想其它會讓人激動的解答。

此外 Warren 與 Maj. Gen. Ray Smith 同行參加一個「永續發展與聰明成長」高峰會，會中他們親臨英特菲（Interface）公司的總裁安德森 Ray Anderson 的一場演講，席間安德森朗誦了湯姆斯（Glenn Thomas）創作的詩〈明天的孩子〉，Warren 深受感動，回到基地後 Smith 問道：你認爲我們應該如何爲北卡羅納貢獻關於永續發展的目標？ Warren 經過幾天徹夜思考後得出一個較清楚的 Lejeune 海軍陸戰隊營地永續發展的理念。在與西圖公司合作後，Warren 與其團隊實踐了諸多前所未有的行動，包括能源水資源保護、綠建築、選擇替代性能源如太陽能與氫燃料、污水處理與循環利用以減低使用地下水、正確的採購、租用可以長期使用的物品與利用氫燃料電池汽車等。在 2002 年 Warren 即將退休前，納翠斯爲他們舉辦了一次爲期三天的永續發展工作坊，Warren 評論說，這個工作坊讓他們理解與著手運用自

然步調的框架實踐永續發展，這是在他離開之前的整個過程中另一個精采高潮，自然步調確實幫助我們體認到如何適應一個極爲複雜的地球程式，以及在軍中一個細微的行動竟然可以貢獻到全球的目標。

（三）伯納比山計劃（Burnaby）

靠近溫哥華 24 公里處，此計畫是透過綠色基礎設施，在西蒙菲沙大學校園與鄰近地區建設一個永續社區。它包括了 4500 戶與地球友善的住家、不同的休閒商店、飯店與學校，而地勢較低的地方則維持原自然樣貌與永久保護區。此計劃有三個永續發展的目標：(1) 密度轉移的目標，將社區集中在 20% 的土地上，其它 80% 則作自然保護用途。(2) 創造一個密集完全結合大學城地社區，且都以步行或轉乘的交通方式，降低單人使用汽車率以 40% 爲上限。(3) 採適應性經營與操作監控，特別是要對洪水期與河流管理完成一個長期改善計劃。對於後項，他們開創一種「整合洪水管理」概念，完全結合工程、規劃與生態的觀點。此案例之可取處是爲小區域計劃提供一個土地使用與發展的典範。

（四）烏克蘭之市營自來水系統

一個新的國家面對一個前所未有複雜的經濟與政治難題，此案例是爲一個老舊社區提供水源的改善計畫。西圖公司已有五十年的成功經驗，他們透過成熟的技術與規劃，爲世界上想要保護自然環境的國家與有需要的居民提供乾淨用水。西圖公司亦針對烏克蘭水公共事業，就如何進行公部門的計畫與決策提供駐廠訓練，最後則是由烏克蘭當地居民實現此一計畫案。正面的態度與積極參與是公民要達到一個社會、經濟與環境永續的系統不可或缺的，因爲從此一案例，提供水源以滿足居民的基本需求固然重要，此外，它還幫助在地居民創造一個由自己參與提昇未來的基本設施。

納翠斯認爲西圖公司是永續發展的一個沉睡的巨人，因爲他將逐漸在永續發展過程中察覺到自己的力量與潛能，而且會有更多的客戶想要從西圖公司獲取一些有效的知識理念或操作經驗。西圖公司高層認爲永續發展對於全球與公司都是重要的，儘早確立與累積諸多成功案例，成爲公司強大力量的來源，也是對客戶最大的安全保障。依納翠斯敘述企業落實自然步調以邁向永續發展的過程，兩個典範的故事，它們都交錯著許多脈絡的重疊系統，以及聚焦於「永續發展如何在組織內成爲一個有意義的概念？」的問題，雖然我們或不在組織中，但在閱讀故事的脈絡時，任何人都可能被此一問題攫獲並出現在某一個或進或遠的節點。

按自然步調的概念所揭示的科學事實，目前的實境脈絡是在一個全球性的社會，而本文所舉例的故事即是發生在不是永續性的社會當中，或者也有可能發生在另一脈絡，它是建立在西方現代經濟商業系統之上，而故事則是在每一個企業的結構內之操作者的運作，並探尋他們的認同和過程的歷史；或發生在一種是個別的改革者脈絡，而故事則是有關他們的經驗，或早期的適應者如何發現個人與組織，甚至是一種整體的永續性間的關係之挑戰，以及他們試圖影響組織企業存續與運作的脈絡。本文舉出惠斯勒與西圖公司兩個故事的脈絡，即是敘述了它們如何利用自然步調的概念，對於永續發展如何在組織內成爲一個有意義的概念問題，我們可以說它們創造了與自然與人共同演出永續發展和諧的舞碼，這些與虎共舞的企業典範，(1) 它們以自然步調的四個框架條件作爲指導原則，同時突顯出永續發展的規範義。(2) 是系統性地思考，它有永續發展圖式作爲績效指標，有願景、規則、改變與策略。(3) 它們肯定人在邁向永續之道中的角色，並重視個人的激勵、學習與成長，發現一種向上的力量。(4) 懂得分享邁向永續之道的心得並與人爲善，以及重視社會責任。(5) 遵循自然步調的概念，並且對環境是友善的，甚至是環境復育。

四、結論

進化的舞碼一直持續著激勵人心的特性，納翠斯重覆以 Lance Armstrong 抗癌的故事爲例，他的抉擇與勇氣讓他成爲一個更完整、有熱情與明智的人。而在這些企業永續發展的故事中，爲什麼會有如此勇氣與虎共舞呢？因爲需要勇氣面對諸多不確定的事，我們正處身在一種不永續的軌道上，從一種視若無睹進展到我們覺察還有許多不知道的事，亦即意識到我們無能爲力的狀態。再者，這種勇氣是如 Lance Armstrong 所說的面對困境，自信能夠做出不凡的事；例如在 CH2M HILL 公司統艙結構中的人，試圖跨越過其各自的藩籬以建構起關於永續發展的知識與能力。

從自然步調中學習永續發展之道，並在不同的企業組織內成就不同的永續發展理想，它已經成爲一個人類文化的選擇，我們在一個進化的十字路口，即將決定我們是否有責任感，以及要留下什麼給未來世代子孫。而我們的希望在那裡呢？永續發展的潮流正尋求進入企業的核心價值、政策與商業計劃，如西圖公司案例；甚至說它將成爲法令、社區發展計畫與社區檢視自己的方式的一部份，如惠斯勒案例。那些進化的先驅英雄們也正尋求成爲主流行動、卓越制度的聲音與平台，他們將在我們的文化中成爲有影響力的指標，當我們聆聽這些正在訴說的故事時，我們也發現了潛力。一系列的進化舞碼正像依央烏的舞蹈，會出現在我們與老虎與他人共舞的舞步當中，而且，最後這些老虎會反過來學習如何與我們共舞。

本文例示以故事的方式敘述企業向自然步調學習永續發展之道，若初步檢視國內企業實踐的經歷現況，根據台灣遠見雜誌推動企業社會責任大調查並舉辦企業社會責任獎的緣起，以及由它們所調查的統計研究中發現，台灣已從認知起步逐漸轉趨積極，並尋求邁向標竿與世界的水平前進，這或許是我們的希望，而挑戰則是將這些個人與組織的行動與決策，和健康的全球系統兩者串接起來；此外，也期待有

更多的先驅分享他們的故事，能夠更深刻地將我們與永續發展的潮流串接在一起。

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愛、自然的價值與環境倫理

柯志明 *

> 任何探究受造物的本質與功能而不探究它們的呻吟與熱切期盼的人，都確定是愚蠢與盲目的（Martin Luther, 1961: 237）。

雖然古來已有諸多思想與宗教信仰皆主張要善待自然，尤其有苦樂感的動物，但基本上傳統的西方倫理學並不將自然納入考量的範圍也未認真對待自然。現代自然科學思潮加深這個基調，更把自然中性化、去價值化、去道德化。倫理只局限於位格間，自然是無位格的，因而自然不涉倫理。這種主流觀點受到當代生態意識的嚴厲挑戰。百多年來的生態意識不斷挑戰這種人類中心主義的倫理觀，奮力把道德延伸至自然。然而至今，困難還在，爭論不休，如何對待自然幾乎成了一個新而顯著的倫理難題，我們覺得任何一個入流的哲學家都不會也不應忽視這個問題。

環境倫理與人際倫理最大的不同在於，環境倫理只要求人而不要求自然。人可以要求人，但人無法要求自然。在人無法要求自然而只能要求自己的情況下，人反省自己對待自然的態度與行爲是否正確，這意味著環境倫理學是人純粹「反求諸己」的學問。因此，人若不能有著更敏感的良知以及更縝密而深刻的道德，環境倫理顯然很難成立，因爲人將很難在面對靜默的自然時找到一個足以說服人的強制理由。可見，人雖非自然的中心，但他還是環境倫理的關鍵。

* 靜宜大學生態學研究所哲學副教授

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但真的有生態倫理或環境倫理嗎？它的倫理法則會是什麼？我們要根據什麼來討論或建立或發現這種倫理呢？我們若能指出對待靜默無言的自然的倫理，那麼人際倫理就更昭彰顯著了。如果人連靜默無言的自然都能善待，更何況是能申張己見的人。倫理的極限何在？或許環境倫理或生態倫理將是最好的測試點。我認爲環境倫理與人際倫理源於相同的根源，但因爲人與自然是不對等的、非主體際性的、難以互動溝通的，因而環境倫理更能顯出倫理的嚴格性與獨特性。善待一個人與善待一隻鳥或一棵樹或一片土地絕對不一樣，善待自然物要比善待人付出更多、要求更多；正因此，人在對待自然上就更能顯出其道德性。

我將在本文中指出，不是人的利益，不是自然的權利，也不是自然的內在價值，而是愛才是環境倫理的基礎。正因爲愛，我們不只批判自己，也批判自然；正因爲愛，我們要求改變自己，我們也渴望自然能改變。也因爲這個對自然的愛，我們期待超越自然，期待一個使得自然可能變得美善的愛的自然作者。沒有這個超越的愛的自然作者，環境倫理不可能也沒有意義。

一、自然的內在價值與對自然的義務

Rolston 問有生態倫理嗎？他的答案是有。[1] 他的根據是自然有其自身的價值，以致於我們必須依據這些價值去對待自然。沒錯，除非自然有價值，否則人無需思考如何對待它。我之所以思考如何恰當對待一個對象乃因那個對象對我而言具有特定的價值（姑不論這價值是如何產生的），因而當我意識不到某對象之價值時，我即不可能恰當地對待它。對 Rolston 而言，生態倫理是建立在自然的價值之上，這

1 參見 Rolston. “Is There an Ecological Ethic”, in *Philosophy Gone Wild: Environmental Ethics*, 1989, 12-29。

是他的環境倫理學的關鍵，正因此，所以他花了很多力氣在論證自然具有價值。[2]

Rolston 的這種環境倫理學進路必先解決自然有其客觀的或獨立於人的價值或內在價值，否則環境倫理就很難成立。但這裡有兩個問題：第一，自然有客觀的、獨立於人的、內在的價值嗎？第二，自然有客觀價值即能引出環境倫理嗎？這是兩個不同但相關的問題，第一個屬價值論，第二個屬倫理學。對 Rolston 而言，解決第一個問題是整個環境倫理的關鍵，因而他以其豐富的自然知識反覆申論自然有客觀的價值，即非人賦予的價值；他同時也強調生態學的基本概念或信念能確立這些價值。因此，Rolston 的環境倫理學預設：價值引發義務（value entails duty），以及義務蘊涵價值（duty implies value）。因爲自然有客觀價值，所以我們對自然就有當行之義務。

其實，Paul W. Taylor 在 1981 年的一篇〈尊重自然的倫理學〉（The Ethics of Respect for Nature）中就提出類似 Rolston 的這種觀點來了。Taylor 以爲我們對有機生物的義務來自於承認它們具有固有的價值，[3] 他說：「活物現被視爲尊重之態度的恰當對象以及因而被視爲具有固有價值的存有物」。[4] 因爲具有固有價值，所以「與人類的福祉一樣，它們的福祉就必須被視爲目的自身來實現」。[5]J. Baird Callicott 似乎也認爲自然是否具有內在價值，「這是環境倫理學中的核心理論

2 Rolston 的整本《環境倫理學》（*Environmental Ethics: Duties to and Values in the Natural World*）就建立在「自然是客觀價值的携帶者」Rolston III, Holmes. *Environmental Ethics: Duties to And Values in The Natural World* (Philadelphia: Temple University Press, 1988), 4. 這個信念上以申論我們對待自然的義務的，因而他才會在第一章的前言裡就說：「價值因而在接下來的諸論證中將是一個主要的語詞。¼¼我們將從價值中引生出義務來」Rolston III, Holmes. *Environmental Ethics: Duties to And Values in The Natural World* (Philadelphia: Temple University Press, 1988), 2。

3 Taylor, Paul W.. “The Ethics of Respect for Nature,” in *Environmental Ethics: an Anthology*. ed. by Andrew Light and Holmes Rolston III.(Oxford: Blackwel,. 2003) , 74.

4 Taylor, Paul W.. “The Ethics of Respect for Nature,” in *Environmental Ethics: an Anthology*. ed. by Andrew Light and Holmes Rolston III.(Oxford: Blackwel,. 2003) , 76.

5 Taylor, Paul W.. “The Ethics of Respect for Nature,” in *Environmental Ethics: an Anthology*. ed. by Andrew Light and Holmes Rolston III.(Oxford: Blackwel,. 2003), 75.

問題」，[6] 因爲「如果沒有內在價值可歸給自然，那麼環境倫理學就沒有什麼分別的。……或以另一種方式表示相同的觀點，如果自然缺乏內在價值，那麼**非人類中心的**環境倫理學將被排除」（重點字體原文強調）。[7] 可見自然具有內在價值是環境倫理學能否成立的關鍵，因爲只有在自然有固有價值或內在價值時，它才有自身之目的，生物也才能被視爲目的自身，因而才是必須尊重的。

然而，我們認爲這種觀點值得商榷。

首先，我們不認爲有關自然的知識足以證立自然的價值，而且自然的價值也不是一種客觀對象可爲我們認識。不錯，我們的自然知識與我們評價自然有關，但是自然的價值不能直接建立在這些自然知識之上，頂多自然知識只是作爲自然價值的必要條件而不是充分條件。如果自然知識不能關聯到我的慾望、情感、意志，那麼那些知識將不能引起我的價值感；這好像如果數學不能關聯到我們生活的任何內涵，那麼數學將對我們毫無價值一樣。其實，自然對我們有價值不是因爲我們認識到它的「內在價值」，而是因爲在我們與自然的關係中我們就「自然而然地」直接體會到自然向我們呈現的價值。自然向我們呈現出價值不等於這些價值內在於自然之中；沒有作爲評價者的我們，自然就不能對我們呈現那些價值。因此，即便環境倫理需以自然有價值爲基礎，我們也不必以證明自然有內在價值來作爲環境倫理的基礎；我們只要承認自然總是向我們呈現著價值就夠了，這就足以使我們要求自己應該善待自然。好比，雖然我未必能認識到氧氣有什麼內在價值，但沒有氧氣則人無法存活，因而氧氣對我的存活確實有價值；這就夠了，如此就足以使我應當去善待氧氣。因此，自然作爲價值的必要條件就足以使我們要善待自然，因爲失去這個條件則我們所謂的價值必無從產生。

6 Callicott, J. Baird. 1999. *Beyond the Land Ethic: More Essays in Environmental Philosophy*. (New York: State University of New York Press, 1999), 241.

7 Callicott, J. Baird. 1999. *Beyond the Land Ethic: More Essays in Environmental Philosophy*. (New York: State University of New York Press, 1999), 241.

再者，或許我們不能證實自然「確實」有其價值，但這也不能否定自然**可能**有價值。如果價值的存在總是與評價者有關，那麼我們必須承認人並不是自然的唯一評價者。至少我們知道動物也有著牠們對自然的評價，雖然牠們不能反省自己的評價以形成一種價值的反思判斷。[8] 更重要的是，可能存在著比人更優越的存有者，他（或他們）對自然**可能**有著與人極不相同的價值判斷，因而自然**可能**向著他（或他們）呈現著不同的價值。顯然，我們永遠都不能排除這種可能性。以爲人是唯一或最優越的自然評價者，這是毫無根據的獨斷之見，也是人類中心主義之見。僅僅根據這個可能性，我們就不能單單以人的觀點評價自然。因此，無論自然有無內在價值，自然都可能有著**非人類中心的**價值，也就是對人而言的一種客觀價值——雖可能是另一種主觀。如果自然也向著其他評價者存在，人就不應獨斷地對待自然。

最後，我們以爲承認某物有內在價值是我們善待它的條件是不完全的見解，因爲我們事實上常常在未認識到事物有內在價值的情況下善待它；甚至更爲極端地，某對象尚未存在時我們也會愛它，而且正是我們的愛使它存在，也使它有價值。父母在孩子尚未存在時就已經愛著他們，父母不是因爲認識到孩子先有價值才愛他們，而是把他們愛得有價值。在此，愛先於存在，也先於價值。因此，以爲承認或認識到自然有內在價值是善待自然的條件並不完全正確，事實上我不知到自然是否有內在價值時我依然可以善待自然並熱愛自然。

8 有關這點，Paul W. Taylor 在〈尊重自然的倫理〉裡強烈批判人類優越於其他生物之意識時即指出：「這是人以自己的價值爲標準所做出的偏見判斷，其實他生物有著它們自己的價值而且若以它們所具有的價值看，人並不十分優越。」Taylor, Paul W.. “The Ethics of Respect for Nature,” in *Environmental Ethics: an Anthology*. ed. by Andrew Light and Holmes Rolston III.(Oxford: Blackwel,. 2003), 79-83. Rolston 在《守護自然價值》（*Conserving Natural Values*）中也以猢猴（lemurs）爲例清楚指出：「猢猴不能自覺地評價它們的價值理論，但它們能以行爲證明它們視爲有價值的東西。」Rolston, *Conserving Natural Value* (New York: Columbia University Press., 1994) ,160.

二、自愛與善待自然

其實，依常識，自然是否有價值對人而言是明顯的。所有心智健全的人都會肯定自然是有價值的，因爲最爲直接而切身的根據是我們有賴自然的供養，我們需要空氣、水、土地、陽光、植物、動物等等，因我們需要呼吸、吃喝、行動等等。如果價值與我們的需要（need）與想要（want）不可分，那麼自然對我們當然是有價值的。這點不需要什麼自然科學知識，常識就夠了。因此，問題的關鍵不是自然是否有價值，而是所謂自然的價值是人主觀認定的或是客觀存在的。Rolston 一再強調，自然具有本身內在的價值，這與人的肯定與否無關。然而無論如何，至少我們可以肯定自然對我們是有價值的，雖然它對我們具有否定的力量。

自然與我們的關係不是我們創造的、建構的、規定的，而是既予的（given）；自然對我們的益處也是如此。這些都是客觀的。我們發現這些客觀事實能使我們視自然對我們爲有價值的。但如果我不愛我自己，則這些事實都可以被我視爲無所謂的、無意義的。自然知識對我之所以是有意義的，乃因爲我愛自己，而我知道自然與我對自己的愛有關。因此，一個真愛自己的人必然會愛自然，因爲愛自然是他 - 她愛自己不可或缺的條件；一樣，一個關心自己益處的人必然會關心自然如何，因爲自然如何關係著他 - 她的益處。就此而言，說人因利己而會不愛自然或傷害自然，這並不正確，因爲真正愛自己的那種「利己」必然不願意也不會傷害自然，因爲傷害自然同時也傷害他 - 她自己。

如果常識上我們即可肯定自然對我們有價值，那麼保護自然就是理所當的了，因爲保護自然就是保護自然向我們所呈現或提供的那些價值，而維護與我們有益的事是十分合理的。因此，任何一個在乎自身利益的人都會也應當保護自然，這就是爲什麼生物學家 Edward O.

Wilson 認爲保育的道德基礎最後還是要建立在自私的推理之上[9]。如果事實上自然與我們的存在有價值上不可分割的關係，那麼任何一個愛惜自己生命或在乎自己幸福的人都應當不傷害自然。因此，除非我們否定人不應追求利己，否則我們就應堅持人有保護自然的需要。

但這裡有一個問題，利己是否強制的？如果有人不在乎自己的利益呢？或者，如果每個人的利己作爲不同呢？我們有什麼理由強迫非利己不可以致於非保護自然不可呢？或有什麼理由非以某種方式利己不可？我認爲這是一個關鍵。在最低限度的意義上，如果我們不能爲利己提供一個合理的理由，那麼我們更不可能去說服人相信保護自然是一個客觀的義務。而這個問題顯然無法從自然中獲得解答，它純然是一個關乎人自身的問題，即：我有必須在乎自己的利益嗎？

對此，我們以爲利己是愛己的表面表現，亦即利己的核心其實是愛己。愛己不完全等於利己。如果利己意指只在乎並追求自己的「利益」，那麼愛己並不等於利己。愛己是指關心並意願使自己更爲美善，而利己則是指追求自己感受到的「利益」。自己感受到的利益不等於實際上有益於自己的美善。因此，一個尋求自己美善的人不會只在乎自己的利益，甚至不會在乎自己。一個人十分可能爲了利己而不在乎自然是否有價值，也不會去保護自然，而只是一味地利用、掠奪自然。如果再把自私或自我中心納進來，那麼一個人更可能會因他的生命有限（有一天會死）之故而全然不考量自然的永續價值，當然也不會考量別人的自然利益。現實上，一個利己的人常常會是一個自私的人因而是一個短視近利的人，這樣的人對自己與對他人、事物都容易有錯誤的判斷並作出不當的行爲。因此，除非一個利己的人是一個真心愛自己的人，否則他的利己很難有什麼道德價值。

但愛己則不同。愛己者希望自己變得更加美善，因而無論現實如何，愛己者總是希望自己變得比現在更好。「美善的自我」是一個理

9 Nash, Roderich Frazie, *The Right of Nature: A History of Environmental Ethics*. (Madison: The University of Wisconsin Press, 1989), 83.

想概念也是一個限制概念，它引導我們不斷地超越當下的自我以致於不斷地批判當下自我的種種不是。因此，如果我們在乎自己是否美善，那麼我們就會在乎自己的現實情況並對它提出意見而企求超越。如此一來，愛己者必定重視與珍惜自然，因爲自然是自我能否美善的現實條件。人生活於自然之中，人需要自然，而且自然對人充滿吸引力，它激發著人對它進行探究。人藉著自然而創造屬乎自己的文化，展現他的才能；人心因著自然而高度發展他的智力與各種科技文明。因爲寓居於自然之中而不得不要面對自然，人因而變得更加的卓越。顯然，現實上，人離不開自然，只有以自然爲條件，人才可能變得更加美善。因此，一個愛己者不可能惡待自然，相反地，他會珍惜並愛護自然，因爲他知道他的自我完善需要以自然爲條件。

在上述的意義上，我們確實可以主張保護自然的環境倫理可以從愛己中導出，相信任何一個愛己者都會合理地認同愛自然與保護自然，以致於那些不愛惜自然與保護自然的行爲都會被視爲不合理的。因此，理性言之，任何一個愛己者都會也當珍惜自然而保護自然，因爲只有如此愛己才可能。因此，如果愛己是普遍人性，那麼，我們不得不說，它確實是環境倫理最恰當的基礎。

然而，嚴格言之，愛己並不能導致行爲的強制性，因爲只要有現實上不愛己者，那麼他 - 她就未必認爲有義務去做對他 - 她有益或有利的事，以及珍惜那些有益於或有利於他 - 她的事物。再者，如果兩個愛己者對自然能否導致他們對自己的愛的理解不同，那麼他們將有不同甚至是對立的自然行爲；這種衝突我們將很難再以愛己作爲原則來化解。第三，也許更爲嚴重的是，以人的愛己爲出發點與視野，我們對自然的理解將大受局限：一方面，由於我們對自己的利益不十分清楚，以致於難以決定如何對待自然才是最好的；另一方面，由於單單以考量自己的利益來理解自然，而這將難以跳脫人類中心主義的局限而無法認識到自然與人之間的非人類中心之可能性。可以這麼說，現實上，愛己、利己與自私常混雜一起而難以分辨，以致於難以產生

真正善待自然的行爲。最後，嚴格言之，自然應該如何被對待與人之愛己實無必然關聯，因不能從愛己直接推出自然當如何被對待。愛己可以是人善待自然的動力但不是它的充分理由；它可以是一個必要條件，但不是充分條件。不錯，一個不愛己的人不可能善待自然，但一個愛己者卻不一定能正確地對待自然；換言之，愛己者還是需要學習如何去善待自然。

三、自然非人所有：自然的他性

但如果保護自然不能直接建立在利己或愛己之上，那麼它又可能建立在何處呢？有什麼其他理由使得我們不得不保護自然或不傷害自然嗎？也就是說，有什麼理由使一個不愛己的人也必須服從保護自然的規範嗎？這個規範要以什麼爲基礎？對此，我們認爲，無論如何，至少自然不是我們的所有物這點限制著我們不可任意對待自然。我們沒有權利任意對待自然，因爲自然不是我們的。我們對自然沒有所有權。即便我們不知道自然爲誰所有，都否定不了自然不爲我們所有，這是再明白不過的道理。

現實上，人存在於自然之中，需要自然的種種供應，因而人取用自然（nature）是十分自然的（natural），因爲人的存在本然（naturally）如此。因此，就存在的角度說，人取用自然是十分合理的，可謂人的自然權利。但是，人可以取用自然不意味著人可以任意對待自然，正如一個房客可以使用他承租的房子，但絕不意味著他可以任意對待他承租的房子。這個限制不是來自於任意對自然會給人帶來損害或不利，而是來自於基本上自然就不是人的所有物。就此而言，不管一個人是否願意愛自己以致於願意保護自然，她都沒有權利隨己意對待自然。基於這個理由，我們有義務限制自己不任意對待自然，也有義務要求他人不傷害自然。因此，凡是對自然造成不可逆的損害之行爲我們都有義務阻止，也有理由判定是錯的行爲。

這個認識與自覺是十分重要而根本的，當代生態運動中對人類中心主義的批判之一就在於指出自然並不是人的所有物，即人對自然沒有所有權。無法指出自然是誰的得不出自然沒有所有者，更不能得出自然就是人的；即便那些把自然視爲爲了人類而存在的人類中心主義者都不能因而認定自然就是人的。自然的歷史告訴我們，自然存在許久之後才有人，以致於甚至可以說人是自然的而不是自然是人的。這個事實限制著人沒有任何理由可以隨己意對待自然而不好好善待自然。而且十分重要的是，不只在權利上自然不是人的，在存有上自然也不是人能左右的。對人而言，自然是**他者**（other）。人不能洞悉自然的奧秘，人也不能左右自然，人在自然中實屬渺小，因而自然以其他性赤赤裸裸地向人展示它不是人的所有物，以致於不可能爲人任意支配。

然而，將所有權的觀念運用於自然的最大弱點是我們不大願意相信自然有它的所有權者，以致於我們傾向將自然視爲沒有所有者的而只按我們的意願對待自然。再者，現實上如果沒有人護衛自然或爲它辯護，那麼將少有人願意承認人沒有自然的所有權。事實上我們已經看到人們對自然的佔有而據之爲自己的私有財產，就算不是個人據有，至少也爲國家所據有。國家立法保護自然是因爲視之爲國家的產業與資源。對此，我們甚要說人對自然做出的種種惡行基本上都基於這個侵犯所有權的錯誤之上，即自以爲自然沒有所有者以致於對它爲所欲爲。

在承認這個所有權的限制之下，我們或許還是會問：何謂任意對待自然？對待自然的限制何在？爲了生存以實現一切人性的豐富內涵，人可以依照自然的方式取用自然，但不應毀壞自然，破壞自然的多樣性、整體性、可持續性。例如，人可以砍樹，但不能砍到樹滅種；人可以使用土地，但不能使用到破壞其他生物的棲地而令之不能生存，或污染土地而使之永久性地毀壞；人可以發展自身的工業文明，但不能發展到破壞整個自然環境。任意就是沒有節制，隨心所欲。人

沒有權利毀壞土地、空氣、海洋而使之失去自然生機並因而令其他生物無法生存，人也沒有權利滅絕任何一種物種。

總之，在不能積極地說自然本身具有什麼權利的情況下，至少我們可以消極地主張人對自然沒有所有權以致於沒有任意支配它的權利。這當然是消極的自然態度，這裡還談不上對自然的積極義務。在這個前提下，人合理的自然行爲就是，人作爲一種自然存有所能做也會做的那些行爲，以及爲了實現人的本性所需做的那些行爲。此外，人最恰當的自然態度就不要人爲地干預自然、破壞自然本有的特質，讓自然自然地存在，因爲自然不是人的。

四、敬畏生命倫理

自覺人沒有自然的所有權使得人必須學會尊重（respect）自然。但人對自然的情感不止於此。人更會敬畏（revere）自然，尤其其中的生命。敬畏生命是因爲生命本身具有無上的價值；而生命既如此可敬畏，那麼生養如此眾多生命的自然當然值得人敬畏。敬畏生命（reverence for life）的倫理比所有權的倫理更肯定自然的積極價值。

敬畏生命的倫理認爲生命具有一種不可侵犯的尊嚴與價值，因而認定「所有生命的毀壞與對生命的傷害，在任何情況下發生，它們都〔當〕責難爲惡的」。[10] 從自然史的角度看，生命的出現極其難得而珍貴，它需要複雜的條件，因此，毀壞生命是十分可惡的行爲。但是，敬畏生命的倫理實則比這種自然史觀點更進一步，因爲生命承載著超出我們所能理解的不可思議的意義。生命是神聖的，也是神秘的，它的存在本身就抗拒人任意對待它。這點我們可以在 Albert Schweitzer（1875-1965）那裡看得十分清楚。

10 Schweitzer, Albert, *The Philosophy of Civilization*. trans by C. T. Campion. (New York: Prometheus Books, 1987), 317.

然而，現實上敬畏生命並非普遍的，它通常只出現在有著敬虔的宗教信仰者身上。確實，只有在人願意承認並相信自然（尤其是生命）有著深刻意義與無上價值的情況下，敬畏生命的倫理才是可能的。但要相信自然有超越而深刻的意義與無上價值，這只可能出現在敬虔信仰者身上。一個人的信仰若不提供這種富有意義的世界觀，敬畏生命是難以出現的。因此，除非所有的人都持有相同或相似的信仰，否則敬畏生命的倫理實難以成爲一種普遍的環境倫理規範。

但更重要的是，敬畏生命的倫理有其現實上的困難。一方面，生命世界本身即充滿著衝突、傷害與殘暴，這一點像達爾文這樣的生物學家都有清楚地認知也是其生物學的核心要點；另一方面，人作爲生命世界裡的一員，正如其他生物一樣不可能不以傷害其他生命作爲存在的條件。一個現實主義者或自然主義者很難是一個敬畏生命的人，因爲敬畏生命不自然、不實際也不可能。如果生命本身是值得敬畏的，那麼，爲什麼自然界裡的相互吞吃的生命表現又是如此令人生畏呢？爲什麼生界本身就充滿著殘暴與殺戮呢？爲什麼人應當敬畏並珍惜如此赤裸殘暴的生命？我們似乎必須承認從自然中我們找不到敬畏生命的基礎，我們所能知道的就是爲了生存而生物之間不得不產生激烈鬥爭。因此，敬畏生命必定是一種超越的信仰，它必須建基於超越的自然觀之上。如果我們遵循 Rolston 的生態倫理或環境倫理，敬畏生命顯然是不可能的，因爲生命之間的相互吞吃是生態的事實與常態，甚至自然就是以這種方式維持其系統。[11]

然而，更爲弔詭的是，敬畏生命這種超越信仰卻常常導致一種接受自然現實的自然主義態度，因爲邏輯上敬畏生命與傷害生命並不對立，甚至後者爲前者所蘊涵。若傷害生命作爲生命的一種現象甚至是必要的現象，那麼一個敬畏生命者必不得對這種生命現象提出異議，

11 Rolston 在《環境倫理學》 Rolston III, Holmes. *Environmental Ethics: Duties to And Values in The Natural World* (Philadelphia: Temple University Press, 1988), 78-84。與《守護自然價值》中正以這種自然觀點支持人的狩獵與肉食 Rolston, *Conserving Natural Value* (New York: Columbia University Press., 1994) ,122-126.

因爲在很大的意義上否定生命之間的傷害與彼此吞吃也就是在否定生命——諸多生命是靠吞吃其他生命存在的。因此，由於敬畏生命者相信自然有超乎其所能理解的意義，因而他不得不全然接受一切自然現實，包括其中的生命相互吞吃，以致於他自己也不否定吞吃其他生命也有著生命「深刻的」意義。如此一來，對他而言，傷害其他生命也是不得不然的作爲了，於是在現實上一個敬畏生命者與一個自然主義者或現實主義者並沒有什麼太大的差別，他們都接受不得不傷害生命；若有差別，則可能只在於敬畏生命者不輕易傷害生命而已。

這是敬畏生命倫理的困難所在。敬畏生命倫理者要我們承認生命的客觀存在及其意義，要我們不得侵犯它。但是，這種信念將導致上述那種接受現狀的心態，以致於反而合理化自然的現況，因此，它雖然限制了人不得任意侵犯其他生命，但卻必須接受非人世界中生命相互吞吃的事實。如果敬畏生命倫理者要徹底貫徹其信念，那麼最終他-她必須拒絕接受自然界的生命現狀，即不承認這個充滿著相互吞吃的自然界合於敬畏生命的法則。但是，在整個自然看起來幾乎都「不」敬畏生命時，敬畏生命的倫理又以什麼爲根據呢？是基於人的主觀意願或超自然的根據？敬畏生命者當然不認爲他們的主張只是人的主觀意願，而是有著客觀根據；那麼，這個根據必定是超越的而不是現實的。

正是如此，如果沒有超越的信仰，敬畏生命的倫理難以成立。在我看來，這才是敬畏生命倫理富有啓發性之所在。敬畏生命蘊涵承認生命的客觀性，也蘊涵承認對生命之存在的無知。敬畏生命倫理者必須承認自己對自然的無知，以致於無法瞭解生命的底蘊。這就是爲什麼 Albert Schweitzer 要強調倫理的神秘主義面向之故[12]。爲什麼會有

12 Albert Schweitzer 將倫理學根植於神秘主義之中，他說：「倫理學必須源於神秘主義」Schweitzer, Albert, *The Philosophy of Civilization*. trans by C. T. Campion. (New York: Prometheus Books, 1987), 304。他在《文化哲學》（*Kulturphilosophie*，英譯爲 *The Philosophy of Civilization*）的第 24 與 25 這兩章都在申論倫理與神秘主義的關係，對他而言，「倫理學是神秘的和絃，其中肯定生命與肯定世界是主音與第五音；否定生命則是第三音」Schweitzer, Albert, *The Philosophy of Civilization*. trans by C. T. Campion. (New York: Prometheus Books, 1987), 291.

這個世界？爲什麼這世界有生命？生命意味著什麼？這都不是敬畏生命倫理者能理解的。因爲不能理解，故須敬畏。我認爲這是敬畏生命倫理最有意義之處，只是需要敬畏以對的不只是生命，而是整個生養生命的自然世界。

對人而言，不可否定的事實是，這個自然世界不是人造的，它的存在是客觀的。自然是他者（other），它自爲地（in-itself）存在著，因而是人在理性上與意志上的對立者（opposite）；人無法理解自然，也無法左右自然。就此而言，我們必敬畏自然，因爲我們不能理解自然的究極意義，我們也無法左右自然。在此，敬畏不只是因爲自然有其自身的價值或不爲人所有，更是自然具有我們不可理解的可能性以及無法對抗的巨大力量。因此，敬畏自然是對待自然最恰當的態度。敬畏意味著謙卑，意味著不自以爲是、不自我中心，意味著自然有其自身的存在方式、意義與目的。所有對自然有基本知識以及有著可怖經驗的人都知道，不敬畏自然是不智的，因爲自然不會因爲人任意對待它而消失或毀滅，相反地，人卻十分可能因其不敬畏之故而消失在自然之中。人根本不是自然的對手。

五、愛自然

事實上，自然是強大的，人是渺小的。把人放在整個宇宙來看，人渺小到幾乎等於無。宇宙的運行完全不受制於人，因而說人的作爲會對自然如何如何其實常是誇大的說法。人雖會傷害自然，但人終究不是自然的對手。不過，由於表面上自然是靜默的、不自由的、被決定的，因而面對人時，自然不會表示自己的意見，也不會申張自己的權利，也常無力抵抗。就此而言，可說自然是弱勢的，動植物尤其如此。今天有大量的物種在消失，但人卻反而快速擴張成長，這是人之強勢最明顯的證據。果如此，那麼強勢者如何可能善待弱勢者？強勢者承認弱勢者有內在價值就表示他能善待弱者嗎？強勢者承認生命有

尊嚴就表示他就會敬畏生命嗎？強勢者承認弱勢者有基本權利就表示他不會侵犯弱勢者嗎？環境倫理與人際倫理最大的差別在於人與自然關係的不對等。人可以向人反應、申訴、抗議、抵制與反擊，但自然則似乎沒有這種能力。自然雖有強大的力量可以傷害人或消滅人，但面對人的攻擊與傷害，至少這個地球上的自然基本上沒有什麼抵抗的力量，尤其是生物。因此向人訴說而企圖說服人的環境倫理基本上隱含著一種「求情」的意味，即請求人不要傷害自然，而且這是人對人的求情。主權似乎在人手裡，只要人不願意，自然幾乎莫可奈何。

強勢者如何可能善待弱勢者？唯有愛而已。[13] 我們認爲除非強勢者愛弱勢者，否則他不會心甘情願地承認弱勢者的內在價值、尊嚴與權利。愛是關鍵，也是最重要的。沒有愛，人不可能尊重自然的自主地位，看不到自然的內在價值，不能體會生命的尊嚴，更不可能承認自然的權利。尤有甚者，即便在不能確立自然是否有內在價值、尊嚴與權利的情況下，愛也能使人珍惜自然、保護自然、善待自然。因此，我們以爲對自然最有價值的態度就是愛。只有愛才能化解人與自然的對立而把人與自然完全地結在一起，只有愛能使人重視、關心自然，因而會想辦法不傷害自然與保護自然。如果像 Rolston 那樣以爲人對自然的責任是出於人回應自然的價值，那麼我們認爲這個自然的價值則只會出現在人對自然的愛裡。愛自然是自然對我們有價值的最重要根據。[14] 即便我們的愛不能「創造」自然的價值，至少我們的愛能「顯示」自然的價值。

因爲我愛自然，因而自然對我就是重要的、有意義的、有價值的。我當然會因爲自己的利益而關心自然，但我也可以純然因喜愛自然而關心自然。我希望自然不要被傷害或破壞而持續維持它的存在、多樣、

13 有關愛與自然之關係的論述可參見我的另一篇文章，柯志明，〈Ecology 是家學：以愛爲核心的生態學之精神科學意涵——從自然到上帝，2008 年〉，《獨者：臺灣基督徒思想論刊》，第 16 期（2008），臺北：臺灣基督學會，頁 284-291。

14 我完全同意 Harry Frankfurt 的話：「愛是究極價值的根源。如果我無所愛，那麼對我而言沒有什麼東西具有特定與固有的價值」Frankfurt, Harry G, *The Reasons of Love*.(Princeton and Oxford: Princeton University Press, 2004）, 55.

美麗、奧妙。我甚至可以爲自然而捨棄我的生命，因爲我認定自然的價值大於我的價值，[15] 或者，我就是熱愛自然，我希望它能一直完美地存在著。我如此地愛自然，並非爲了我自己的什麼，也並非爲了人類的什麼，而純然只爲了自然本身。我喜愛許許多多的自然物與景物，沒有爲了什麼，也不是因爲什麼，就是純然地愛它們。

就自然的價值而言，根本言之，自然對我有價值未必因爲我對自然有正確的知識，而僅僅因爲我愛自然。我非常可能愛自然但卻對自然沒有正確的知識，但因爲我愛自然，因而自然對我就顯得有價值。再者，也不是因爲自然先有價值，我才愛自然；而是因爲我愛自然，自然才對我有價值。如果我不愛自然，那麼即便我擁有自然的知識，自然對我仍然是沒有價值的；甚至即便我「客觀地」知道自然是有價值的，自然對我依然沒有價值或沒有意義。正因爲自然對我有價值與意義，因而我必然關心自然的存在狀況；我不能容忍人恣意對待自然、傷害自然、破壞自然，以致於我們必然起而保護自然。保護自然成爲我必然承擔的責任，因爲我愛自然。如果環境倫理須根植於生命尊嚴或自然權利，那麼它們都離不開自然的價值；而自然的價值則離不開對自然的愛，因而愛才是環境倫理的根本，其實也是一切倫理之根本。在我看來，當代的生態自覺與環境運動根本上就是愛自然的運動，至少它是對自然之愛的覺醒。

就在愛自然中，人才顯得其高貴與特有的倫理本性，因爲現實上人愛自然並不能得到自然相稱的回報。自然並不能像我們的愛人那樣以我們能理解的方式回報我們的愛，相反地，自然不能完全了解我們對它的愛，甚至以傷害作爲我們愛它的回報。[16] 人當然也會傷害我們

15 Paul W. Taylor 認爲人類對其他生物不是必要的，反而人類的消失對許多生物而言是極大有益的；甚至如果所有人都滅亡，則將以「消失得好」（Good riddance!）而極受歡迎。Taylor 的這種態度與其說是渺視人類，不如說是對自然的愛，而且可以視爲是一種捨己的愛，即不在乎人（包括他自己），單單在乎自然。Taylor, Paul W.. “The Ethics of Respect for Nature,” in *Environmental Ethics: an Anthology*. ed. by Andrew Light and Holmes Rolston III.(Oxford: Blackwel,. 2003), 78.

16 在德國導演 Werner Herzog 所執導的《灰熊人》（*Grizzly Man*）這部記錄片裡，Timothy Treadwell (1957-2003) 這位狂愛阿拉斯加灰熊的人，他的愛的最終結果就是他與女友一起被灰熊殺害吞吃。在片

的愛，但自然則更爲冷峻，我們幾乎不能了解自然如何看待我們對它的愛，而常常只能在猜測中進行這樣單向的愛。因此，人必然要爲了愛自然而付出代價，如果人沒有足夠的愛則不可能爲此付上代價。但若不是愛，人與自然終究是對立的。最爲高尚的敬畏倫理最後還會因爲自然帶給人許多的威脅而不得不被迫放棄，權利說與內在價值論亦然。愛自然意味著不以自己爲中心而以自然爲中心，關心自然自身的利益與好處，竭力爲自然效勞。

事實上，從愛的角度看，人愛自然也是恰當的，因爲人確實先領受了自然的贈予。如果不是自然提供一切生活的必需條件，人不可能存活。因此，如果生命被人視爲有價值的因而應當愛惜的，那麼人就更應當愛惜使生命得以存在的自然。人確實可視自然的贈予爲愛的表現，以致於以愛自然作爲自然愛人的回報。其實也只有出於愛的觀點，人才可能看出自然的愛的意涵以及自然對人所施予的愛，也才可能以愛回報自然的愛。在這個意義上，我們可以視不愛自然的人爲忘恩負義者，他們不知保護生命的源頭而將存活視爲理所當然。存活不是理所當然的。除了那些痛恨生命者外，所有愛生命者都應當愛自然，因爲自然使其存活並享受生命的各種價值與意義。

人對自然的愛當然會受到諸多的挑戰。愛並不能免除人對自然的利用以及因而有的傷害，人若要存活就必須利用他所需要的動植物。但是，除非以愛爲基礎，否則我們無法想像人如何可能對著靜默的自然實踐倫理，我們也無法想像人如何能不以利己作爲對待自然的動機，以致於終究把自然視爲利己的手段與工具。如果我們對自然有所謂的義務，這義務也必定出於對自然的愛。對，對自然的義務出於對自然的愛。若非人愛自然，對自然的義務不可能成立；即便成立，對人也沒有意義。

子一開始 Treadwell 在一頭灰熊的背後面對著鏡頭說：「我全心地愛著牠們，我要保護牠們，我要爲牠們而死，但我不會死在牠們的爪牙下」（I love them with all my heart, I will protect them, I will die for them, but I will not die at their claws and paws）。結果他真的死在牠們的爪牙下，但這樣的死難道不就是「我全心地愛著牠們」他說的這話的最強有力的證明嗎？

正因爲環境倫理的根源在愛，因而人的生命品質就是環境倫理的關鍵。在此，我們必須指出，自然生態不應也不會以人爲中心，但作爲要求人如何善待自然的環境倫理，人還是它能否成立的關鍵環節。沒有愛的人格，環境倫理不可能；不，沒有能關注弱者、受難者、沉默者並爲之捨己的愛，環境倫理不可能。只有愛才可能使人不自我中心並變得謙卑，因爲對自然充滿愛的人必以自然爲關注之焦點，也會謙卑承認他先受惠於自然以及需要自然的支撐，更會謙卑承認自己在自然中的渺小以及對自然的無知。總之，一個充滿愛的人不可能是一個自我中心的人，當然也就不會是一個人類中心主義者。

六、自然的將來：一個種愛的可能性

如果愛的本質在於全心關注被愛者的利益或好處，那麼對自然的愛也必然關注自然的美善。這種愛激發我對自然產生種種可能性的想像，而不單單認同並接受現實的自然，因而導致對自然現狀的可能反省與批判。我不同意如 Rolston 所主張的環境倫理或生態倫理要建立在自然的現實上；即便對待自然的應然與自然的實然有關，自然的「實然」也不等於現前的事實，而應包含著新的可能性。這意味著自然現實可能是不好的因而是當超越的。這個不好是從愛的眼睛看出來的，而且這是出於人的心靈的愛。人不應改造自然以合於人的慾望，人也不可以自己爲中心評價自然，但人卻可以出自人的非自我中心的愛評價值自然，而想像自然更好的可能性，以致於期待一個更美善的可能的自然。以神學語言說，自然有著它的終末向度（eschatological dimension），因而環境倫理也必須蘊涵這個向度。

就愛而言，環境倫理的批判性就不只指向人，更可以指向自然本身。愛讓我們看到自然中有感動物相互吞吃的情況是殘酷的、充滿痛

苦的，因而斷定那是不理想的，可不接受的。邏輯言之，一個多樣而豐富的自然生態系統不必然要以生命之相互吞吃以及有著種種災難的自然爲前提，因而自然事實不意味著就是美好的或是合理的。[17] 因此，正如本文一開始我們引用的宗教改革家 Martin Luther 的一句話所說的：「任何探究受造物的本質與功能而不探究它們的呻吟與熱切期盼的人，都確定是愚蠢而盲目的」（1961: 237）。但除非我們有愛，否則我們注定就是愚蠢與盲目的。

因爲對自然有著這種美善可能性的想像，因而人就更不會認同自己對待自然的行爲。基本上，不認同自然中之殘暴與痛苦的人就不會施加殘暴與痛苦予自然，也不會無故破壞自然。因此，不滿意自然之現實的愛者也就不會滿意對自然沒有愛的人，反之，認同或滿意自然之現實者反而更可能不會反對人傷害自然，因爲自然本包含著傷害；這正如環境倫理學之自然主義者或實在主義者會以爲痛苦乃是生態系統之維持不可避免的環節，以致以爲不應關心有感生物之個體痛苦到超出生態系統的健全。[18] 但是，愛的倫理可以忍受自然之現實，但卻不會視現實爲理所當然，也不會以爲現實是不可或不需改變的。動物或任何有感生物的痛苦或許不同於人類，但是只要它們感受到痛苦且因之而焦慮恐懼，那麼任何引起此類痛苦的現象在愛者的眼裡就是可超越的。進一步言之，即便與痛苦無關，只要自然中存在美善的毀害

17 基督教聖經以基督之愛的眼光談到自然（受造物）的痛苦與渴望，《羅馬書》說：「受造之物切望等候上帝的眾子顯出來。因爲受造之物服在虛空之下，不是自己願意，乃是因那叫他如此的。但受造之物仍然指望脫離敗壞的轄制，得享（享：原文是入）上帝兒女自由的榮耀。我們知道，一切受造之物一同歎息，勞苦，直到如今。」聯合聖經公會，《和合本聖經》（臺北：臺灣聖經公會，1988 年），（8:19-22）。這種對自然的理解只能在一種特殊的愛中才可能，也因此，聖經表達著一種有關自然的終末期盼，而這個期盼完全迥異於當前的自然現實。《以賽亞書》有兩段經文可充分表達這種期盼：「豺狼必與綿羊羔同居，豹子與山羊羔同臥；少壯獅子與牛犢並肥畜同群；小孩子要牽引牠們。牛必與熊同食；牛犢必與小熊同臥；獅子必吃草，與牛一樣。吃奶的孩子必玩耍在虺蛇的洞口；斷奶的嬰兒必按手在毒蛇的穴上。在我聖山的遍處，這一切都不傷人，不害物；因爲認識耶和華的知識要充滿遍地，好像水充滿洋海一般。」聯合聖經公會，《和合本聖經》（臺北：臺灣聖經公會，1988 年），（11:6-9），以及「豺狼必與羊羔同食；獅子必吃草與牛一樣；塵土必作蛇的食物。在我聖山的遍處，這一切都不傷人，不害物。這是耶和華說的」聯合聖經公會，《和合本聖經》（臺北：臺灣聖經公會，1988 年），（65:25）。

18 Rolston III, Holmes. *Environmental Ethics: Duties to And Values in The Natural World* (Philadelphia: Temple University Press, 1988) , 86-87。

與生命不可挽回的死亡，在愛的觀點裡都是一種缺陷。這裡當然存在著困難，因爲我們不知道究竟自然當以什麼方式存在才可能達到無死亡、痛苦與缺陷的美善境界。但這都否定不了我們有著更美善的渴望與想像。其實一個生態的自然主義者或現實主義者要我們接受自然現實有意義以致於不應反抗它，那也必須基於自然朝著一個更美善的目的與將來，否則將不具有說服力。像來布尼茲（Gottfried W. Leibniz, 1646-1716）那樣相信這是所有可能世界中最好的世界的這種信念也必須以世界之外的上帝作爲基點，因爲上帝總意味著最美善的可能性，意味著超越一切醜惡的可能性。因爲上帝是可能性，所以現實才是可忍受的也才是可有意義的。

因此，從可能的自然看來，現前諸多不可克服的困難與缺陷就是可容忍的也是有意義的，以致於我們不應也不必期待一種沒缺陷的環境倫理；而我們事實上也不可能有著完美的自然行動，誠如 Andrew Linzey 在他的《動物福音》裡說的，「地上沒有純潔的土地」（2000: 24）。我們不只做不到完全不傷害自然或生命，我們甚至被自然激怒而去對抗自然與傷害自然。面對自然的現實，人幾乎無能爲力去改變。自然畢竟不是人的作品，人無法按照自己的意思更動整個自然，人也沒有能力這麼做。從愛的觀點看來，我們根本不可能有完美的環境倫理行動，我們總是會做出可以或可能不必做出的傷害自然的行爲。

然而，雖做不到，但有美好的想像。基於這種**愛的想像**，人於是會產生超越的信仰，在愛的信仰中期待自然美好的將來。自然是否會自然地變得如我們的愛所設想的那般美好呢？我們完全沒有根據如是想。在此，我們必須寄望於一個能控制自然的美善力量，也就是自然的美善主宰者或作者。當然，自然的主宰者或作者必須是一位如同我們的愛或超越我們的愛的愛者，如此自然才可能有一個合於愛的美好的將來。但我們必須承認，從自然之中我們無法得知有這麼一位愛的自然主宰者或作者。除非有別的思想根源，否則我們無法期待與相信一位愛的自然的主宰者與作者。然而，如果自然沒有這個美好的將

來，如果自然是毫無目的與意義的，那麼環境倫理也將是無意義的，人將沒有一個強制的理由去善待自然。如果我沒有永恆的生命，如果自然也沒有永恆的可能性，如果我與自然都終將歸於無，那麼我爲什麼要如此在乎自然呢？我爲什麼非善待自然不可呢？我善待自然有什麼意義呢？除非自然因我的愛而可以永恆地存在著且因之而美善，除非我也有著永恆的生命得以享受自然的美善，否則我善待自然將沒有意義，因爲一切將歸於無。無是一切意義的否定，當然也是一切倫理道德的否定。

但這是倫理的極限，或者更好說是哲學的極限。哲學無法明確地告訴我們一位自然創造者，更不可能明確地告訴我們這是一位愛的創造者；哲學不能爲我們指出永生之道，也不能保證自然的永續性；當然現在的哲學家們也不再像或不願意像 Plato 那樣的古希臘哲學家們渴望另一個理想世界並藉由哲學爲人指出永生之道。或許正爲此之故，現代哲學無法有效地建立起任何可靠的倫理學，包括環境倫理學，也因而無法清楚指出人當依循的環境倫理。我深信，如果環境倫理要成立，如果期待人能自覺地更愛自然，那麼恐怕需要有更超越的根基。但在這個現實世界裡我們找不到這個根基。

想像、期待或渴望這像這樣的超越根基不合理嗎？相信自然有其超越的愛的作者不可取嗎？有什麼不可駁斥的理由限制我們如是相信或期待嗎？相信一位自然的愛的作者不可思議嗎？不合理嗎？如果生態意識果真是非人類中心主義的，那麼具有此意識的人就沒有什麼理由不可如是想。反過來說，只有能向超越界或超越者開放的生態意識者，才是真正徹底的非人類中心主義者。對人而言，如果超越者或超越界很難想像與相信但卻又不否定其可能並願意相信，那麼這才是真正的非人類中心主義——否定人類難以根除的局限。因此，只有走向超越者，才是非人類中心主義之生態意識的極至表現。這是整個問題的關鍵。

七、結語：環境倫理之可能與不可能

對我而言，如果當代生態意識是有意義的，那是因爲它蘊涵著一種無遠弗屆的開放性。它總是向著他者（other）開放，總是表現著一種他性（otherness），總是在批判任何一種形式的自我中心。它固然批判人類中心，但它其實也當批判封閉於當前自然現實的生物中心與生態中心。如果生物是中心，那麼非生物呢？如果生態是中心，那麼難道沒有非生態嗎？如果自然是中心，那麼難道沒有超自然嗎？這種無限制的開放意識才是生態意識之非人類中心主義的核心。

反之，如果生態主義是一種現實或現世的自然主義，那麼它將無可避免地也是另一種人本主義或人類中心主義。對我而言，一個沒有超越向度的自然主義是沒有超越向度之人本主義的必然表現，而不願意向超越開放或向超越封閉的這種現實主義心靈正是人類中心主義的典型表現，它完全囿於我們這短暫而可悲的人類生命之管見。在這種封閉意識下，談論生態或環境的永續，談論人如何可能有優質生活，其實都是幻想，因爲對一個活在可能毀滅的世界的必死之人而言，永續與優質都是毫無意義的，也是不可能的。只要死亡與自然毀滅的可能性存在，永續與優質頂多只可視爲人的一種短暫自我安慰，而所謂的「環境倫理」也不過就是人如何好好渡過短暫現世的「明智箴言」（prudent precepts）而已。

爲了使將倫理推向極限的環境倫理可能，「生態」（*oikos*）的意義必須往超越界延伸，必須把超越死亡與毀滅之可能性包括進來；如此，自然才有其新的可能性，人愛自然也才可能以及有意義。參照整個浩瀚無窮的宇宙，這種生態意識的延伸與開放也是合理的。畢竟在我們地球這顆小小的星球上思考有關自然的環境倫理實在過於偏狹與自大，難道僅憑我們人的管見就能確定怎麼恰當對待無邊無際的自然嗎？難道我們真地不需要他者之助嗎？不需要一個更有助於正確判斷的整體而超越的視野嗎？其實，一個充滿愛的心靈已然對我們做此要

求。人雖渺小，但卻有著充滿無邊之愛的心靈。這愛像個「通孔」，向我們開啓自然宇宙諸多美善的可能性。我們相信，只有在愛的無限性裡，我們才能對自然宇宙的無限性做出相襯的倫理回應。

但問題就在這裡。人們缺乏這種無邊之愛，因而不能理解愛的無限性。如果生態意識的對立面是人類中心主義，那麼人類中心不過是人的自我中心的花朵；而人缺乏愛正由於其自我中心之故。只在乎自己，只相信自己，只堅持己見，只爲己利，而不在乎別人，不相信別人，不理會別人的意見，不關心別人的利益；偏見愛我群我族我類，而排斥他群他族他類；只想當主人，而不願做僕人；只想控制，而不願順服；相信只有人可經驗的這個世界，而不相信可能有超驗的世界，等等。這難道不才是倫理之不可能的關鍵嗎？如果人無能於脫離其自我中心，非但環境倫理不可能，一切倫理皆不可能。但人能脫離自我中心嗎？

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放下的美學：環境美學新展望

蕭振邦 *

一、前言

八〇年代以降，西方環境哲學（philosophy of environment）逐漸受到世人矚目[1]，而相應的環境倫理學探究，也隨後逐步成爲當代顯學及環境危機的解題大宗。此中值得研究者注意的是，有許多學者專家在處理環境哲學及環境倫理學的核心議題時，經常論及環境美學，甚至採取環境美學進路作爲主要的解題取徑。是以，本文主旨在釐清環境美學與環境倫理學之間的學理關連及其重要涵義，再進一步剖析環境美學的發展梗概、內涵，並作適度的檢討與批評，最後嘗試揭明此重要發展面相的新展望。

扼要言之，本文基本上是由西方自然美學轉變發展爲環境美學這一向度切入討論，而主要論點即當代環境美學與環境倫理學緊密相干，是以如果要周延地照應學科之間的一致性、連貫性，那麼，環境美學的探究一定不能忽視這種關聯；以及，如果要滿足這種訴求，環境美學應該關注與處理與環境倫理學相干的發展概況及其基本課題。

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* 國立中央大學哲學研究所教授

1 美國環境哲學家Holmes Rolston Ⅲ在他的〈走向荒野的哲學家〉（"A Philosopher Gone Wild," 1993）中，聲稱他自己是「走向荒野的哲學家」，以提倡「走向荒野的哲學」爲職志，企圖引導世人重新考量文化走向，並正確地評價人身處其中的自然（世界），換言之，要大家重新正視自然的價值、意義，以及全面反省人對待自然之道。Rolston 把這種態度稱爲由文化向自然的轉向——「自然的轉向」(natural turn) 或「環境的轉向」（environmental turn），而這也正是當代思潮的主要特色之一。Rolston「自然的轉向」之簡要看法，見 Holmes Rolston Ⅲ, "A Philosopher Gone Wild," in Davie D. Karnos and Robert G. Shoemaker (eds.), *Falling in Love with Wisdom: American Philosophers Talk About Their Calling* (New York: Oxford University Press, 1993), 184-187。

職是之故，本文要特別強調，環境美學探究工作勢必要把環境倫理學的若干課題納入研究範圍，反之，若想要徹底講明環境倫理學，也有必要處理環境美學方面的相關研究。因此，基於環境倫理學與環境美學之間的緊密關聯，以及目前環境美學本身的發展需求來看，的確值得投入環境美學研究工作。最後，本文例示了兩種結合了環境倫理理念及環境美學發展規模的準環境美學模型——放下的美學及突現美學，擬作爲未來環境美學發展的新展望。

二、環境美學發展梗概

（一）西方環境美學的簡要歷史回溯

就西方美學的概括發展歷程來看，學者專家大致上是以二十世紀作爲環境美學具備自身發展特色的分水嶺——此前，「環境美學」僅形同傳統自然美學的延伸，二十世紀之後，環境美學才正式取代了自然美學[2]。這種發展形勢（conditions）可圖示如下：

傳統自然美學 → 二十世紀的美學理論詮釋 → 當代環境美學

若進行溯源性考察，那麼，那些依據古代原始人類活動證據發展出來的美學詮釋，多半都揭示早期出現的人類「藝術徵候」[3]，皆與人參與／活動其中的環境有關。比如說，在原始人的生活環境中，某些環境因子或物件被突顯出來，並留下記錄，例如，一隻水牛的圖像。我認爲，若把這些「圖像」視同爲某種優位／最優價值的印記（mark），那麼，原始人勢必會有一套他們自己的——作爲保存義或實現義「背景」的——「環境美學觀」，如是才有可能使這些「印記」

2 Ronald W. Hepburn 在其〈當代美學及自然美的忽視〉中，即深入探討了這種現象。相關看法，見 Ronald W. Hepburn, "Contemporary Aesthetics and the Neglect of Natural Beauty," in James O. Young (ed.), *Aesthetics: Critical Concepts in Philosophy*, Vol. 3 (London and New York: Routledge, 2005), 341-361。

3 我在重構與詮釋 Sharman Apt Russell 的《爲蝴蝶著迷》中的「蝴蝶美學」時曾推斷，基於特定生存目的進行造作或變造，從而改變了他者的觀點，並因此維續了造作者的自我存在。這種「蝴蝶美學」或更能用來詮釋原始人類活動的藝術觀及其美學涵義。《爲蝴蝶著迷》見 Sharman Apt Russell, *An Obsession with Butterflies: Our Long Love Affair with a Singular Insect* (London: Heinemann, 2003)。

得以呈現、突顯，以及保存下來。[4] 是此，環境美學有可能在每一個時代都曾以不同的方式呈現與存在過，只是不一定受到人們重視。

再者，也不難發現，「讚嘆自然之美」與「以自然作爲美感[5]對象」皆已見之西方信史，而十七世紀時的歐洲人更把自然風景（landscape，山水）視同爲美感欣賞的重要對象；十八世紀歐洲人的生活世界甚至突顯出「風景如畫」的審美興趣及取向。總之，這種風景如畫的審美興趣及取向，實隱含了環境美學發展的重要轉折深意。

扼要言之，「風景如畫」理念可依 Kant 的看法理解之：

> 就美的藝術產品而言，必須立即意識到它是藝術，而不是自然，雖然其形式中的合目的性必須擺脫所有任意規則之約束，就好像它就是一種自然的產物一樣。自然是美的，因為它看起來像藝術；而假如我們意識到藝術，它只能夠被稱為美的，雖然藝術畢竟看起來像自然。[6]

第一，「風景如畫」其實涵蓋了三種成分：(1) 自然風景——實物；(2) 人類欣賞自然風景——給出美感判斷；(3) 人類以藝術手法（譬如，繪畫）把相干的美感興趣表現出來——這類「表現」即「如畫」的成果。容或此中的深意是：(1)「美感」本身可以表達；(2) 十七、十八世紀的西方人相信「美感表達」可事先模擬或預籌，而關鍵就在於運用克勞德鏡（Claude glass）[7] ——人們相信在黑鏡中看到了自己感興趣的自

4 這裡我採取了突現美學（emergence aesthetics）的詮釋模式，其詳細內容，請參考蕭振邦，《深層自然主義：《莊子》思想的現代詮釋》（台北：東方人文學術研究基金會，2009，修訂版），第一章。

5 在本文中，“aesthetic”除了意指一般所謂的「感性」之外，在自然欣賞脈絡中意指「美感」，而在藝術鑑賞脈絡則意指「審美」。再者，“appreciate”在自然脈絡用爲「欣賞」，在藝術脈絡用爲「鑑賞」。下文皆同此用法。

6 Immanuel Kant, *Kant's Critique of Judgment*, translated with introduction and notes by J. H. Bernard (London: Macmillan and Co., 1914), 187.

7 克勞德鏡或稱「黑鏡」（Black Mirror），它是由十七世紀風景畫畫家 Claude Lorraine（1600-82）命名的——他的名字在十八世紀成爲「如畫般的美感」之同義語。黑鏡像一面凸面鏡，表面塗成暗色調，經常被製作成化妝粉盒式可折疊物。（克勞德鏡的實物外觀可參閱張繼文先生提供的圖片，見張繼文，2005，〈風景的觀看與想像：一個視覺文化藝術教學內容探究〉，國立屏東師範大學網，URL = http://www.npue.edu.tw/academic/vart/paper6.htm。）黑鏡的作用在於抽離景物，把它反映在一個鏡面環境中，它能夠美化景色的色調，而賦予繪畫般的特質。十八世紀末及十九世紀初的藝術家、旅遊者、風景鑑賞

然風景之「美感」，並且能夠用藝術手法把它表現出來；(3) 美感興趣可依引文中提示的「合目的性」來理解。

第二，關於「自然的合目的性形式」，Kant 提示：

> 我們有……好的根據，就自然的個別法則、關連於人之判斷的理解力、在某系統中把各種個別經驗嵌結起來的可能性，而假定自然擁有某種主觀的合目的性。這一點在許多自然產物中皆可預期，就好像它們是特別為我們的判斷設計的，因而包含了適合於吾人判斷的形式；它們透過多樣與統一的結合而加強及維續了人的心理力量（判斷力），故我們將之命名為美的形式（beautiful forms）。[8]

Kant 的意思是說，自然本身與人的判斷都擁有相似的「美的形式」，而且，它具有「先天」（a priori）的意含，這是其品味判斷說的核心主張。

第三，依 Kant 之見，一方面，藝術創作原本訴求的是自由，但人的活動總是會被種種規則束縛，因此，人爲了打破規則約束，畢竟使藝術創作看起來就像是自然產物（「渾然天成」），這一點，也可間接解釋如畫派人士爲什麼會屬意自然風景的內在動機；另一方面，由於人們對自然之美的直接興趣，其實與「道德觀念」聯繫在一起，它也就嵌結了自然與「客觀的合目的性」，是以，藝術創作才不致成爲漫無章法的遊戲。

如上所述，若依 Kant 的詮釋來看，十七、十八世紀風景畫的美學涵義可總結爲「自然化的藝術」與「審美化的自然」二義，這也大致就是傳統自然美學的內涵。可以說，西方環境美學發展初期，即以傳統自然美學提供的理念及解釋作爲核心，發展出種種相應的審美或美感理論，而當其詮釋遭遇糾結時，才嘗試發展出新的解釋模型。

家或風景畫家經常使用黑鏡（方法是，觀者背對作爲標的物的景色，而把克勞德鏡置於觀者面前〔鏡面朝向景物與觀者的眼睛〕，觀者再透過克勞德鏡觀察在凸面鏡上反映出來的景物），以製作「如畫派風景畫」的素描。相關說明，可以參閱 Wikipedia, the Free Encyclopedia, 2007, "Claude glass," Wikipedia Website, URL = http://en.wikipedia.org/wiki/Claude_glass。

8 Immanuel Kant, *Kant's Critique of Judgment*, p. 259.

十九世紀之後，與環境美學相干的討論加入了許多「人爲環境因子」，而預示了探究對象的轉移，終至發展出以「環境」取代「自然」的理念轉換。是以，這也就暗示當代的西方環境美學已然不同於傳統自然美學，環境美學必須擁有它自身的不同理念及詮釋模型，雖然，還是可以說「傳統自然美學是當代環境美學之母」。

（二）由傳統自然美學過渡到現代環境美學的變遷因子

西方環境美學仍然在創進中（in the making），其發展概況我已在 2000 年的〈大地美學：其議題探究與可能開展〉[9] 作了初步引介。約言之，截至目前環境美學領域較具代表性的專書計有[10]：Arnold Berleant 的《環境美學》、《生活在山水中：環境美學芻議》；Berleant 編輯的《環境與藝術：展望環境的美學》；Allen Carlson 的《美學與環境：自然、藝術與建築鑑賞》；Carlson 與 Berleant 合編的《自然環境美學》；芬蘭 Joensuu 大學芬蘭語與文化系教授 Yrjö Sepänmaa 的《環境之美：環境美學的普遍模型》；Malcolm Budd 的《自然的美感欣賞：自然美學論文集》；Marcia Muelder Eaton 的《美學與好的生活》。以上所列專書討論的內容，大致皆顯示學者專家意識到當代環境本身的鉅變及傳統自然美學詮釋的不足，而嘗試重構當代環境美學的努力[11]。職是之故，這門學問一直處於襲用與改造若干傳統美學

9 蕭振邦，〈大地美學：其議題探究與可能開展〉，《鵝湖學誌》第 25 期（2000 年），頁 99-144。

10 這些可據以研究環境美學的書籍依序註明如下：Arnold Berleant, *The Aesthetics of Environment* (Philadelphia: Temple University Press, 1992); Arnold Berleant, *Living in the Landscape: Toward An Aesthetics of Environment* (Lawrence, Kansas: University Press of Kansas, 1997); Arnold Berleant (ed.), *Environment and the Art: Perspectives on Environmental Aesthetics* (Burlington, USA: Ashgate Publishing Co., 2002); Allen Carlson, *Aesthetics and the Environment: The Appreciation of Nature, Art and Architecture* (London and New York: Routledge, 2000); Allen Carlson and Arnold Berleant (eds.), *The Aesthetics of Natural Environments* (Toronto: Broadview Press Ltd., 2004); Yrjö Sepänmaa, *The Beauty of Environment: A General Model for Environmental Aesthetics* (Denton, Texas: Environmental Ethics Books, 1993); Malcolm Budd, *The Aesthetic Appreciation of Nature: Essays on the Aesthetics of Nature* (New York: Oxford University Press Inc., 2002); Marcia Muelder Eaton, *Aesthetics and the Good Life* (London and Toronto: Associated University Press, 1989)。

11 譬如，Berleant 在其第一本著作中嘗試循現象學美學的進路探究環境美學，然而，或許是因爲未臻乎理想，他在第二本書中重新提出一種融會「都會美學」的全新看法，從而提示了新的「環境美學芻

術語的調整情境之中，也因而衍生出一些理解上的糾結。但儘管如此，西方環境美學畢竟是一門全新的學問，其中原委可說明如下。

第一，就環境問題、環境危機受到關切的發展情勢來看，目前的「環境視野」已然接受了相互依賴（interdependent）、相互嵌結（interconnected）、交互作用（interacted）的環境觀（譬如，環境生態學觀點）[12]，因此，傳統自然美學論述已不足以解釋其中的相干現象或提供有效的理解資源。

第二，傳統上的「風景」意含也有了很大的變動[13]。要之，傳統視覺取向的「概觀式風景」，目前逐漸轉換成「投入／參與式風景」（participatory landscape）——人們畢竟是因爲環境吸引人的景色（scene）而趨近觀賞它，故強調人與風景所在地直接互動的特質。[14]

議」。Carlson 在其書中強力推薦他主張的「肯定美學」（positive aesthetics），試圖由自然自身的性質或價值來貞定其美，並擺脫以「藝術鑑賞」爲進路的自然美學觀，然其見解仍然有許多可議空間。芬蘭思想家 Yrjö Sepänmaa 則在其書中嘗試把「環境美學」由傳統美學中分離出來，而重新把它置入「環境哲學」的氛圍（Sepänmaa 特別強調，一方面，環境倫理學是目前環境哲學的探究大宗；另一方面，突顯了地球哲學思考——特別是 Yi-Fu Tuan 的「親近場域性」〔the topophilia〕，而以人類考量的周遭環境等等議題〔因此也牽涉了政治、社會，文化等等面相〕作爲探究大宗），從而強調環境美學就是真實世界的美學（the aesthetics of the real world），而多少與想像的藝術世界之美學相對反。Sepänmaa 把環境美學區分爲研究環境之美的「美的哲學」，以及研究環境之美感評價的後設批評（metacriticism）。以上 Sepänmaa 的看法，見 *The Beauty of Environment: A General Model for Environmental Aesthetics* (Denton, Tex: Environmental Ethics Books, 1993), 15-16。

12 此如 Berleant 提示，「環境」概念已然指涉了自然環境、都會環境（urban environment）與文化環境，其外延無疑有了擴充。相關看法，見 *Environment and the Arts: Perspectives on Environmental Aesthetics*, p. 2。

13 Sepänmaa 認爲，自然風景擁有一張「臉」（face），而且，這張臉的表情（expressions）豐富。一般而言，人們總是基於經濟或實際考量而改變這張「臉」，但 Sepänmaa 強調，現在人們身爲自然風景的觀眾（the audience of a landscape），扮演的角色除了是企圖從習常生活的事物中解放出來之外，還必須意識到人對環境及在地文化負有的責任或義務，這可能是「風景」意含本身呈現的最大變動。Sepänmaa 的看法，見 Yrjö Sepänmaa, 2005, "Face to Face with Landscape," University of Joensuu Website, URL = http://www.eki.ee/km/place/pdf/KP1_02sepanmaa.pdf。

14 Berleant 在〈一種突現的環境美學〉（"An Emerging Aesthetics of Environment"）中即強調人的投入／參與，且提示只要是人的美感面相已然具有重要意義／切己感的環境，就一定擁有美感價值。這種見解一方面肯定了環境本身擁有美感價值——但此價值有賴人透過重要意義感或切己感以突顯之；另一方面，當人的手段及行動達到「影響環境美感價值」的程度時，那就會形成環境藝術。總之，Berleant 循兩種嵌結關係提示了「環境 → 美感價值 → 環境藝術」的環境美學發展軌跡，而這也是他建構的環境美學之主要見解。兩種嵌結關係可簡要圖示如下：

(1) 環境 ——┬—— 環境佔有美感價值
　　美感介入 中介

(2) 環境美感價值 ——┬—— 環境藝術
　　人的手段、行動改造 中介

但就一般經驗而言，並非整個環境都是「美景」，而實況可能是人們勢必行經一些不屬於「美景」的地方，譬如，從台北市去到「景色公園」（scene park）——陽明山國家公園，這時候人與「非美景場域」的互動，顯然就會大大不同於與「美景」本身的互動。果爾如是，此中就隱含了某種「（環境美感之）異質之投入」的可能，而傳統美感經驗論在這方面的確顯露其詮釋上的不足，而需要加以擴充。

第三，就傳統的觀點而言，「自然環境」與「人文環境」通常是一組對反的概念，或者，兩者或多或少是異質的。然而，目前基於兩種理由可以推斷，其實際情況已然改變：(1) 這個星球已經沒有未受人類（活動）深度影響與衝擊的「自然環境」——由這個事實來看，人們所謂的「自然」早已涵蓋一定程度或意義的「人文」涵義（特指其影響）；(2) 自始以來，人類活動從來就是與「自然」相互嵌結及交互作用。循此可謂自然美學理論在這類「新環境意含」上失去了大半的解釋力，而必須改弦更張。

大體上說，就人的現實處境來看，自然已經成爲無所不包的寓所，傳統的「自然」觀點早已不敷使用。是以相對而言，觀諸美學本身的發展，傳統「自然美學」畢竟也有了時代性隔閡，以及詮釋上的限制，因而必須發展出切合當代現況與需求的「環境美學」，而其內容或如 Berleant《生活在山水中：環境美學芻議》的提示「環境美學指示了作為總體環境複合體成員的人類之鑑賞力的嚙合（appreciative engagement），它就是各種感官性質與當下的意義支配的內在經驗」[15]，因此，環境美學的研究主題即「環境美學變成了環境經驗及其知覺或認知之脈絡性構成要素之當下的、內在價值的研究」[16]。以上 Berleant 的看法即環境美學發展進程中的一種「里程碑」式宣示，簡言之，環境美

Berleant 的看法，見 Arnold Berleant, "An Emerging Aesthetics of Environment," *Living in the Landscape: Toward An Aesthetics of Environment*, 25-39.

15 Arnold Berleant, "An Emerging Aesthetics of Environment," *Living in the Landscape: Toward An Aesthetics of Environment*, 25.

16 Arnold Berleant, *Living in the Landscape: Toward An Aesthetics of Environment*, 26.

學的發展是由種種附加價值——人文與自然的嵌結、實用設施的人工環境美化問題、環境評估——環境美感／審美評議等等價值——之釐清，轉移到環境美學在其自身之價值的彰顯。但果真要釐定這類意義與價值，還是必須先解決「環境美學內容爲何？」的問題。

（三）當代環境美學的內涵

基本上，若循 Berleant 的觀點來看，要例示環境美學，那麼，現代人更熟悉的當是景觀美學、建築美學與都會美學等等與藝術經營及審美評估較爲貼近的美學詮釋。粗略地說，環境美學探討的「環境」，固強調與人類活動更密切關連者，譬如：(1) 建築景觀與地景的嵌結，而指向某種區域設計；(2) 庭園設計、公園（地理景觀的綜合運用）；(3) 城市發展——體現了人類的力量及目的訴求，它固爲某地理區域整合發展；(4) 文化環境——強調環境的社會及歷史脈絡性構成要素。總此，環境美學探討的就不只局限於自然景觀上的「知覺之美」的攝受，它還包括了文化上、傳統上的各種經驗傳承，同時也涵蓋都會本身形成的「美感逆反」（噪音、污染與都會人爲設施等等對知覺興味的衝擊）。

若再細究之，則環境美學涵蓋了兩種視域（也因而形成兩個不同的探究領域）：(1) 人化的景觀視域；(2) 自然之野性（wildness）的根源視域。若由「人化的景觀視域」來看，它以人類的美感／審美價值爲核心，蘊涵的環境欣賞／鑑賞事件有可能就是傳統戶外活動、古道之旅、特殊地形、地物的欣賞。事實上，更兩極化的發展也顯示了「工業化環境鑑賞」的需求，且已然成爲現代環境美學的特色。相對而言，在此視域中所謂的「純粹自然」，多半被識者歸類於「崇高」（the sublime）這個對立面來處理，亦即，「自然」正是人的「審美意識」無法消納的一個面相，而必須另立範疇加以說明者。

再者，若由「自然之野性的根源視域」來看，人原本固來自於自然，人性原初也當蘊涵了種種自然根性，容或它就是生物原本具有的

「原始能動性」，而其特質就在於「源源不絕的自由力量（或云「體現自由的力量」）」，此可謂之爲「野性」。如果深入反省，何以人會在現實生活中失去了行動力？或者，何以人原本來自於自然，偶而回到自然卻發現自己完全沒有行動力？這些問題基本上都不會直接與美學發生關連，但如果美學研究必須涉及根源性考察，那麼，環境美學的探究勢必也相對地會涉及類似的根源問題，特別是，「自然的野性」與環境美學的關連性尤其需要講明。

如上所述，就環境美學的發展特質而言，可以說「生活化取向」當是其探究的重要向度。這種取向有兩種涵義：(1) 把日常生活所「見」，解釋爲「風景／景觀」的需求——亦即顯示把美感／審美功能整合進實際環境之中的需求；(2) 人類的生活有鑑賞所見之風景／景觀的需求——亦即，顯示自然風景的「價值」不斷被人類使用，也因而被都會文明覆蓋。是以，目前的環境美學內涵已十分不同於傳統自然美學。

總之，當代西方環境美學擴充了傳統自然美學議題及其探究範圍，考量所及已包覆人所投入／參與的不同意義之環境。是此，「環境」一詞不僅是指「人的物質生活周遭」，而毋寧涵蓋了人投入／參與其中的社會自然（sociophysical）脈絡，它包覆了各種擁有「環境知覺」特徵的多樣性延展物。職是之故，當前與「環境」有關的研究都會遭遇一項難題，亦即，當「環境」概念指涉的外延趨近於無限大時，其內涵（內容）也就相對地有可能趨近於零，進而變得令人無法理解。相同的，這也正是當前環境美學研究遭遇的困難，是以，如何把環境美學說清楚，仍是這個學科現階段發展的首要課題。

依我之見，就目前西方環境美學的發展實況來看，它大致循三種進路開展：(1) 環境藝術進路；(2) 環境科學的審美評議進路；(3) 環境倫理學的美感欣賞進路。[17] 首先，「環境藝術進路」的環境美學，主要是由傳統自然美學發展出的替代式「人工製品化自然美學」（附庸式自然美學）詮釋，此可謂之爲訴求「藝術成就」的**藝術成就型環境美**

17 相關看法及詳細討論，請參閱蕭振邦，〈大地美學：其議題探究與可能開展〉，頁 99-144。

學，其內涵可說明如下：第一，就傳統自然美學觀之，要到十七世紀以後，西方人才把自然視同爲美感／審美的泉源，是以，所謂的「傳統自然美學」其實就是人工製品美學的類比物，而「環境藝術進路」也只不過是把傳統美學重視視覺美感／審美鑑賞的模式移植到「新環境」，從而講述一種把環境視同爲「藝術對象」的美學觀。[18] 第二，目前能看到的世界各國強調文化資產保存的「世界遺產」方面的經營，多半是把自然美景以國家公園、私人莊園的方式保存起來——景色公園，就好比自然美景被當作「藝術品」或「審美對象」加以保存一樣，這類經營都展示了一定程度的「審美化的自然」（或甚至是「藝術品化的自然」）傾向，而多少限制或剝奪了自然自身之特性的彰顯，或者使之淪爲鑑賞的工具，是以，這種進路也是當前某些西方環境美學家想要批判的對象之一。

其次，「環境科學的審美評議進路」的環境美學，此可謂之爲訴求「環境審美」的**審美取向型環境美學**，其內涵可說明如下：第一，一般而言，環境科學重視人們遭遇的「環境問題」之描述及解題，而「環境評估」（environmental assessment）也就是環境科學研究解題所操作的重要環節[19]。大體上說，環境評估工作涵蓋了三個向度：(1) 環境調查——對特定環境進行實際探勘（probe）或視查（survey）；(2) 環境衝擊評估（EIA）——評估與特定環境有關的各類衝擊影響（包括置身其中的成員之間的相互影響）；(3) 環境發展評議（EDE）——基於效益價值、美感／審美價值與自然環境價值的考量，發掘特定環境本身的可發展性——特別是釐定特殊環境的自在意義，以及伴隨考量世人投入／參與特殊環境存在樣態之改變的適切程度。第二，扼要地說，目前 EIA 與 EDE 的研究工作已然趨於多元化，但基本上重視的還是「有人爲因素介入的環境評估」，而就美學範疇來看，這類評

18 如Carlson在*Aesthetics and the Environment: The Appreciation of Nature, Art and Architecture*中的批判性論述。

19 關於「環境評估」的相關論述，請參閱蕭振邦，〈環境評估：學理與實務的對話〉，《應用倫理研究通訊》第 20 期《環境評估專號》（2001 年），頁 5-9。

估與評議在很大的程度上集中於「人類可能美化環境的評議」上，也因此形成了一種訴求「審美」的環境美學。[20]

其三，「環境倫理學的美感欣賞進路」的環境美學，此可謂之爲訴求「貞定及正視環境自身之內在價值」的**內在價值是依型或倫理取向型環境美學**。由於它是一種有必要且十分值得釐清及了解的環境美學類型，故其內容另於下節說明之。

總此，可謂當代的環境美學顯現的特色在於，自然型、都會型環境美學齊頭並進；藝術成就型（含審美取向型）、倫理取向型環境美學二分對揚，而未來的環境美學也可能在這兩種氛圍的激盪中繼續擴展。以上所述，大致是當代環境美學的發展梗概，接下來將繼續討論我關懷的環境美學面相——倫理取向型環境美學。

二、環境美學與環境倫理學的關聯

爲什麼討論環境美學時會牽扯到環境倫理學呢？這是出現在當代環境哲學中的議題，若以 Berleant 的探究爲例，那麼個中原委可說明如下。要之，Berleant 在〈解構 Disney 世界〉提示[21]，整個「解構事件」是由愉悅這種「美感特徵」引發的，但當人們回歸到引發這種愉悅的生活世界去反省生活本身的意義與價值時，卻進一步衍生了「道德考量」。雖然，Berleant 並沒有再深入說明其中的涵義，卻已明確例示了「美感與道德」或「美學與倫理學」之間的一體性或連續性與不可分離性。根據我的研究，環境美學與環境倫理學的關聯，大致可循兩種途徑進行理解之：(1) 環境評估進路；(2) 美感倫理進路。

20 相關看法可參閱 Marcia M. Eaton, *Aesthetics and the Good Life*，或 Mossetto Gianfranco, *Aesthetics and Economics* (London: Kluwer Academic Publishers, 1993)。

21 Arnold Berleant, "Deconstructing Disney World," *Living in the Landscape: Toward An Aesthetics of Environment*, 41-57.

首先，從環境評估進路來看，當人們試圖針對遭遇的環境問題進行實際解決／解題時，勢必要依賴或處理環境科學提供的環境資料及實際解決方案，而其中除了災難因應等等特例之外，具普及影響力的就是環境評估。然而，環境問題的解決／解題固需要科學描述及相關研究作爲後盾，但身處環境問題情境之中，人們也必須進一步釐清問題自身的性質，並尋求及釐定相關的自處之道，因此，勢必就需要澄清解決問題或採取行動時涉及的應然規範與價值判準了。職是之故，說明行爲／互動的規則及價值取向如何釐定，是解決環境問題的必要條件，而這一點也就揭明了何以在解決環境問題時必須去討論與考量環境倫理議題。總之，若就身爲一種例示性積極實例而言，環境科學評估正是在環境發展評議向度內，透過美感價值評估及評議而與環境倫理學發生關連。

其次，從美感倫理的進路來看，根據我的研究[22]，Holmes Rolston Ⅲ在〈從美到義務：自然美學與環境的倫理學〉[23]中提示，假如要導出「環境倫理學正好是以某種自然美學作爲根基」這種結論，那麼，勢必要進行某種「擴張的」（expanded）或「擴大的」（enlarged）自然美學探究，以便把「義務」（duty）概念涵蓋進美學之中。事實上，Rolston 進行的正是一種「越界的詮釋」，若進一步發展之，就有可能開拓「美感倫理」（aesthetic ethic）的闡釋與建構，而環境美學與環境倫理學也就緊密關連在一起。以下分別簡要地以 Aldo Leopold 的「保育美感」論述與 Rolston 的修正意見來說明環境美學與環境倫理學的關聯。

22 蕭振邦，〈「美學是倫理學之母」涵義探究〉，《應用倫理評論》46 期（2009 年），頁 2。

23 Holmes Rolston Ⅲ, “From Beauty to Duty: Aesthetics of Nature and Environmental Ethics,” in Arnold Berleant (ed.), *Environment and the Arts: Perspectives on Environmental Aesthetics*, 127-141.

（一）Leopold 的保育美感論述

Leopold 本人並未發表任何美學專著，就其現有的著作而言，毋寧說，其關懷焦點主要還是集中於「關愛土地」、「拯救大地」等等議題。然而，在他的著作中的確經常出現具有「美學涵義」（aesthetical implications）的提示及論述，顯示他本人在討論環境倫理問題時，對各種「美感／感性課題」有其特定關注，其「美感／感性的保育」或「保育美感（或「感性」）」（conservation esthetic）等等相關論述就是積極例證。

爲什麼 Leopold 在探討環境倫理時會伴隨討論美感／感性議題？依據我的研究，Leopold 在闡釋依循相關環境倫理規範付諸行動時，勢必涉及各種根源性探究，而且，若就他本人關懷的「倫理實踐訴求及證成」來看，「倫理實踐的促動力（impetus）從哪裡來？」也就是核心問題了。其實，分析 Leopold 的論述可以看到他強調必須由「對大地的愛」及「生態良知」推動倫理實踐，且提示要一併從美感／感性的角度進行考量。

根據我的研究，Leopold 普獲學界肯定的經典之作〈大地倫理〉[24] 顯現的精神正在於適度限制人類生存奮鬥行動的自由，並訴求符合社會認可的行爲，其「倫理原理」即「權利享有－義務匹配」。是此，其倫理考量的基點還是在激發個人的反省、體察與實踐，且實踐動力來自對大地的關愛、尊重與讚賞，以及對其價值的重視。然而，凡此皆有賴生態良知發用，而更重要的是，其基本理念已然形成爲道德格律「一件事是正確的，當它傾向於／有益於保存生命社群的完整性、穩定性與美，不如此，它就是錯誤的」[25]。

24 Aldo Leopold, "The Land Ethic," *A Sand County Almanac and Sketches Here and There*, illustrated by Charles W. Schwartz, introduction by Robert Finch (New York: Oxford University Press, 1989), 201-226.

25 Aldo Leopold, *A Sand County Almanac and Sketches Here and There*, 224-25. 再者，Callicott 的「跨越大地倫理」（beyond the land ethic）環境哲學反省也提示了「大地倫理的道德格律之動態／積極的摘述」：「一件事是正確的，當它傾向於／有益於僅僅在正常的時空尺度上擾亂了生命社群，不如此，它就是錯誤的」，見 J. Baird Callicott, *Beyond the Land Ethic: More Essays in Environmental Philosophy* (New York: State University of New York Press, 1999), 138。

果爾如是，若這些環境倫理理念已然被當作道德格律看待，那麼，人們依此格律採取行動的動力從哪裡來？這是一項必須釐清的根源問題。要之，〈大地倫理〉揭示的倫理關懷正是要豁醒「尊重他者權利的態度」，而其主要訴求是要把人際間的「義務關係」擴張到生態系；此中，擴張的機制來自於「對大地的愛、尊重與讚賞，以及對大地之價值的重視」，而其動力就來自於生態良知的發用。這項看法可以重構爲下述論證：

(1) 關愛、尊重大地及重視其價值 ⊃（生態良知發用 ⊃ 可把人際義務關係擴張到生態系）

(2) 生態良知發用

∴ (3) 關愛、尊重大地及重視其價值 ⊃ 可把人際義務關係擴張到生態系

然而，此論證隱含的問題是，生態良知如何發用？基本上，Leopold 爲了解決類似問題而暗示「要促進倫理的發展，……應該從倫理與美感的角度進行考量」[26]，而 Leopold 也正是透過〈保育感性〉[27]，嘗試以「自然環境的美感」來激發人「對大地的愛、尊重與讚賞，以及重視大地的價值」[28]。果爾如是，Leopold 的「大地倫理」及「保育感性」也就成爲環境美學與環境倫理學緊密關連的一個積極例示。

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26 Aldo Leopold, *A Sand County Almanac and Sketches Here and There*, 224.

27 **Aldo Leopold, "Conservation Esthetic,"** *A Sand County Almanac and Sketches Here and There*, 165-177.

28 **Callicott** 曾爲 Leopold 的「保育感性」進一解，見陳慈美（譯），J. Baird Callicott（講），2000，〈李奧波的土地美學〉，載於主婦聯盟綠主張》第 151-152 期）。他指出，Leopold 宣稱的「以往〔美國〕所有與保育有關的決定，……受到美的激勵多過責任上的期許」顯然有疑議：爲什麼與責任、義務更密切關連的保育工作，會遠較之義務而更受到「美」的動機引發呢？ Callicott 以「國家公園」爲例，建構了一個論證來說明此中的涵義。

（二）Rolston 的修正意見

Rolston 在〈從美到義務：自然美學與環境的倫理學〉[29] 中檢討了 Leopold「以美感作爲倫理行動之動力」看法，他同意 Leopold 的見解，但卻進一步作了一些必要的修正。Rolston 認爲問題在於 [30]，一般以「美感」作爲「倫理（動力）」之基礎的論證，大多輕易地就直接由「是」（實然）的描述轉移到「應該」（應然）的推斷——人置身於自然美景之中，不需要任何命令就會對大自然產生「義務感」——亦即，主張「有自然美景（對自然）有道德義務」。如是，這種試圖以自然美景激發的美感作爲實踐環境倫理規範的「起始的（initial）動機」的看法（亦即，作爲一種充分條件），似乎欠缺說服力。

Rolston 如何解決這項困難呢？首先，Rolston 嚴格區分了「評價」與「價值（自身）」，而主張「美感」只是人的一種「評價」，而非自然本身的「價值」，是以，它只出現在人類的意識之中——畢竟是人類「點燃（ignite）了美」。果爾如是，人們試圖去鑑賞與保存的並不僅僅是自然本身，而是「自然－人類關係」。[31] 其次，Rolston 再區分「美感能力」與「美感屬性」而主張 [32]，有兩種美感性質：(1) 感性——這是去體驗的能力，只存在於觀者身上；(2) 美感屬性——它客觀地存在於自然事物之中。如是，便可以把人的美感經驗解釋爲人欣賞自然世界而發現它是美的，而這種看法也正好強化了原本就存在的各種自然本身之屬性的重要性。基於前述理念，Rolston 提出了他的「美學走向荒野」之說，要人們反省「評價」之外更深刻的「美的價值」——去發現自然的美。更且，當人面對自然帶來的驚奇感時，那不僅是一種美感，更是越過美而成爲對生命本身的一種尊重。如是便離開美學的領域，而跨入內在的、生態系統的價值領域。

29 Holmes Rolston Ⅲ, "From Beauty to Duty: Aesthetics of Nature and Environmental Ethics," in Arnold Berleant (ed.), *Environment and the Arts: Perspectives on Environmental Aesthetics*, 127-141.

30 Arnold Berleant, *Environment and the Arts*, 127.

31 Arnold Berleant, *Environment and the Arts*, 132.

32 Arnold Berleant, *Environment and the Arts*, 132-133.

可以說，Rolston 把 Leopold 大地美學中的「美感」再作了一次「荒野的轉向」，而透過積極地嚙合於（engagement）自然，把美感由人類的評價轉移到自然自身的內在價值（美感屬性）之上，更且，這種感知也就能立即激勵人對自然的尊重，並真正成爲大地倫理行動的力源。Rolston 是這樣主張的：「這是一種歡喜的關心（joyful caring）、愉悅的義務（pleasant duty），它是可以依賴的、有效的，因為它擁有積極的激勵。這種倫理是自動地（automatically）實現的。」[33] 果爾如是，Rolston 的「美感倫理」論述也就成爲環境美學與環境倫理學緊密關連的另一個積極例示。

以上大致簡要說明了我關注的環境美學與環境倫理學緊密之關聯的梗概，但這項特色其實並未受到 Berleant 與 Carlson 的重視，而只受到 Sepänmaa 的重視。是以，容或可以方便地把 Berleant 與 Carlson 的環境美學歸之爲「藝術及科學導向型環境美學」，而把 Sepänmaa 的環境美學歸之爲「倫理導向型環境美學」，同時，介乎兩者之間的就是 Budd 的「調和型環境美學」——他試圖把前述兩種類型加以調和，並釐清其間衍生的難題。以上三種形態的環境美學，即大體例示了當前西方環境美學發展的三大趨勢。

三、環境美學的發展難題及其解困之道

一般而言，上述西方各類型環境美學的發展都不免遭遇難題而陷入一定程度的困境，以下簡要說明其梗概，及其解困之道。

（一）出現在兩種脈絡中的難題

根據我的研究，藝術成就型或審美取向型環境美學遭遇的難題是：這類環境美學多半會以藝術取徑及考量作爲主要關懷，而不斷加重環

33 Arnold Berleant, *Environment and the Arts*, 140.

境本身的人工造作分量（例如，構造及建築），而企圖以特定「藝術模式」來類比地建構環境美學理論。然而，若從突現美學的觀點來看，如此一來就會突顯出某種局限性（confinement, restrict），亦即，類似「以藝術爲主導的論述」多半忽視了突現歷程中的「自然與美可能擁有的各種關聯」，以及無視於人類與自然的相互嵌結及交互作用中可能展現的創造性及其相關涵義。是以，這種過度重視「藝術取向」的美學經營，反而成爲目前極待修正的一種環境美學探究進路。

此如，Callicott 在〈李奧波的土地美學〉「冷僻的西方自然美學」及「透過繪畫欣賞自然」兩小節中大體指出，一者，在西方並沒有欣賞（enjoy）自然美的傳統，要到十七世紀才出現推崇自然美景的寫實主義者，而他們的美感經驗是透過「風景畫」獲得傳達。再者，西方世界在近現代思潮的影響下，「大自然」無疑被「對象化」了，是以，「自然美景」就如同藝術品一樣地被保存在「博物館」——國家公園——之中，也常常成爲私人的「收藏品」——私人的美麗莊園，這些「自然美景」全都被視同爲某種「文化資產」（如當前所謂的「世界遺產」）而被保存下來，且經常被人拿來欣賞（消費）。

西方環境美學可能遭遇的第二種難題是：若強調環境美學與環境倫理學之間的緊密關聯，那麼，由於生態環境倫理觀點本身隱含的難題——例如，以平等作爲構成道德的必要條件，但「平等」自身卻無法釐定，是有道德不可能之評議[34] ——以致，循環境美學爲環境倫理行動找尋動力的努力便有其限制了。

如前文所述，Leopold 與 Rolston 提出的見解都十分動人，也具有一定的說服力，但是，一方面，若就 Leopold 的觀點來看，要以他所謂的「愉悅取向的美感」作爲行動的「初始動機」則嫌薄弱，或者，

34 Steve Schwartz 曾在〈何以不可能是道德的〉中透過例示、檢討連鎖推理詭論而指出，各種既存的「道德規範」學說都無法解開本身隱含的這類連鎖推理詭論難題，而不能免於獨斷或謬誤之譏，Schwartz 也與數位學者專家進行論辯，而形成正反並陳之意見。相關看法，見 Steve Schwartz, 2003, “Why It is not Possible to be Moral,” The Philosopher’s Magazine Website, URL = http://www.philosophers.co.uk/portal_article.php?id=78。

透過「自愛」的轉換[35]而把這種美感當作關愛與尊重自然的動力，則其既有論述又難以負荷。要之，倫理學要求建立的是必然的、普遍的倫理規範，是以如Leopold的見解所示，可能衍生「個人意願」（想要）與「普遍義務」（應該）之間的落差；另一方面，若就 Rolston 的觀點來看，他所謂的「美感價值」，要不就落在主觀評價的窠臼，要不就只突顯客觀價值的優位性，並且，縱使人可以把握所謂的「內在價值」，卻仍然有可能把「美感價值」與「審美評價判斷」混爲一談，甚至還可能更衍生「後設－評價／價值區分」與「後設－後設－評價／價值區分」上的衝突。

現在要質問的是，到底爲什麼會衍生這類難題呢？我認爲，西方環境美學遭遇的困境，並不是因爲結合了環境倫理學造成的，究其實，所以會衍生前述難題，最大的原因就在於西方人對「美」的認定方式——把「美」視同爲存在物的一種「屬性」，或某種「存有的終極價值」——造成的，而當前英美現代美學的式微，正好印證了這件事。

（二）解困之道

根據我的研究，若要解決前述西方環境美學遭遇的難題，根本之道就在於徹底修正其美學觀，亦即，放棄「屬性進路」的認識論思考模式，而改以「突現進路」的詮釋思考模式，以突現美學觀來取代西方的現有的本質主義美學觀。然而，想要求西方人接受這種見解，其實十分困難，這等於是要西方人放棄他們的文化素養，用全新的觀點來看待世界！這一點，George Lakoff 與 Mark Johnson 在《我們賴以

35 若依據 Callicott〈李奧波土地美學〉所示，「自然之美」呈現於人與自然的深度互動，且其先決條件即「人必須與自然和諧共處」，但若要促使「人與自然和諧相處」，則又必須以「愛與尊重大地」作爲先決條件，而人會去「愛與尊重大地」，則是由「自然的美感」激發的。果爾如是，這就形成了一種循環論證。是以，若要避開 Callicott 的疏忽，可將 Leopold 的看法重新詮釋爲：人的這種「自然的美感」（感動）是自發的——它就是自然或作爲自然之成員的人類本具之特性——自本自根的質性，而且，也直接展現爲對自然本身的愛與尊重——形同於人自身的一種自愛。如果作爲自然的成員之一的人類，出於一種「自愛」地去面對自然，那麼，當然會激發出愛與尊重。

生活的隱喻》的〈後記〉即詳細說明了類似「改造」的難度[36]。是以，我僅在下一節嘗試提供突現進路的環境美學觀作爲對照，以補足西方環境美學。

除了前述「解困之道」之外，也可就學理上爲西方環境美學遭遇的難題再進一解。扼要地說，在建構環境美學時若企圖講明種種環境論述本身的美學（aesthetics of discourse of environment）或美學涵義，那麼，其實不能直接預設各種環境論述本身蘊涵了「美學」，因爲，這樣一來就有可能違犯先定結論的謬誤（或丐辭的謬誤）。是以，容或可以這樣思考：如果存在著某種具有特色的環境論述，那麼要講明這些論述中可能蘊涵的美學或美學涵義，就必須循其本身可能擁有的特色進行分析才能達成目的。容或合理預設是，目前的確存在著各種環境論述，而這些環境論述蘊涵的各種思想中，也的確擁有饒富特色的美學因子，如是，整個分析構想便可圖示爲條件證明如下：

(1) 存在著有特色的環境美學 ⊃（環境論述之思想具備了有特色的美學因子 ⊃ 環境美學特色當由環境論述思想之有特色的美學因子突現之）

(2) 環境論述之思想的確具備了有特色的美學因子

∴ (3) 存在著有特色的環境美學 ⊃ 其特色當由環境論述思想之有特色的美學因子突現之

此條件證明的結論，可以說，就是思考與建構當代環境美學的總綱領，而且，其中的核心課題當是：如何釐清與證成「環境論述之思想本身具有有特色的美學因子」。

再者，還存在著一項實際問題，亦即，如果已經有學者專家提出了某種「環境美學」論述，或者，人們認爲某位專家的「環境論述」中蘊涵了某種「美學理論」，那麼，該當如何處置？要之，美學理論

36 George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: The University of Chicago Press, 2003).

畢竟是一種功能取向的「對『美』作的解釋」，或者是某種「背景式實況」的分析。是以，當人們反省既有的環境美學論述時，必須先釐清建構者訴求的「功能」爲何（亦即，他據以進行解釋的「模型」爲何），或者是，他要分析的「背景式實況」爲何（亦即，他用來作爲理論推演的「根源」預設爲何），然後，一方面依「手段－目的」分析模式闡釋其理論；另一方面則透過：(1) 溯源法（retroduction）——由紛雜之現象回溯其本源，以釐清其底景；(2) 最佳預期推想法（abduction）——擬定一種恰當的「根源」假設，並預期透過各種推演可加以證成，以釐清其底景。可以說，這些都是分析美學理論時要照應的基本課題，環境美學理論的分析也當如是進行。[37]

四、環境美學新展望

前述西方環境美學大體上展示了某種「體驗論」架構，以及依循自然之美的「可感受性」體驗基準（canon），進一步說明作爲自然成員的人類自本自根地擁有的「自然美感」特質，並闡釋循這種「自然美感」引發的「對自然的愛與尊重的回應」，把環境倫理與自然美感嵌結於「自然總體生態論述」之中，從而開拓了別開生面的「環境美學」。可以說，一方面，此種論述深度地揭示了「倫理實踐的根源動力從哪裡來」的具有洞見的闡釋；另一方面，此種論述的確也展示了美學本身具有的「根源性考察」特色。然而，如前所述，這類西方環境美學也遭遇了一些根本難題，是以，下文我將循放下的美學與突現美學進路，爲西方環境美學再進一解。

要之，依前文的討論可推想，環境美學探究的核心要義就在於究明：人與自然環境相互嵌結、交互作用與相互依賴地和諧共存的

37 事實上，以上的方法皆經常被學者專家使用，其中，最佳預期推想法的運用目前有了極大幅度的躍進，亦即，加入了關於隱喻的論述及運用，一方面，就環境美學論述的探討而言，隱喻課題的開發，不啻爲論述者打開了一個全新的視域；另一方面，隱喻的運用也爲人們從事的環境美學之根源性實踐反省，提供了很多寶貴的立足點。

「良好狀態」（well-being），此可謂之爲**環境突現之美**（emergent beauty of environment），而且，人類正是以這種突現之美（或其反面「突現之美的闕如」）作爲「背景」，而有以進一步突顯眾人祈嚮的（invocative）各種優位／最優價值。是以，在我看來，環境美學未來的發展契機就在於循環境與美學兩者的嵌結而去闡明：(1) 環境突現之美本身何以會突現（emerge）；(2) 環境突現之美與各種不同的優位／最優價值之間的關係——保存義或實現義原理的建構；(3) 環境美學的人文或文化的意義及其價值涵義。以下，即依 Lawrence Buell 的美學觀——作爲一種新環境美學觀的西方式芻議，以及《莊子》的美學觀——作爲一種新環境美學觀的東方式詮釋或理解資源，以例示我所謂的突現環境美學——放下的美學。

（一）放下的美學觀

美國哈佛大學教授 Lawrence Buell （1939-）於 2005 年出版《環境批評的未來展望》[38]，此書雖然使用「環境批評」替代（lieu）了「生態批評」（ecocriticism），但他強調這是一種策略上需要配合的歧義（strategic ambiguity），以展示他個人及整個時代對環境議題的關注傾向。Buell 的早期作品《環境的想像》[39] 也展示了相同的關注，而這本書主要是以 Henry D. Thoreau 及 Aldo Leopold 等人的自然觀想爲核心及中介，以嵌結自然書寫與美國文化的形成，其重點在於討論自然書寫的由來，以及自然書寫在形成美國文化歷程扮演的角色。

《環境的想像》第五章「放下的美學」[40]（以下簡稱「〈放文〉」）一開始即提示 [41]：

38 Lawrence Buell, *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination* (Malden, MA: Blackwell Publishing, 2005).

39 Lawrence Buell, *Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 1995).

40 Lawrence Buell, "The Aesthetics of Relinquishment," in *Environmental Imagination*, 143-179.

41 Lawrence Buell, *Environmental Imagination*, 144.

> 在本章中我反省了令美國環境作家感興趣的兩種放下的形式（two forms of relinquishment）。較熟悉的一種是物品、物質戰利品的放下（relinquishment of goods, of material trophies）。……較基進的放下是放棄個人的自主性，放棄心智甚至身體與環境分離（apartness）的幻覺。

〈放文〉如是分析的目的在於爲其環境書寫的論述鋪路，他提示[42]：

> 第一種放下或許提供了最普通的環境書寫情節。第二種蘊涵了情節的消解，並且質疑意識監督的權威性。如是，它開啟了一種徹頭徹尾的突破知覺之展望，一種人們夢想難及而更具生態中心存有地位的可能性。就如生態哲學家 Holmes Rolston Ⅲ所示，因為「生態學並不知道某種抽離其環境的封包的自我（encapsulated ego）的存在」。假如放下了人類的分離性迷思，那麼，還有哪一種文學仍然可能？它一定是這種文學：放棄或至少質疑那些被認為是文學的基本焦點——人物角色、人格面貌、敘事意識。

引文中可以看到〈放文〉展示的 Thoreau 式親自然、生態批評的敘事立場及觀點，〈放文〉把這類操作稱爲環境書寫（environmental writing）。〈放文〉指出[43]，有極大的誘因使讀者把這些非小說（nonfiction）讀成抒情作品、「我」的冒險，而這些看法有時候是正確、充分的。但若把陳述環境的非小說讀成「『我』之消失」的情節，對那些非小說並不公平。此誠如 Peter Fritzell 指出的，一方面，就個人觀點而言，所有環境因子近乎被說明，而且被賦予意義；另一方面，就全－物種觀點而言，個人唯有在公共的、非個人的環境脈絡才會獲得意義，總之，環境專家依個人觀點表陳見解，而其個人觀點則在環境中接受洗禮。換言之，這些環境書寫皆揭示了人與環境相互嵌結、交互作用的實況。

然而，〈放文〉在論述這些環境書寫時，爲什麼要論及「美學」呢？再者，這些環境書寫到底展示了什麼美學涵義？根據我的解讀，《環

42 Lawrence Buell, *Environmental Imagination*, 144-145.

43 Lawrence Buell, *Environmental Imagination*, 179.

境的想像》提示，傳統上個人是因爲某種人類中心式基本美感愉悅而引發了接近或投入自然的意圖，但環境書寫則展示了完全不同的美學觀——放下的美學（aesthetics of relinquishment），並透過這種美學觀點同步揭露作家引領人們步入全新的環境意識覺醒之時代的真相。

基本上，〈放文〉透過三個論點敷陳其看法：(1) 自願的簡樸（voluntary simplicity）；(2) 放下自我（self-relinquishment）；(3) 環境非小說即放下的寓言（fable of relinquishment）。要之，〈放文〉擬把「環境文本當作生態中心性載體或能動者」[44] 而大致提示[45]，如是就必須在此類作品中找到對自然環境有所回應的想像結構作爲根據，換言之，當代讀者必須能夠作出重大調整——把文學視爲自然環境的標誌。是此，容或「自願的簡樸」、「放下自我」就是這類「環境標誌」。

首先，「自願的簡樸」即循「尊重簡單的生活（respect for the simple life）」[46] 的理念，去過一種放下物欲羈絆的生活，而〈放文〉以 Thoreau 在 Walden 湖畔的生活實驗爲例的講述中，甚至把這種自願的簡樸生活稱爲一種苦行——「Thoreau 以具有恢復力的苦行取代了禁欲的資本主義式自我關係」[47]。如〈放文〉所述[48]，在自然環境中，物質事物被視同爲陷阱而不是珍寶，支配自然與納入自然兩者對立，反之，在資本主義社會中，欲望被不斷驅動與鼓舞，若要反對它，只有禁欲，而禁欲本身是一種剝奪，不是美感。在日常素樸事件中，自願的簡樸所產生的愉悅，允許簡單的生活變得有意義，而 Thoreau 自我訓練的方式是集中注意重複的事件、類似的延伸、舉隅（synecdoche）——閱讀 Thoreau 而接受這種訓練觀的讀者，將會在另一個層面體驗到苦行的美感（ascetic aesthetic）。

44 Lawrence Buell, *Environmental Imagination*, 143.

45 推斷自 Lawrence Buell, *Environmental Imagination*, 144。

46 Lawrence Buell, *Environmental Imagination*, 146.

47 Lawrence Buell, *Environmental Imagination*, 151.

48 Lawrence Buell, *Environmental Imagination*, 151-152.

其次，〈放文〉引述了 Freya Mathews 的看法「若個體欲保全具體實在的任何客觀事態，將需找到新的個體判準」，而指出「放下自我」就是這個新判準。要之，美國環境書寫嘗試處理潛在的自願簡樸思想中的自我中心性[49]，而當環境意識覺醒，在關心眾人勝於關心個人、關心自然環境勝於關心眾人的世態中，主要關懷也勢必從關心自我轉移到關心人與生態圈交互作用的各種利基（niches）[50]，因此，放下自我也就具有實質意義了。[51]

基本上，放下自我就等於「把自我抹去（efface）」[52]，而〈放文〉並不認爲 Thoreau 果真這樣做。〈放文〉摘引了 Sharon Cameron 的話「自我並未被自然授權，而毋寧是被自然改造」，及其意見——Cameron 認爲 Thoreau 在著作中表現的是自我的權威及自主性屈服於環境的權威。[53] 總之，〈放文〉歸結[54]，就 Thoreau 而言，自然環境最初只是提供他作爲自我－信賴之實驗的一個舞台，它促成了某種在尋求自我淨化過程中超乎自願的簡樸之自我訓練，是以，不可能完全抹除自我。

然而，〈放文〉也指出[55]，放下自我使女性作家杜絕了自我導向的敘事法，而以更具環境敏感度的形式從事寫作，以及，Leopold 在修正了保護掠奪者的環境態度之後，也展示了其放下自我的特色[56]。要之，Leopold 對自我－信賴的實驗並不感興趣，他關注的是自然環境自身，自然的表現就如同自我表現一樣，最後會成爲建構生態倫理的手段。

49 以上看法及引文，皆見 Lawrence Buell, *Environmental Imagination*, 158。

50 「利基」意指某環境中有利生存的條件或場域。

51 Lawrence Buell, *Environmental Imagination*, 167.

52 Lawrence Buell, *Environmental Imagination*, 168.

53 Lawrence Buell, *Environmental Imagination*, 169-170.

54 Lawrence Buell, *Environmental Imagination*, 174.

55 Lawrence Buell, *Environmental Imagination*, 177, 171, 174.

56 〈放文〉指出，Leopold 在《沙群年紀》希望以「這是一位學者理解何以原始荒野為人類的冒險提供定義及意義」結束其書，然而校訂者卻以「大地倫理」作爲全書最後一章。見 Lawrence Buell, *Environmental Imagination*, 172。

總之，如〈放文〉所述，一方面，放下，基本上使環境書寫者從物質的累贅中解放，而其內在的覺醒讓書寫者把這種解放看成是一種主要的回報；另一方面，展現了放下美學的作品皆把焦點聚集在非人類上，而拒絕人類中心式基本的美感愉悅。[57] 然而，〈放文〉的這種「放下」論述，不論是放下物質的追求，或是放下自我，事實上都只是知性概念圖式中的理念運作，反之，環境書寫者則是透過與環境本身的實際互動，透過體驗才有了這些真切的感受，也正因爲如此，〈放文〉才有必要把它置於美學氛圍來論述。

對環境書寫者而言，畢竟「放下」並非意指**根除**自我（eradication of ego）。放下的美學毋寧是隱含了自我的懸疑，因爲人會感受到環境就像一個人一樣地值得去注意，並且體驗到人自己置身於許多交互作用的存在物之間。[58] 是以，放下的美學其實說的是一種感性的昇華，一種在世界中找到歸屬的自適之美感，而我曾在〈論自然書寫與環境美學〉中指出：

> 「找尋歸屬」——欣賞他者、獲得他者的承認，以及「自我－創造」等等所依循的原則——「佔有或取用他者的資源而不違其原理」，都顯示主體的自我－意識需求（意指解開諸如「何以會覺察到我」、「我到底是什麼」，以及「我與其他人在本質上如何區別」等等問題的需求），乃必須與整個環境和諧共存、互動，它其實就是生態保存、保護與保全的第一原理。[59]

容或此義可作爲 Buell 放下的美學之補充說明，以及闡明把放下的美學作爲當代環境美學發展之例示的涵義。

57 Lawrence Buell, *Environmental Imagination*, 168, 156.

58 Lawrence Buell, *Environmental Imagination*, 178.

59 蕭振邦，〈論自然書寫與環境美學：以陳列《永遠的山》爲例示〉，刊於徐國能主編，《海峽兩岸現當代文學論文集》（台北：台灣學生書局，2004），頁 264。

（二）《莊子》的自然美學觀

如上所述，Buell「放下的美學」陳義甚高，也具有代表性，然其美學論述仍待縝密重構，是以，再以《莊子》的美學觀補足之[60]。其實，《莊子》中並未見當代義美學講述，也鮮少論及藝術觀，容或只展示了與美的理念、原理有關的洞見。[61] 簡言之，《莊子》所揭義理，或企圖讓人與物充分彰顯其性，並認取意義及價值歸趨（自在自適、逍遙無待）以獲得人存之圓滿的途徑（道）——特定優位／最優價值也因而得以突顯。以下，即依《莊子》的陳述，嘗試重構其自然美學觀，以作爲突現環境美學之例示。

第一，**超脫或放下世俗美醜的區判**。《莊子》以世俗美醜之見：(1) 沒有一定標準而不足據；(2) 是師心之過。但《莊子》並未刻意要泯滅世俗美醜之見，僅嘗試把它們導入「眾美從之」（《校詮》552）[62] 的境地。何謂眾美從之？由突現的觀點來看，美就是天地萬物之總體突現，不能再化約爲個別事物之物性，它會反過來在人的意義與價值歸趨的體證與體現上去約束或規範天地萬物，此之謂眾美從之，而其中的突現原理實蘊涵於天地／大道本然與聖人之德，亦即，美俱現於大道本然，以及聖人的修養實踐之體現中。

第二，**淡視（或手段性地貶抑）世俗之技藝**。在《莊子》中可能提及的「藝術」約莫有三種：(1) 一般造作的技術、技能；(2) 困限於師心之過的世俗技藝（另類「滑疑之耀」）；(3)「進乎技」而「所好者道」的藝術。類似的藝術觀在〈養生主〉篇庖丁解牛寓言中被明白表露——庖丁解牛本身就是體現道的例示，是以，美在其中矣。

第三，**美的層級性闡述——美之突現**：一者，就大道本然而言，天地有大美——蓋以美之突現是就整個天地萬物共同結合爲整體而有

60 關於《莊子》美學的詳細論述，請參閱蕭振邦，《深層自然主義：《莊子》思想的現代詮釋》，第一章。

61 這方面的討論，請參閱蕭振邦，〈道家美學思想基型——《莊子》的美學觀〉，《鵝湖學誌》第 20 期（1998），頁 1-70。

62 本文所引《莊子》原文，皆見王叔岷，《莊子校詮》（台北：中央研究院歷史語言研究所，1988，初版）。本註及以下引用《莊子》原文時，皆直接於文末註明「（《校詮》xx 頁）」，不再另加註腳。

以突現者，是之謂大美。二者，就人作爲能動者而言，美其實是透過修身、修心工夫而體現——《莊子》提示的工夫，本乎「觀於天地而已」原理，固是不修之修；工夫修養只不過是要回歸本然之整全、整一，而大美也就可視爲人體現美的價值歸趨。三者，解消美學的異化——前述修身（甚至修心）容或都還是消極的，只是某種對治成心的工夫，反之，更重要的則是自然地體現大道之本然，是以，不可反客爲主，反墮入工夫神通的講究，而把身體或生命當成轉換工具來役用，以致呈現人存自身的種種「美學異化」，此之謂「不以人滅天」。四者，不失其性——使美之所以爲美的條件就是大道自身（含其運行），亦即，美之突現，故不能斲喪大道體性。扼要言之，**美的體現就在於不傷其能與大道體合之性、不失其能與天地結合為整一之性**（此如「百年之木，破為犧樽，青黃而文之；……美惡有閒矣，其於失性，一也」〔《校詮》464〕的批判），而終能與萬物爲一（道通爲一），以突現天地大美。

再者，《莊子》思想透顯的理念是順乎自然，而不是求乎自然，然而，一旦論及體現道的工夫修養，即影射某種「求」的意圖，這樣反而使《莊子》變成有所求了，這不啻形成《莊子》思想的內在衝突。我認爲，**想要解決這類難題，就是為什麼要研究《莊子》美學，或者，也就是為什麼要為《莊子》思想提供某種美學詮釋或重構的原因所在**。因爲，唯有把「求」設想爲某種自由的、無關乎利害的創意或創造性活動——其實義即「意義與價值歸趨的貞定與體現活動」或「突現的詮釋與實現活動」——這也正是《莊子》強調的順乎自然之實義，如是才能克服前述內在衝突，而得到圓滿解題。

扼要地說，《莊子》的美學觀涵攝的並非美感經驗論或藝術理論細節，而是與天地大美嵌結的種種突現考察，其中各觀點皆與其「自然論述」或「道論」相繫，而總結爲自由創造的生命／生活之美的揭露[63]。總之，承前所述，解題關鍵就於《莊子》提示的「藝的態度（特

63 或許，此說也可爲徐復觀先生所謂的「道的人生觀」（徐復觀，1979：48），以及「若通過工夫在現

殊的工夫修養之根柢）」——一種「『遊』的態度」，而生命的祈嚮與工夫修養也正是循此態度而開展。這種美學觀不但說明了人的根源性定位與解困轉化的生命安頓之道，也說明了其中的創意與創造性原理，並標示出人自由地與天地合爲整全的大道突現及至美、至樂之契及。大體上說，此中的生命／生活美學向度容或可簡要圖示如下。

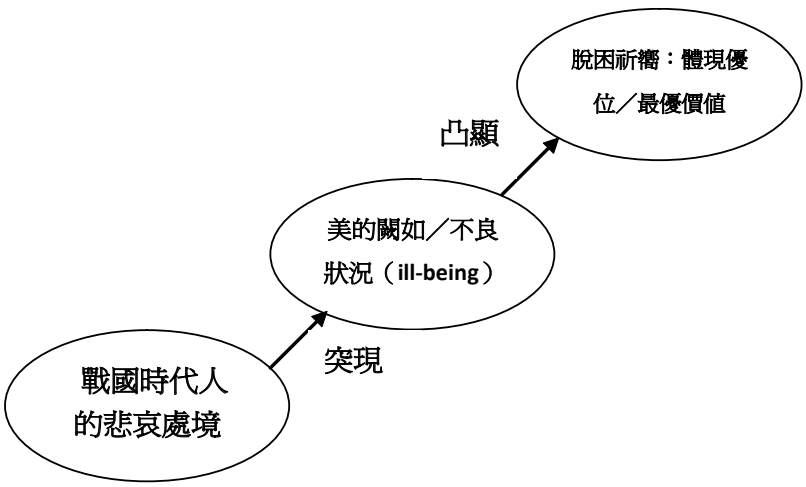
生命美學向度
- **藝的態度**
  - **基本理念 — 遊刃有餘／因其固然／依乎天理**
  - **行動具體目標 — 體現大道／實現至美至樂祈嚮**
- **自由創造的契會與發用**
  - **生命當下自由創造地實現其祈嚮**
  - **出離人生的黯闇 — 朗朗乾坤的大美突現**

對照而言，《莊子》思想重視的果真就在於體察人生的悲哀實義，進而轉境脫困，由消極地擺脫人生的困限，轉爲積極地開展生命的逍遙之遊，那麼，其所賴者無他，也正是工夫修養而已。這種工夫修養固是不修之修，其特質容或有三種涵義：(1)「自主性特質」——自覺地透過工夫修養（不修之修）而導引自身回歸自然，並促使一己的自然性分發用，此是「順乎自然」一義；(2)「創造性特質」——於道的體驗與體現上，必須能創意與創造地賦予突現詮釋，此是「進乎技矣」一義；(3)「自然突現特質」——以人能化其「成心」，不再私心自用，而把「主權」交還給自然，進而順任自然自身創發其用，然而，人自身畢竟是自然的成員之一，固亦稟乎自然之性，是以，就人自身（其限度所及與能及者，或者是「就人能夠實踐地檢驗者」）、人存的氛圍（人畢竟不同於整個自然）而言，此「自然之作主」（「**大通為一**」）即等同於「人自己作主」（「**復通為一**」）。如是，**《莊子》的工夫修養要義或原理，就在於這種同一「自然作主」與「人自己作主」的領會與體現了**。

然而，在《莊子》思想中，美並不是《莊子》推崇的優位／最優價值，《莊子》闡述的多半是眾人身處戰亂時代的悲哀處境，以及脫離

實人生中加以體認，則將發現他們〔按：指老子與莊子。〕之所謂道，實際上是一種最高的藝術精神；這一直要到莊子而始為顯著」（徐復觀，1979： 48）等等看法再進一解。然而，我這裡論述的「生命／生活美學」解法，固不同於徐復觀先生在《中國藝術精神》中的解法。

此處境的轉化之道。是以，在《莊子》陳述的生活實境中，美根本就隱而不顯，人存活動的當下指導原則只是性命保全一途。如是，即可依突現理論分三層次來闡釋《莊子》的美學觀：(1) **基本層次**——戰國時代整個人事物的實際境況；(2) **突現層次**——時代境況突現了美的闕如；(3) **突顯層次**——在美的闕如這種突現背景下，人興起了特定的脫困祈嚮，並進而努力體現相應的優位／最優價值。其要點可圖示如下：



如上圖所示，《莊子》提示的美就不是西方美學家所謂的本質或終極價值，而只是戰國時代實況的總體突現性，而且，依《莊子》來看，戰國時代的突現反是一種美的闕如（「不良狀態」〔ill-being〕），而不是美。進而言之，也正是以美的闕如作爲背景，才興起特定的脫困祈嚮，並期盼體現種種優位／最優價值，此如，〈逍遙遊〉篇提示的走出小大之辯困境的逍遙、〈齊物論〉篇提示的出離「人固若是芒乎」之悲哀困境的物化，以及〈德充符〉篇提示的放下形體的殘缺、人世的困限等等際遇的「才全而德不形」、「與物爲春」，此皆可作爲《莊子》突現美學詮釋的積極例示，其中，逍遙、物化、才全而德不形及與物爲春，固是《莊子》提示的種種人有以祈嚮及體現的優位／最優價值。然而，一言以蔽之，基於《莊子》強調「順乎自然」、「遊

的態度」與「不修之修」等等實踐要義來看，其美學觀也正是一種一體照應了自然環境之總體突現的放下的美學，此誠可作爲當代環境美學發展的一種例示。

五、結語

首先，本文試圖周延地講明西方由傳統自然美學過渡到當代環境美學的發展概況，以及其中的變遷因子。無可否認，當代環境意識的覺醒——其中「人化的景觀視域」與「自然之野性的根源視域」的對揚，尤其是關鍵——兩者無疑深度影響了西方環境美學的發展，而人自身在此變動中的重新定位要求，也促使美學觀有了重大轉變。大體上說，一者，若就當前西方環境美學的發展實況來看，約略可區分爲三種類型：(1) 藝術成就型環境美學；(2) 審美取向型環境美學；(3) 內在價值是依型或倫理取向型環境美學。再者，若就西方環境美學的未來發展趨勢來看，則約略也可歸結爲三種趨勢：(1) 藝術及科學導向型環境美學；(2) 倫理導向型環境美學；(3) 調和型環境美學。

其次，本文強調環境美學與環境倫理學之間的相互嵌結及相互依賴關係，並分析了西方環境美學可能遭遇的困難，以及相關的解困之道。然而，西方環境美學本身遭遇的難題，其實不只是一種學術操作層面的問題，它更蘊涵了西方思想、文化發展上的根源問題，換言之，由於美學經營的根源性探究操作，實觸及了西方思想、文化最根源的難題，這些難題西方人目前已積極地進行反思、解構及重構，非吾人之能力有以助之。然而，作爲一種學理上的對照參考來看，正好有助於我們自己改弦更張，而有所修正地建構自己更恰當的環境美學。

最後，本文重構了一中一西兩個準環境美學（quasienvironmental-aesthetics），以作爲建構未來環境美學的積極例示。這種準環境美學的特點在於，一方面，以突現理論作爲理論參考系，試圖融會人與環境相互嵌結、相互依賴與交互作用的環境實況及其相關難題的解題需

求，進而一體考量滿足整全的環境知識的建構需求；另一方面，以「放下的美學」觀點作爲降低人文強勢獨走的過人化弊病，而提供非人類自然物有以維續、自然環境有以發展之空間的意義與價值規模，嘗試以之補西方環境美學的不足，並進而作爲未來環境美學發展的一種參考模式。

《應用倫理評論》稿約

一、本刊爲國立中央大學哲學研究所應用倫理研究中心所發行之學術刊物。本刊原名爲《應用倫理研究通訊》季刊，自民國九十八年起改名爲《應用倫理評論》半年刊，每年四月與十月定期出刊。

二、本刊以推動應用倫理之研究爲宗旨，除發表與應用倫理學議題相關之哲學論述外，亦歡迎相關之規範倫理學的理論研究，以及其它專業科系就理論評介與實踐經驗作多元的探討。本刊開放投稿，竭誠歡迎海內外學者專家賜稿。

三、本刊除致力爲應用倫理學之專業學術研究提供發表的園地外，並期許能爲應用倫理議題的理性討論建立跨領域交流的公共論壇，本刊之學術專論因而依論文的性質分爲三類：

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是其委託人善良的自然道德的延伸。不管委託的關係的內容是什麼，社會所有人一樣要以一定的道德義務彼此對待」（Goodpaster 1991: 68）。

(3) 如引用之原文過長，超過五十字以上，請另行成立一段落，該段落文字以標楷體表之，且該段落左邊界縮排兩個中文字寬。不同段落請再縮入兩個中文字寬。例如：

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九、 引用論文或書籍，中文書名請用《》，例如：《儒家生命倫理學》；中文篇名或論文請用〈〉，例如：〈動物權：一個佛教向度的解讀與解釋〉。外文書名請以斜體字表示，例如：*Ties That Bind – A Social Contracts Approach to Business Ethics*。外文單篇論文則請用雙引號，例如：“Business Ethics and Stakeholder Analysis”.

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Donalson, T. and Lee E. Preston, “the Stakeholder Theory of the Corporation: Concepts, Evidence, and Implication,” *Academy of Management Review* 20(1995): 65.

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莊世同，2008，〈合法性與整全性－對德沃金法治觀的審視與反思〉，王鵬翔（編），《法律思想與社會變遷》，台北：中央研究所法律學研究所，頁 45-84。

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Donalson, T. and Lee E. Preston 1995, “the Stakeholder Theory of the Corporation: Concepts, Evidence, and Implication,” in *Academy of Management Review* 20: 65-91.

Clouser, K. D. and Gert B. 1999, “A Critique of Principlism,” in James Lindemann Nelson and Hilde Lindemann Nelson (eds.),

Meaning and Medicine: A Reader in the Philosophy of Health Care, New York: Routledge, pp.156-166.

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《應用倫理評論》編輯委員會
電話：(03)4227151 # 33121
傳真：(03)4224704
電子郵件：ncu3121@ncu.edu.tw

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