

The New Ethics: Ethics in a Gaian Context

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1. The Anthropocentric Focus of the Western Ethical Tradition

If you had studied ethics virtually anywhere in the Western world in the roughly two-and-a-half thousand years between the time of the Greek founders of Western philosophy and the early 1970s, it is almost certain that you would have been overwhelmingly or exclusively concerned with the discussion of issues that were, for all earthly purposes at least, entirely focused upon human beings and their relationships to other human beings. I say “for all earthly purposes” here because even avowedly *theocentric* views have, for all *earthly* purposes, been employed to legitimate the importance and centrality of humans to the cosmic drama in general. The consequence is that humans have been considered to be the primary or sole earthly focus of moral concern. What’s more, many people would now consider theocentric views to be essentially human projections upon the cosmos in the first place. If this claim is true then it means that the creation of an anthropomorphic conception of God was an expression of cosmic hubris that was then used to *justify* that very cosmic hubris, for we proceeded to see ourselves as made in the image of a god *that we had created in the first place*. (If this is indeed a self-deception of the kind that is charged then it underlines Freud’s claim that “Where questions of religion are concerned, people are guilty of every possible sort of dishonesty and intellectual misdemeanour.”¹) Extending this line of argument, it is of great consequence that we also chose to see our own kind (i.e., human beings) *and our own kind alone* as having a privileged personal relationship to this god.

The longstanding, highly anthropocentric focus of Western thought represents a truly extraordinary feature of our intellectual history, whether we consider the secular or religious aspects of this thought. The upshot for ethics has been that *for virtually the entire duration of Western intellectual history*, ethical discussion has not had any *direct* concern with moral obligations that humans might be

thought of as having towards any members or aspects of *the rest of the world*. This is no small exclusion! As a result, the main conceptual resources that the Western intellectual tradition has been able to offer to questions such as “What’s wrong with killing my neighbour’s dog (which keeps me awake all night)?,” or “What’s wrong with chopping down the stand of trees on my neighbour’s property (which blocks my view of the river)?,” have been of two main kinds, both of which sound off-key to many people today. One approach has been to say that you shouldn’t do these things because the dog or the trees matter to your neighbour (or perhaps to God – although that itself has been a thoroughly debatable point in Western religious thinking), that you have a moral obligation not to harm your neighbour (or sin against God), and that to do what you are proposing would be an *indirect* way of harming your neighbour (or a sin against God). The other approach has been to say that you shouldn’t do these things because harming other beings or forms of life might make you more likely to harm people – and *that* would be morally wrong. Thus, when it comes to *the rest of the world*, the best that the most influential ethical views in the Western intellectual tradition have been able to come up with have essentially amounted to this: “Don’t torture Fred’s cat because it might upset *Fred* if you do so (or perhaps even God) and/or it might make you more inclined to do nasty things to other people.” So much for the cat itself! The very idea that humans might actually be thought of as having *direct* moral obligations towards *the rest of the world* was simply not on the ethical agenda.²

The strange thing about all this is that there is nothing intrinsic to the main approaches to ethics that stops them from being applied in ways that are extremely broadly focused. Let us take a look at the main ethical approaches to see why this is.

2. A Brief Introduction to Ethical Theory

The field of ethics is commonly divided into *descriptive ethics*, *normative ethics*, *meta-ethics*, and *applied ethics*. *Descriptive ethics* simply refers to the descriptive study of the ethical views that people *happen* to hold. *Normative ethics*, in contrast, refers to arguments for the kinds of norms, goals, or standards that people *ought* to hold. Normative ethics therefore lies at the heart of philosophical approaches to ethics and is what most people mean when they use the term “ethics”. *Meta-ethics* refers to discussion *about* normative ethics, as opposed to arguments *for* a substantive normative position. Meta-ethics covers questions regarding such things as the meaning of ethical terms and how we arrive at knowledge of what is good or bad, right or wrong (i.e., meta-ethics picks up especially on the semantic and epistemological issues that arise from normative ethical discussion). Finally, *applied ethics* refers to inquiry into the application of normative ethical approaches in all manner of practical contexts. These contexts range from A to Z (e.g., from abortion, animal experimentation, business, computing, journalism, medicine, nursing, and so on, to xenotransplantation and zoos) as well as from birth to death (e.g., prenatal testing and obstetrics generally to euthanasia and physician assisted suicide).

A systematic exposition of the basics of normative ethics – the heart of ethics – would typically begin by outlining the three main approaches to normative ethics:

(i) Ethics that focus on the cultivation of particular *virtuous qualities of character* (formally known as *virtue ethics*).

(ii) Ethics that focus on the upholding of, or respect for, particular *principles* (formally known as *deontological ethics*, from *deon* duty, although I prefer the more user-friendly term *principle ethics*). A principle ethics approach is concerned with the upholding of, or respect for, particular *principles* quite independently of the question of whether or not the *character* of moral agents is such that they personally *wish* to uphold these principles or the question of whether or not upholding these principles necessarily leads to the best *consequences* on each occasion.

(iii) Ethics that focus on obtaining particular *outcomes* (formally known as *consequentialist ethics*, or just *consequentialism*).

This simple schema, based on whether the focus of an ethical approach is on the character of the *actor*, the principle that informs the *action per se*, or the *outcome of the action*, respectively, describes the three main approaches to normative ethics. The thing to note about each of these approaches is that there is no intrinsic reason why they cannot be extremely broadly focused. For example, in principle, it is easy to imagine ethicists advocating:

(i) the cultivation of particular *virtues* that would incline moral agents to be tremendously concerned for, say, the ecological integrity of the world around them and the richness and diversity of its life forms; or

(ii) respect for particular *principles* such as “Preserve ecological integrity and biodiversity”; or

(iii) the realization of particular *consequences* such as the preservation of ecological integrity and biodiversity.

But however easy it might be to imagine these applications in principle, the fact of the matter is that ethicists in the Western tradition (at least) have, for the most part, lived in such a narrowly construed moral universe for so long, and defended the narrowness of its boundaries with such tenacity, that it is reasonable to describe the moral universe of Western thinkers almost up to the present – the ethics of no less than the last 2,500 years! – as a *closed* moral universe. Thankfully, this narrow focus of interest has recently begun to be challenged such that we are now in a position to begin speaking in terms of a contrast between what I refer to as *the closed moral universe of the Old Ethics* and *the expansive moral universe of the New Ethics*. In a nutshell, the Old Ethics is the ethics that has been with us in the West from the time of the first Greek ethicists 2,500 years ago until the present day. It is the ethics that has focused moral concern upon people and people alone – and often not even all people at that. The New Ethics, which has only begun to emerge in any rigorous way since the 1970s (making it roughly just 1% of the age of the Old Ethics), is the ethics that has finally begun to take *the rest of the world* seriously – this is no small advance! The New Ethics is, then, ethics conducted in a whole earth, ecospheric, or Gaian context.³

But the New Ethics is not without problems of its own.

3. Problems with the New Ethics

The New Ethicists – often referred to as “environmental ethicists” – have advanced three main answers to their central question: “What is valuable in the world?” (where valuable is taken to mean *intrinsically* valuable, that is, as referring to things that we have reasonable grounds for believing represent genuine sources of value in their own right rather than things that we simply ascribe value to because we happen to have a personal liking for them or because they are useful to us in some way). The first answer is that an entity is intrinsically valuable if it is sentient, that is, if it has the capacity to feel. This corresponds to the *sentience approach* or, alternatively, the *animal welfare approach*. The second answer is that an entity is intrinsically valuable if it is alive, whether it can feel or not. We could just call this the *life approach*. And the third answer is that an entity is intrinsically valuable if it possesses the kind of self-organizing holistic integrity that enables it to renew itself, or remake itself, on an ongoing basis. The latter criterion, which refers to what are sometimes technically described as *autopoietic systems* (from *auto* self, and *poiesis* a making; hence, self-making), would include not only individual living things but also ecosystems and the ecosphere itself – or *Gaia*. I refer to this as the *holistic integrity approach*. And, of course, it is this approach that represents the full flowering of ethical thinking in a whole earth, ecospherical, or Gaian context.

But while many of us might have an intuitive sympathy with these more expansive approaches to ethics, the New Ethics is certainly not without its problems. A few years ago I published a detailed critical analysis of these three main approaches to the New Ethics in which I examined each of them with respect to both their rational foundations and their practical consequences.⁴ The upshot of my analysis was this: As the New Ethics has been developed to date, at least, it would appear that (i) only the sentience (or animal welfare) approach rests upon solid rational foundations; (ii) all three approaches either issue in or are compatible with objectionable practical consequences; and (iii) none of these three approaches is sufficiently comprehensive in its potential range of application. I cannot repeat this critique here but I can indicate its flavour by making three points about these approaches.

1. *The sentience (or animal welfare) approach*

The sentience approach would appear to rest on solid rational foundations: since most moral agents would accept that the experience of unnecessary pain or suffering is an intrinsically bad experience, it is easy to argue that this evaluation and the moral concern that attends it ought to apply to any entity that is capable of experiencing unnecessary pain or suffering, that is, any sentient being. From this perspective, to be concerned about pain or suffering only if it attaches to particular kinds of sentient beings – like people, or even just certain classes of people – is viewed as a morally indefensible form of discrimination. However, if we accept this as the criterion by which we judge which entities are deserving of moral consideration and which are not then we find that this approach nevertheless issues in a range of practical consequences that are objectionable

from the point of view of many people's holistically inclined or ecologically informed judgments and intuitions. I will give just one example of this here: the problem of introduced species.

Introduced species are a major problem in terms of the present loss of global biodiversity. For example, *New Scientist* cites a report from two U.S. environmental agencies (The Nature Conservancy and the Environmental Defense Fund) based on a "painstakingly compiled list of some 6,500 species in North America that are under threat of extinction, along with the reasons why each species is in trouble."⁵ The researchers found that

alien species were the second most common reason for the problem [i.e., threat of extinction], affecting 49 per cent of the species. Only habitat alteration, which affected 85 per cent, was a bigger threat. Experts believe this ranking will hold good elsewhere in the world as well, though there are as yet no good studies outside the US.⁶

Many ecologically informed people feel that it is extremely important to preserve biodiversity and so think that we ought to eliminate introduced species that are ecologically destructive wherever possible. However, from the perspective of the sentience approach it is not at all clear that we are morally entitled to do this. An introduced animal can be just as sentient, and therefore just as intrinsically valuable, as an indigenous animal. What right then do we have for privileging the interests of one over the other?

2. The holistic integrity approach

The previous point might lead us to think that the obvious answer is to adopt the holistic integrity approach, whereby we make decisions on the basis of the extent to which something enhances or diminishes the self-renewal capacity of the ecosystem with which we are concerned, or the ecosphere/Gaia in general. The initial problem here, however, lies with the rational foundations of the holistic integrity approach. An ecosystem or the ecosphere itself has no subjective (or experiential) life as an ecosystem or the ecosphere; rather, it is only the individual sentient beings within an ecosystem or the ecosphere that experience an "inner," subjective dimension to their lives. But if something is not capable of at least some form of conscious experience then surely it makes no difference how we treat it from its "point of view," as it were, because, not being conscious, it doesn't *have* a point of view. With these considerations in mind, we can see that it is a lot easier to argue for the intrinsic value of sentient beings than it is to argue for the intrinsic value of ecological wholes. Of course, we could still say at this point that it doesn't matter that self-renewing ecosystems are not sentient. We could insist that they nevertheless represent genuine sources of value in their own right rather than things that we simply ascribe value to because we happen to have a personal liking for them or because they are useful to us in some way, and that they should therefore be respected accordingly. But the problem here consists in being able to say what it is, exactly, that makes a non-sentient self-renewing ecological whole a genuine source of value in its own right, which is to say a source of value that is not reducible to the fact that its

maintenance just happens to please us in some way or, more bluntly, is simply *useful* to us.

Critics of the holistic integrity approach argue that it is more straightforward and convincing to say that the value of self-renewing ecological wholes does indeed consist essentially in their usefulness to us – in their *instrumental value* as opposed to their *intrinsic value*. But if that is the case, and if we accept that these systems are instrumentally valuable to *all* (intrinsically valuable) sentient creatures, then we are back where we started from with respect to whether or not we have the right to remove introduced species. It seems quite artificial to argue that introduced species ought to be removed because the ecosystem is *more valuable to sentient creatures* without them. More valuable to which sentient creatures? Not to the (intrinsically valuable) introduced animals that have just been killed! We are therefore left with a problem: If the holistic integrity of ecosystems is not considered to be valuable in its own right then what moral basis have we got for privileging the claims of indigenous animals over the claims of introduced animals? But if the holistic integrity of ecosystems is considered to be valuable in its own right then in what does this value consist? Advocates of the holistic integrity approach have thus far failed to provide a clear and persuasive answer to this question.

3. The question of comprehensiveness

Even if we assumed that the holistic integrity approach did rest upon solid rational foundations, or that such foundations could be found, it nevertheless suffers from a range of problems or inadequacies at the level of practical consequences anyway. Again, I can only point to one general kind of example in this context, but it, too, is a significant example. Suppose that we did ascribe not merely a use value but an intrinsic value to self-renewing ecological wholes.

This would provide moral grounds for objecting to anything that interfered with the self-renewing capacities of these wholes. However, there are many kinds of impositions that can be made upon self-renewing ecological wholes that do not upset their self-renewing capacity but that we might nevertheless feel we would want to object to simply because they seem so out of place. We can think of many kinds of examples in regard to this point. I will simply outline two.

Example 1: introducing a species that we know is ecologically benign (assume that we can know this for the sake of the argument). This would increase the amount of biodiversity in an ecosystem without interfering with the self-renewal capacities of the ecosystem, so why not do it? Yet many ecologically informed observers would feel that the most ecologically desirable course of action does not consist in increasing biodiversity as an end in itself, but rather in *preserving the characteristic biodiversity* of an ecosystem.

Example 2: replacing an old established building that blends in with the landscape beautifully (in terms of both the material from which it is made and its overall design) with an ultra-modern building that has no obvious connection with the landscape at all in terms of its design but that nevertheless draws on the best ecological principles so that it has no greater ecological impact than the building it has replaced. In this case too, and many more that could be supplied,

we have a situation in which something seems objectionable because it is quite out of place – incoherent with the world around it – and yet appealing to the intrinsic value of self-renewing ecological wholes provides us with no moral grounds for registering our objection because the development concerned does not threaten this form of holistic integrity.

These considerations mean that even if we were to ascribe intrinsic value to self-renewing ecological wholes, this approach would still not produce an ethics that is *comprehensive* enough in its potential range of application to register a range of environmentally sensitive judgments and intuitions concerning things that may not cause any particular ecological damage but that nevertheless *don't fit in* with the context in which they are located. Moreover, the second, ill-fitting building example given here raises another point that needs to be emphasized in regard to the “comprehensiveness” question. This is the point that the approaches that have been developed to The New Ethics to date have focused overwhelmingly on natural entities (including human beings) and the *natural environment* as opposed to the *built environment* (or the *humanly constructed environment* generally). It would therefore seem to be high time that we developed a genuinely comprehensive approach to The New Ethics, that is, one that is just as applicable to the built (or humanly constructed) environment in its own right as to the natural environment.

4. The Theory of Responsive Cohesion I

How, then, are we to develop an approach that takes into account the legitimate moral claims of sentience, that does justice to holistically inclined ecologically informed judgments, and that can be applied to environments of all kinds, that is, the built environment (or the humanly constructed environment generally) as well as the natural environment? I have been developing a new approach to ethics under the name of the *theory of responsive cohesion* that attempts to achieve these things.⁷ Just as I could only provide the briefest sketch within the length of this paper of the range of problems that attach to the established approaches, so *I can only provide the most basic outline of this new approach here*. That said, this is what it looks like in preliminary outline.

The central thesis of the theory of responsive cohesion is that there is a form of organization that underpins not only our most informed judgments as to what is most *valuable* but even the very possibility of *valuing*. To take away this form of organization is to take away not only those things that our most informed judgments would otherwise have regarded as the most valuable kinds of things but even the very possibility of *valuing*. I refer to this form of organization as *responsive cohesion*. Responsive cohesion can be contrasted with the two forms of organization that lie on either side of it, as it were. I refer to these as *fixed cohesion* and *discohesion* (lack of cohesion). Let me briefly outline what I mean by these three forms of organization.

Things can be ordered, organized, hold together, or exhibit *cohesion* (or not) in any of three main ways. (*Cohesion* is my preferred term here and it simply

means to hold or cling together, from Latin *cohaerere*, from *co-* together + *haerere* to cling, adhere.) These three main forms of cohesion can be thought of as lying along a spectrum of possibilities with all manner of gradations in between.

At one extreme, things can, literally or metaphorically, hold or be stuck together in a fixed, rigid, and hence static, or at least repetitive, way. By definition, then, the elements or salient features that constitute them are not *responsive* to each other in any meaningful way; rather, they just hold or are stuck together in a certain way and that's that. Another way of saying this is that their salient features don't *answer* to each other in any meaningful way. (Talking about whether things can be said, literally or metaphorically, to "answer" to each other is often an illuminating way of talking about whether they can be said, literally or metaphorically, to be responsive to each other. The word *response*, from which the adjectival term *responsive* is derived, itself derives from the Latin *responsum*, meaning *answer*.)

At the other extreme, things can, literally or metaphorically, simply fail to hold together at all, in which case they do not exhibit any cohesion to speak of, they are "all over the place," there's "no logic to them," they're "completely chaotic" (in the conventional rather than more recent, technical, mathematical sense of the term *chaos*).

Between these extremes lies the region in which things can be said, literally or metaphorically, to hold together (i.e., to possess an overall cohesive form of organization), but to hold together in virtue of the ways in which the elements or salient features that constitute them are *responsive* to each other. In these cases, the elements or salient features that constitute things can be said to feed into and play off each other, or answer to each other in various ways, such that they generate and maintain a form of organization that is cohesive overall. Rather than being locked into a fixed, rigid, frozen, forced, mechanical or formulaic pattern on the one hand (as with examples of fixed cohesion) or being "all over the place" on the other hand (as with examples of dis cohesion), examples of responsive cohesion have a fluid, adaptive, creative, organic, "alive" quality about them.

The theory of responsive cohesion advances the thesis that, in any genuinely open consideration of the matter, it is always the example that exemplifies the most responsively cohesive form of organization that is typically judged to be the best example of its kind by informed judges – or that (for reasons that I simply can not pursue here for reasons of space) ought to be judged to be the best example of its kind. I therefore argue that responsive cohesion represents *the foundational value* – the most fundamental general value there is – and that we ought, accordingly, to live by, or be guided by, this foundational value to the extent that we reasonably can (e.g., by preserving examples of responsive cohesion where we find them, regenerating or creating examples of responsive cohesion in and through our chosen undertakings, reflecting and reinforcing this relational quality in our judgments and ways of proceeding, and so on).

Even our most informed judgments about what *constitutes* an informed judgment support the idea of the foundational value of responsive cohesion. Let me illustrate this. Even if a view holds together internally (i.e., is internally

cohesive), we do not think that it represents an informed judgment if it is a fixed and dogmatic view (i.e., if it is *unresponsive* to reasons and evidence). Rather, such a view represents an example of *fixed cohesion* at the level of ideas or judgments. On the other hand, we do not think that a view that is internally inconsistent or that “doesn’t hold together” (i.e., a view that is *discohesive*) represents an informed judgment either. Rather, such a view represents an example of *discohesion* at the level of ideas or judgments. Instead, our most informed judgments suggest that an informed judgment is precisely a view that both holds together internally and is based on and remains open to reasons and evidence (i.e., a view that answers to or is responsive to reasons and evidence). And a view of this kind is clearly an example of *responsive cohesion* at the level of ideas or judgments.

But the theory of responsive cohesion does not just advance the view that responsive cohesion is the most valuable form of organization at the level of our most informed judgments about what *constitutes* an informed judgment. Rather, to repeat, the theory of responsive cohesion advances the thesis that our most informed judgments suggest that responsive cohesion is the most valuable form of organization in *any* area we care to consider. Let’s quickly consider some other examples across realms as broad as science, ethics, psychology, and politics.

In the realms of both science and ethics, informed judges typically consider both rigid adherence to a theory in the face of significantly differing reasons and evidence *and* the complete lack of a theory (such that one lives in a “wilderness of single instances”) to represent bad examples of science and ethics. These two ways of proceeding represent examples of *fixed cohesion* and *discohesion*, respectively, at the level of theory. In contrast, good procedure in both science and ethics consists in there being a *responsive cohesion* between theory and observations in the case of science and theory and personal moral judgments and intuitions in the case of ethics.

In the realm of psychology, informed judges typically consider a person to be in “good (psychological) shape” when there is a *responsive cohesion* between their thoughts, emotions and desires (i.e., when the various elements of their psyche “answer” to each other). In contrast, we consider a person to be in “bad (psychological) shape” when they feel compelled to do the same things in the same ways (we say that they are “stuck in a rut” or “acting like a zombie”) or when they seem to be (psychologically) “all over the place,” “a mess,” “crazy,” and soon. The latter two ways of being represent examples of *fixed cohesion* and *discohesion*, respectively, at the level of psychological organization.

In the realm of politics, informed judges typically consider that the best forms of politics are those in which there is a responsive cohesion between a government and the population it governs, that is, where there are mechanisms in place to ensure that the government answers to the people (e.g., through democratic elections, an independent judiciary, and a free press) and that people answer to the government (e.g., through the rule of law). In contrast, informed judges typically consider that the worst forms of politics consist in circumstances where ruler(s) dictate to the people but are not answerable to them (as in dictatorships) or where there is no government and everyone is a “law unto themselves” (anarchy). Again, the latter two ways of proceeding represent

examples of *fixed cohesion* and *discohesion*, respectively, at the level of political organization.

We can extend this analysis on and on. For example, take three more vast and significant realms of human activity: conversations, skills, and artworks. Informed judges typically consider that the worst conversations, skills, and artworks are those that (for a variety of reasons) can be described as formulaic, stereotypical, frozen, “stuck in a rut,” routine, rigid, or mechanical on the one hand *or* chaotic, anarchic or “all over the place” on the other hand. Once again, these examples represent examples of fixed cohesion and discohesion at the level of conversations, skills, and artworks. In contrast, informed judges typically consider that the best conversations, skills, and artworks are those in which the elements or salient features that constitute them have the quality of answering to each other, of feeding into and playing off each other, of being *responsive* to each other.

The theory of responsive cohesion has been developed in *response* to the new kinds of ethical problems that arise in the New Ethics – the new kinds of problems that arise when we try to think about ethics in a Gaian context. And of course this theory lends itself very naturally to considerations about the whole planet, that is, the ecosphere, or Gaia, precisely because Gaia is the largest earthly example of responsive cohesion. If there is one thing that Gaia is – and that ecological systems in general are – it is an exquisitely interacting network of mutually modifying processes. It is through the responsiveness of these mutually modifying processes – and especially the mutual responsiveness of the biotic and abiotic components of the ecosphere to each other – that the earth has managed to maintain a sufficient degree of overall ecological cohesion as to have continuously supported life forms of various kinds for something like the last 4,000 million years. If responsive cohesion is the most valuable form of organization then the earth’s collective ecological processes (i.e., the ecosphere) are arguably the most valuable “thing” there is (at least for all earthly purposes) precisely because they exemplify this form of organization at the largest, or most inclusive, level (at least so far as our earth-bound lives are concerned).

5. The Theory of Responsive Cohesion II

In introducing the theory of responsive cohesion I noted that its central thesis is that there is a form of organization, which I have referred to as responsive cohesion, that underpins not only our most informed judgments as to what is most *valuable* but even the very possibility of *valuing*, that this form of organization constitutes the foundational value; and that we should therefore live by, or be guided by, this value. However, so far I have only indicated that this form of organization underpins our most informed judgments as to what is most *valuable*. In what sense, then, does it underpin even the possibility of *valuing*? The answer is actually quite straightforward: if there is one example of responsive cohesion that rivals the example of the ecosphere, or Gaia, it is the example of brains that are complex enough to generate conscious experience.

Given that (i) the capacity for conscious experience is a prerequisite for being able to engage in the process of valuing anything at all (i.e., no consciousness, no valuing); and (ii) that the only things we presently know of that are capable of generating conscious experience are brains of a sufficient degree of complexity; and (iii) that the mutually modifying, consciousness generating activities of brains represent exquisitely complex examples of responsive cohesion; and (iv) that we have no grounds for believing that any form of fixed cohesion or dis-cohesion (whether artificial or extraterrestrial) *could* generate conscious experience (i.e., if any artificial or extraterrestrial entity were to be capable of generating conscious experience then its form of organization would have to represent an example of responsive cohesion; think about this: can you imagine *any* form of rigidly fixed structure or process – let alone anything that completely lacked structure – generating conscious experience?); then (v) it follows that the form of organization I have described as responsive cohesion must underpin (not only our most informed judgments as to what is most *valuable*, as argued previously, but even) the very possibility of valuing.

6. Applying the Theory of Responsive Cohesion

You will recall that I suggested that an adequate approach to the New Ethics would have to (i) take into account the legitimate moral claims of sentience; (ii) do justice to holistically inclined ecologically informed judgments; and (iii) be applicable to environments of all kinds, that is, the built environment as well as the natural environment. If we accept that responsive cohesion is the foundational value – since it lies at the basis of not only our most informed judgments as to what is most *valuable* but even the very possibility of *valuing* – then we can approach each of these challenges from the perspective of respecting this foundational value. I will consider each of these challenges in turn.

First, the theory of responsive cohesion says that although all living things and beings are valuable (by virtue of the fact that all living systems exemplify the relational quality and, thus, the foundational value of responsive cohesion), sentient beings are more valuable than “merely” (i.e., non-sentient) living things because they exemplify more compelling forms of responsive cohesion both structurally and in terms of sentiency. Not only do sentient beings represent more compelling examples of responsive cohesion in terms of their observable *physical structure* (e.g., there are massive differences between the kinds and sophistication of responsively coordinated organization in plants as opposed to sentient animals) but these beings also introduce a *qualitatively* new form of responsive cohesion into the world relative to “merely” living things. Specifically, sentient beings exemplify neural forms of responsive cohesion that underpin various forms and degrees of *awareness* of the world. These forms of awareness allow sentient beings to be more *responsive* to the world across a wider range of situations than is the case in regard to “merely” living things. This means that sentient beings can keep better track of – and, in this sense, *cohere with*, “stick with,” or “cling to” – the changing world around them in more active and diverse

ways than is the case in regard to “merely” living things (recall here that *cohere* derives from a Latin root meaning *to cling, adhere, or stick*). Sentience therefore introduces a *qualitatively new form of responsive cohesion* into the world. The increased degree of inner sensitivity (or inner *responsiveness*) to changes in the world that sentience bestows allows its possessors to respond more appropriately than they otherwise might to changes in their environment, and so (by better fitting into or *cohering* with their environment), maximize their chances of surviving and reproducing their relatively sophisticated forms of responsively cohesive structure and, with it, their own qualitative forms of inner sensitivity to the world.

Second, the theory says that we should value the preservation of ecological integrity in virtue of the fact that ecological integrity represents the expression of the foundational value of responsive cohesion at the ecological level. According to the theory of responsive cohesion, we should neither stop evolution in its tracks and “deep freeze” an ecological system nor allow an “anything goes” approach when it comes to the destruction of habitat and the introduction of new species – especially invasive species. This is because these approaches represent examples of fixed cohesion and dis cohesion at the ecological level, and so run counter to the principle of responsive cohesion. Instead, the theory of responsive cohesion suggests that we should respect the range of ways in which different species in different areas have evolved to interact with each other, and that we should actively disvalue the breaking down of these patterns of responsive cohesion.

Third, the theory of responsive cohesion is applicable to environments of all kinds (i.e., the built environment as well as the natural environment) precisely because it is pitched at such a fundamental level, namely, the level of forms of organization – and *everything* can be said to be organized in one way or another. This means that the theory of responsive cohesion is a truly *comprehensive* theory. It has something to say about what is and what is not valuable with respect to *any item of interest at all*; specifically, it says that expressions of responsive cohesion are more valuable than expressions of fixed cohesion and dis cohesion. Thus, when it comes to the built environment, the implication is clear: buildings that *answer to* or that are *responsive to* their environments are more valuable than those that are not. And this applies not only in obvious physical senses, but even at the level of design. Thus, if two buildings have roughly the same environmental impact in physically measurable terms but the design of one is such that it fits in, answers to, or is responsive to its context in a way in which the other build is not, then the theory of responsive cohesion clearly suggests that the former building is of greater value.⁸

I have now (very briefly) argued that the theory of responsive cohesion is an adequate approach to the New Ethics on the grounds that it (i) *does* take into account the legitimate moral claims of sentience; (ii) *does* do justice to holistically inclined ecologically informed judgments; and (iii) *is* applicable to environments of all kinds, including the built (or humanly constructed) environment. But, of course, fascinating questions still remain about clashes that might arise between these various aspects of the theory. The most significant one in my view is that of the problem of sentient invasive species. This is because

the theory of responsive cohesion provides grounds for valuing both sentient creatures *and* the preservation of ecological integrity (which is more than is done by its polarized rivals, i.e., the animal welfare approach and strong versions of the holistic ecological integrity approach, since these focus exclusively or at least overwhelmingly on one side or the other of this clash).

But does the theory of responsive cohesion provide a means for resolving this crucial tension? The answer is a clear “yes.” A central further development of the theory of responsive cohesion, which I have simply not been able to explore in any detail in this brief outline, is the distinction between *internal* responsive cohesion and *external* or, better, *contextual* responsive cohesion. Let me illustrate this distinction using the example of buildings. Two buildings might be judged to be of similar value in terms of their internal responsive cohesion, that is, in terms of the ways in which the various elements or salient features that constitute each building can be said to answer to or be responsive to each other. In this case, the two buildings are of similar value considered in isolation (i.e., in terms of their *internal* responsive cohesion). But buildings don’t exist in isolation. Like everything else, they exist in context. And one of these buildings might reasonably be judged to answer to or be responsive to its environmental context to a far greater degree than the other (i.e., in terms of its *contextual* responsive cohesion). Thus, according to the theory of responsive cohesion, the building that exhibits both internal *and* contextual responsive cohesion is clearly more valuable than the building that exhibits the same degree of internal responsive cohesion but a lesser degree of contextual responsive cohesion.

The situation is similar in the case of invasive species. Considered in isolation, two sentient species might be considered to be of similar value in terms of the degree of internal responsive cohesion of their neural activity, which finds expression in each of them, and each of them alone, as their capacity for experience (i.e., they might be considered to be about equally sentient). But species don’t exist in isolation any more than buildings or anything else does. Thus, considered in terms of the extent to which they answer to or are responsive to their context (i.e., considered in terms of their contextual responsive cohesion), the indigenous sentient species is clearly more valuable than the invasive sentient species precisely because the indigenous sentient species has a history of perhaps many millions of years of responding to and being shaped by the environment in question. It is what it is in virtue of its ecological context. In contrast, the invasive species is what it is in virtue of some *other* ecological context. Moreover, if the introduced species is a genuinely invasive species (as distinct from an ecologically benign intruder) then it will destroy at least some of the responsive cohesion that exists in its new environment. Thus, the *invasive* species has two points against it in terms of contextual responsive cohesion: first, it does not exhibit anything like the same degree of contextual responsive cohesion as its indigenous neighbours, and, second, in virtue of being an *invasive* species, it will destroy some degree of the contextual responsive cohesion that does exist in its new environment. Moreover, since we can never be sure whether or not an introduced species will turn out to be ecologically benign or invasive,⁹ the principle of responsive cohesion clearly suggests that we should hold a presumption in favour of regarding any introduced species as a potentially

invasive species, which is to say a destroyer of responsive cohesion at the ecological level.

I hope that these remarks are enough to suggest that the theory of responsive cohesion can account in a systematic way for our considered judgments in regard to the value of sentient beings considered as individuals, the value of ecological wholes, and the relative value of individual sentient beings considered in the context of different kinds of wholes (i.e., in terms of their contextual responsive cohesion). I also hope I have conveyed a sense of the *comprehensive* applicability of the theory of responsive cohesion, since this is guaranteed by the fact that the theory is pitched at the fundamental level of forms of organization – and, as I have said, *everything* is organized in one way or another. For now, however, I must leave it to the interested reader to pursue these applications in whatever contexts they see fit.

Notes

1. Sigmund Freud, *The Future of an Illusion* (first pub. 1927 and 1928 in German and English respectively) in Albert Dickson, gen. ed., *Civilization, Society and Religion*, The Penguin Freud Library, Vol. 12 (London: Penguin Books, 1991), p. 214.
2. See, for example, John Passmore's already classic *Man's Responsibility for Nature: Ecological Problems and Western Traditions*, 2nd ed. (London: Duckworth & Co, 1980). Passmore argues that throughout the history of Western philosophical thinking "It is constantly assumed that whatever exists does so *only for the sake of the rational*" (my emphasis, p. 15) and that "In so far as cruelty to animals was wrong, this was only because, so it was argued by Aquinas (C13th), by Kant (C18th), and by a multitude of lesser thinkers, it might induce a callousness towards *human* suffering. There was nothing wrong with cruelty to animals *in itself*" (p. 113).
3. The term *Gaia* is often used these days to refer to the whole planetary ecosphere as a quasi-living entity (not a *conscious* living entity; rather, simply an entity that is governed by the kinds of complex self-renewing processes that characterize living systems in general). This term for the ecosphere derives from the name *Gaia*, the Greek goddess of the earth (from *gaia*, the Greek word for earth) and has been popularized through James Lovelock's influential "Gaia hypothesis." See James Lovelock, *Gaia: A New Look at Life on Earth* (Oxford: Oxford University Press, 1995).
4. Warwick Fox, "A Critical Overview of Environmental Ethics," *World Futures* 46 (1996): 1–21. Reprinted in Ruth Chadwick and Doris Schroeder, eds, *Applied Ethics: Critical Concepts in Philosophy*, Vol. IV (Environment), (London: Routledge, 2002), pp. 23–47.
5. Bob Holmes, "Day of the Sparrow," *New Scientist*, 27 June 1998, pp. 32–35, p. 35. See also Chris Bright, *Life Out of Bounds: Bioinvasion in a Borderless World* (London: Earthscan, 1999).
6. Holmes, "Day of the Sparrow," p. 35.
7. My forthcoming book-length development of this theory is tentatively entitled *Responsive Cohesion: An Ethical "Theory of Everything."*
8. For an extended development of this argument see Warwick Fox, "Towards an Ethics (or at Least a Value Theory) of the Built Environment," in Warwick Fox, ed., *Ethics and the Built Environment* (London: Routledge, 2000), pp. 207–221.
9. See Chris Bright, *Life Out of Bounds: Bioinvasion in a Borderless World*.