

Editorial remarks

Experientia has begun to publish in loose sequence review articles devoted to the general subject of forest decay ('Waldsterben') in a continent-wide polluted environment. Parts I, II and III appeared in the March, May and September 1985 issues of the journal and concentrated on detailed analyses of various basic biological mechanisms possibly underlying the phenomenon of widespread forest destruction. In the present issue we are featuring an essay by Professor K. M. Meyer-Abich, of the University of Essen, who as a philosopher revived 'Naturphilosophie' and is currently Minister of Science in the state government of the City of Hamburg. His paper is a consideration of the philosophical and sociological implications of the phenomenon which has been having an increasing impact on the public consciousness, particularly in West Germany, one of the most severely affected countries in Europe. We think such an essay is justified because during the dramatic developments of forest decline in recent years, mankind – whether considered in the light of individual or collective ethics – has shown a deplorable lack of understanding of the theory and practice of longterm survival of the human race. There is no question that much more basic scientific research into the underlying causes and biological mechanism of large-scale forest decline is required. But we also need to build a community of responsible specialists, willing to come together beyond the confines of their respective fields of research and to think about the underlying human behavioral problems that have lead us to the dramatic and frightening situation in which we find ourselves today. We hope that the following essay will stimulate others to reflect seriously upon the problem of how mankind should and must react in order to ensure its own longterm survival. A true 'Science of Survival' must be aimed at finding practical solutions to the major ecological problem facing us today.

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Peace with nature, or plants as indicators to the loss of humanity

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Summary. 1) Peace with nature means that human relations with other beings are controlled constitutionally within a community to which not only mankind belongs. Constitutionally restricted and in this sense non-violent, human domination is legitimate. 2) What we are allowed to do depends on who we are. Mankind is the species in which nature emerges to express herself in language, art and reason, and in doing so she moves herself forward with us. 3) How we should relate ourselves to nature also depends on our understanding of nature. Nature basically is acting nature, or creative power, and in this sense equally is the nature of the beings of nature. 4) Some artifacts are more natural and correspond to peace with nature better than others which are unnatural and violate peace with nature. Also in our fellow world, and even apart from man's influence, nature is what *ought* to be. 5) The technologically less advanced countries should not repeat the mistakes of the industrialized countries. The traditional pattern of industrial economy cannot be generalized to all peoples and violates peace with nature. 6) Plants are not only most sensitive indicators to environmental pollution but to the loss of humanity as well.

Key words. Forest decline; peace with nature.

Plants are known biologically to be very sensitive indicators to environmental pollution. More than that, it is now becoming clear that they are equally sensitive indicators to the loss of humanity.

That the forests are dying is, in my opinion, not just a management mistake which we have made. I consider the problem to be rooted in our way of conceiving the rest of the world as nothing but resources for human purposes. It is not a management mistake then, but a problem of hubris. To make this point clear, I refer to custom among many primitive peoples of apologizing before cutting a tree. We may ask here: What did the apology help the tree if it is cut anyway? The answer is: The apology did not help the particular tree, but the custom of apologizing

before cutting trees saved the life of all those trees the cutting of which would have been inexcusable.

Instead of reintroducing apologies I would recommend to consider trees as well as other natural fellow beings as legal subjects. My argument, however, hinges on the observation that, given our way of thinking about trees, we shouldn't be too surprised that trees don't survive the treatment which corresponds to our thinking.

To illustrate my point I take two examples from contemporary papers, and I am choosing papers of philosophical colleagues because philosophers sometimes have the virtue of making something clear to the point of absurdity. The first example is, not mentioning any names:

'An automobile needs gas and oil to function, but it is no

tragedy for it if it runs out – an empty tank does not hinder or retard its interest. Similarly, to say that a tree needs sunshine and water is to say that without them it cannot grow and survive; but unless the growth and survival of trees are matters of human concern, affecting human interests, practical or aesthetic, the needs of trees alone will not be the basis of any claim of what is ‘due’ to them in their own right.’

Overlooking the first sentence’s premise – that a situation for a car can be tragic or against its interest – it is monstrous to say that a car without gasoline and a tree without light and water are in a ‘similar’ situation; the tree’s dying is completely ignored here as if it were nothing. A car without gasoline can be suitably preserved, but a tree without light and water dies. Can we be justified to consider the death of a tree different from that of a human being without being accused of lacking all moral judgment and sensitivity? I am not arguing that the death of a plant is to be considered the same as the death of a man. Plants are plants and men are men, so that a plant dies a plant’s death and a man dies a man’s death. But how do we dare ignore that ‘sameness’, wherein – in both cases – a living creature dies and goes back to the earth? Moreover, there are such intermediate cases as ‘human vegetables’.

In death what we cannot hold passes away. But to acknowledge plants only insofar as we can hold them precludes experiencing their death. To acknowledge only what we can hold, moreover, generally means that we miss the natural context of life or the world’s animation. As Gustav Theodor Fechner said, ‘Not what is available but what is not available in a subject makes up its soul’. The time might come when those philosophers who at present consider plants similar to machines will refer to Fechner’s book on plants’ souls (Nanna, oder über das Seelenleben der Pflanzen, 1849) as a proof that philosophy has not always disregarded these most sensitive beings.

My second example is taken from the background idea that animals can suffer and are *therefore* not to be treated as mere resources, while plants apparently do not suffer, however we treat them. Consistently, the question may be asked:

‘Why, if leaves and trees have no capacity to feel pleasure or to suffer, should I tear no leaf from a tree? Why should I respect its location any more than that of a stone in my driveway?’

These are true questions. We really ought to know why leaves should not be torn from trees arbitrarily. The authors, however, believe that there is no harm in tearing leaves and that a tree without water is in a similar situation to an automobile without gasoline. And this is what I mean by saying that plants are not only very sensitive indicators for pollution but also of the loss of humanity. Can we really be surprised that the forests are dying when industrial societies simply lack the most elementary recognition of life and death in trees?

Peace with nature is the alternative which I suggest instead of the dominant anthropocentric view that the non-human world is nothing but resources for our purposes. As long as we do not learn to think newly and better about our fellow world, the same mistakes will be made again and again. The forest’s dying gives us a chance to

become better human beings at peace with nature, of which we are a part.

1) *The idea of peace with nature*

The basic idea of peace with nature is most easily explained by referring to the distinction between three kinds of political ambition drawn by Francis Bacon, the English philosopher. Bacon has been blamed so much for his pleading to conquer nature by following her rules that I gladly take the opportunity to refer to him more favorably here. The most elementary political ambition, he said (in his *Novum Organum*, 1620; part I, section 129), is to get power over one’s fellow human beings. A second and more noble stage – which he himself reached as Lord Chancellor – is to seize power for one’s own country among other countries. The highest and most excellent level of power, however, is, according to Bacon, man’s domination over nature. He himself reached this stage when he was dismissed from office and continued as a philosopher.

Now let us call *peace that political order in which the given conflicts are settled nonviolently*. In peace, then, power may not be exercised in the form of violence. Relating this to Bacon’s hierarchy of political ambition and power, we must admit that non-violent forms of exercising power have so far only been established at the lowest of the three levels. An adequate international order, although desperately needed, is not yet in sight, and the same is true with respect to man’s domination over nature, whether in national or international regimes. Instead, violence is exercised between nations as well as by mankind with respect to nature. Peace, then, as far as it goes, has only been achieved on the national level, and even this only in some of many nations. Internationally, peace is missing and is missed by the peoples. Peace with nature, however, is not only missing but has not even been generally identified as being missed. This is where my message comes in.

The basic idea is that peace on the third level of power ought to be found and implemented on the same lines as on the first level, and that this also applies to the second level. Nationally, the achievement that conflicts are settled nonviolently has been brought about by *law*. Laws and justice have always been the core of political culture. In my view, particularly the modern constitutional state is one of the greatest achievements in political culture.

In international relations, we are still on the level of feuds, or the right to private warfare, and with respect to nature this is even more so. Power, however, should only be exercised constitutionally, as we have learnt from human history. *Peace with nature means that human relations with other beings are controlled constitutionally within a community to which not only mankind belongs*.

More specifically, the constitutional state historically came into being as a follow-up of the absolutist state. Equality with respect to the absolutist ruler, so to speak, has been replaced by equality before the law. Now, man’s domination over nature as exercised nowadays may be called absolutist, as I will explain. My suggestion is, therefore, to determine our relation to nature on the same lines as, in human history, absolutism has given way to

the constitutional state. This, of course, leads towards a legal community of nature between mankind and other beings.

To give an example: As soon as trees are recognized as fellow subjects in a legal community of nature, we can no longer simply take them as resources for our purposes. Instead, our interest in cutting trees – to build a house, to produce paper, or to remove a forest for traffic reasons – ought to be weighed against the tree's interest in not being cut. This does not mean that no more trees will be cut, but that only those trees will be cut for which we seem to have justification. Like the animistic apology, this will save the lives of all those trees whose cutting does not seem to be justified after careful consideration. Of course, against our attempts at justification, the tree will have to be defended by a counsellor in court. The counsellor being human, he can never be really sure whether he really knows what his client's interest is, but this is also the case when human beings are defended in court. One might object that even now no tree is cut without justification. This may be so, but the justification is only with respect to opposing human interests, e.g. traffic interests vs leisure interests, or lumber business interests. The tree's own interest is not considered nowadays.

Before discussing the rights of men and other creatures in any detail, the *criteria* have to be considered according to which justice and injustice in nature can be distinguished. These criteria, and especially the two most elementary ones, are the topic of this paper.

Which criteria, however, are the most elementary ones in human relations to nature? My starting point is that what we have to do or are allowed to do depends on who – explicitly or implicitly – we think we are. Our actions express our idea of who we are. A person who, for instance, helps an old lady to cross the street considers such an act an intrinsic part of his nature. And one who does not help her but thinks: 'Who am I that I should do so?' answers, through his behavior, the very question he asks; namely, who he is. The most basic question in relating ourselves to nature, therefore, turns out to be: *Who are we with respect to nature?*

Now it can easily be seen what my next question will be, since how we treat nature will not only depend on premises about humanity, but also on our concept of nature. Our problem is a relationship, the relationship between man and nature, and this involves dependency on both sides, man and nature. So my second question will be: *What is nature?*

2) *Who are we with respect to nature?*

The original connection between mankind and the non-human world is that of natural history. The age of the universe is some ten billion years, and the age of this planet several billion years. The first vertebrates came into being a few hundred million years ago. Finally, during the last hundred million years, birds and mammals also appeared on earth, and these were fairly recently joined by man; not more than one or two million years ago. Man, therefore, together with animals and flowers, trees and stones emerged from the history of nature as the particular species *homo sapiens* among hundreds of mammals, thousands of vertebrates and millions of other

species on the tree of life. We are not alone in the world. The history of nature may or may not have happened as Darwin thought, but I am only referring to the fact of natural history here.

In 1873 Nietzsche invented a parable which read as follows: In some very remote outpost of the universe there was, once upon a time, a celestial body on which clever animals invented knowledge. This was the most arrogant and mendacious minute in the history of the world, but only a minute. After a few breaths of nature the celestial body grew stiff and the clever animals had to die.

The message of the parable is that humanity is not the measure of the universe. We, however, live 'as if the hinges of the universe were centered in our minds' (als ob die Angeln der Welt sich in ihm – dem menschlichen Intellekt – drehten, Nietzsche, Kritische Studienausgabe 1980, Vol. I, p. 875). Indeed, the time in which knowledge has spread from East to West around the world, has so far been only a minute in the history of the world, and already we believe that everything is centered in mankind, as if the rest of the world were nothing but at our disposal. Meanwhile, however, it seems that also this pride goes before a fall, and that human hubris may even be the reason for our having to die. (It happens that knowledge began below a tree by eating fruit).

In Nietzsche's parable the clever animals who had invented knowledge had to die because the planet grew stiff or froze. Even if this expectation was unjustified, it may be true that mankind will have to die since we treat nature like a self-service shop without a cashier, live at the expense of our fellow beings and jeopardize the basis of life. Meanwhile the environmental crisis has reminded us that the basis of life in nature happens to be the basis of human life as well, so that the destruction of the environment emerges as a kind of suicide. The forest's dying, especially, is a massive impairment of human interests. Yet this does not make any difference with respect to the hubris because even if by now we tried to save what still can be saved – and to some extent this is done in environmental policy – this happened or happens only in our own self-interest, and not for the sake of nature or of the whole to which we belong as a part. We still look at the rest of the world like an *absolutist ruler*: 'Nature - that's me', and have learnt nothing more than that a more intelligent management of the resources is necessary for our own sake and survival. But was this self-centeredness not the basic reason for the crisis, being the blindness in which we brought destruction to our fellow beings?

To live as if the hinges of the universe were centered in our minds is based on a concept of humanity which is usually called anthropocentric. That man (*ánthropos*) should find his place at the center is certainly justified with respect to social and political institutions within mankind, meaning that these institutions should correspond to human needs. If, however, anthropocentrism is generalized from mankind to other beings it means that human self-interest becomes the hinge of our relations with the rest of the world, so that man claims to become the measure of the being or not-being of everything. Our will be done, industrial society prays. But the center of human society is not necessarily also the center of the community of nature.

Even the term environment is anthropocentric because it

denotes what is around us and as it appears when viewed from the position of man in the center. Since anthropocentrism is not justified by man's position in natural history, I prefer to call the world beyond mankind not the environment but 'our fellow beings', or 'fellow world' ('Mitwelt' instead of 'Umwelt', in German).

When Jacob von Uexküll coined the term Umwelt, or environment, he thought of the plurality of environments, every species having its own. The human environment, for instance, is the stage on which human life in the universe is enacted. Instead, we have misunderstood the whole universe to be nothing but a stage for human life. Anthropocentrism however, deserves a careful critique philosophically as well as theologically. I confine my objections to a few broad outlines here. The easiest case is the *religious critique*. In Christianity man is created as God's image. God being the creator, we are thus expected to treat our fellow beings in the spirit of the creator; that is, to respect every being as a part of the whole in its own right. It is true that man has even been entrusted with domination in nature, but certainly only on behalf of the creator and in such a way that we will have to justify ourselves for our care of our 'fellow world' when we ultimately stand before him again. And according to the New Testament, the universe is created through Christ and towards him (di'autoû kaî eis autòn éktistai, Kol. 1.16), not by man and towards man. If we are Christians, therefore, we are not allowed to conceive the world on the lines of anthropocentrism. The same seems to be true in Buddhism, except for the plants, unfortunately.

The *philosophical critique* of anthropocentrism is more subtle. Basically, my argument is that, being part of nature ourselves, we cannot consistently treat other parts of nature as completely different from mankind. If, for instance, we consider the rest of the world as nothing but material or a bag of resources at our disposal, man himself – belonging to the material world – can come to be considered to be a resource as well, and this is what happens with 'human resources' in the economy.

The kinship between, for instance, man and trees which follows from our common roots in natural history does not mean that men are trees or that trees are men. So it would be a mistake to treat trees like men; trees are trees and they are not men. But insofar as trees and men are related through natural history, they are the same – namely living beings as opposed to minerals. More than that, they are also jointly different from other living beings; men and plants – together with animals – are eukaryotes and not prokaryotes (bacteria).

The kinship of men with horses, dogs, cats, and other mammals may seem to be more obvious than their kinship with the trees because in natural history man came into being with the mammals. But still the same is true as in our relationship to plants: Dogs are not men but dogs, and it would be inappropriate as well as entirely mistaken to treat a dog like a man. However, insofar as dogs and men are naturally related, they are the same, being equally mammals. And as far as this equality goes, dogs and men should be treated corresponding to this equality – that is, equally. Hasn't it come to be one of our most fundamental legal principles that two subjects or cases should be treated equally according to their similarity or sameness and differently according to their dissimilarity

or distinctiveness? Considering man's affinity to the rest of the world, it might be a good idea to treat other beings more humanely in the future.

Let me assume now that a careful analysis leads to the result that anthropocentrism is a wrong answer to my question: Who are we with respect to nature? What, then, is the right answer? To conclude that, if we are not the center, we are nothing and nowhere, is still to be obsessed by the same arrogance. Let us admit, then, that human history is only one thread in the evolution of nature, one thread among others in the course of life. This thread, however, is not the same as others, and since it is the one we hang onto, we ought to find out how it differs in particular.

My answer is that man is the *Zôon lógon échon* in the history of nature: the animal whose physical constitution implies the faculty of speech. In the context of natural history I understand this to mean that *nature comes to express herself in language, or reason, through the human species*. In German, this is said more easily: *Im Menschen kommt die Natur zur Sprache*. Nature speaks through mankind. That elements of speech are also found in other species does not change the situation. Rather it is important to realize that human language is not the only language in nature. We should be careful not to miss what mountains and rivers, animals and flowers can tell us when we listen to them. Still, in human language a new level of consciousness is reached in the history of nature. Verbal language is also only one of the different forms in which nature emerges to express herself in mankind. Another form is the nonverbal arts. In my understanding of language and reason or *lógos*, philosophy and science, religion and poetry, painting and music belong together. About two million years after the appearance of man in natural history, nature in Pre-Socratic philosophy even finds a name for herself, namely *phýsis*, and finds a way to express herself in *lógoi*. Aware of the *lógos* – listening to *phýsis*, as Heraclitus put it (fragment B112) – we perceive human history in nature as nature becoming aware of herself by way of language. The question then is: Which task or responsibility should the faculty of speech and reasoning respond to?

Human thought, according to Plato, is the dialogue of the soul with itself. To identify nature as the basic subject in this dialogue leads to our overcoming the absolutist, or anthropocentric, view: 'Nature – that's me' (La nature, c'est l'homme). Instead, we recognize that nature is what we are: *we are nature*, and we understand ourselves as belonging to nature. As Goethe and Tobler thought: Nature! We are surrounded and embraced by her – unable to step out of her and unable to enter deeper into her. Unbidden and without warning, she draws us into the circle of her dance and *continues to move with us* until we are exhausted and fall from her arms. (Works, Hamburg ed., vol. XIII, p. 45; italics added.) – Natur! Wir sind von ihr umgeben und umschlungen – unvermögend aus ihr herauszutreten, und unvermögend tiefer in sie hineinzukommen. Ungebeten und ungewarnt nimmt sie uns in den Kreislauf ihres Tanzes auf und *treibt sich mit uns fort*, bis wir ermüdet sind und ihrem Arme entfallen.)

That nature is propelling herself forward with us is certainly not to deny that mankind has a special role in natural history. In fact, as Goethe put it elsewhere, the

universe could even be expected to 'burst out into jubilation' (l.c., vol. XII, p. 98) if it were brought into its own by man's living life to the full. As opposed to that, the industrial economies treat our fellow beings as if they were nothing but at our disposal. The crown of creation, however, should crown not only itself, but the world as a whole ought to be conceived and treated as worth crowning.

That man ought to identify himself with respect to the universe – and not the universe with respect to man – is also the message of the 8th Psalm: 'When I see the heavens – who is man that you bear him in mind?' More than that, from St. Paul's letter to the Romans we learn that our fellow creatures are even *expecting* something from mankind. Nature is *suffering*, St. Paul said, nature is not idyllic. And because this is so, she is expecting from man a manifestation of hope and freedom. This may, until now, never have been realized, or really believed, in Christian ethics. It seems to me that it is our task ultimately to become conscious of nature's expectation for the first time in the history of mankind.

3) What is nature?

This question had to be touched already because the definition of man at the same time defines the rest of the world with respect to him. Also, if man belongs to nature as a part to the whole, what the part is cannot be stated without referring to the whole. The answer given in the preceding section: *The human species is the one in which nature emerges to express herself in language and reason, and in doing so she propels herself forward with us*, therefore, already implies a specific understanding of nature. Obviously, this is not our everyday concept of nature. An average European, for instance, considers nature to be the green world which is perceived, or missed, outside the window; that is, animals and flowers, trees and stones, light and wind and water, heaven and earth. The plant's green has justifiably become a symbol for all this because light and air, water and soil (Empedokles' four elements) grow together in a plant's existence – and none of them can be lacking if the plant is to grow. Moreover, plants are the basis of animal life. In this sense, animals are also part of the green world of nature. Among them, even man himself belongs to nature, which is observed especially in the case of sickness.

In our everyday understanding of nature, therefore, she is a realm of beings, beings of nature. Apart from nature, we observe another realm of beings: society, the socio-sphere or the historical world of humanity. Between nature and society, however, a realm of indifference or a no-man's land remains. This is the realm of artifacts. Houses and vehicles, factories and communication systems, for instance, are generated by the interaction of society and nature, so that they belong to neither or to both of them. And this is the realm in which at present the deterioration of the environment is apparent, so that just this ought to be discussed.

A solution can be tried in two opposite ways. One is that the term nature is restricted to wilderness. Up to the middle ages, wilderness in Northern Europe practically meant forest. In this sense, however, 'nature' cannot be

considered a problem in Europe. Understood to mean wilderness, the term nature is rendered completely useless in environmental policy. Even the most 'natural' – and as such conserved – landscapes in Central Europe, for instance, are shaped by human culture, mostly by agriculture – when it had not yet become agroindustry. A more philosophical objection is that – if our question is how and how not to relate ourselves to nature – we are generally simply not interested in wilderness, since places where men live usually are not wilderness. And what we want to find out is how to treat our fellow beings *where we are*, and not where we are not. As Christians, moreover, our task is to take care of our fellow beings, human as well as non-human, and not to leave them alone, submitted to suffering.

The second solution is to call nature everything that obeys the laws of physics. Even if this leads to calling high-voltage transmission lines, motor airplanes, herbicides, and plastic bottles, nature – isn't man part of nature so that what is created by him should be included? Again I have two objections. The first is as before that the physical law idea of nature does not help us at all as a discriminating concept in the development of technology. Environmental protection as well as destruction obey the laws of physics. This understanding, therefore, does not help us in tackling present-day questions in the light of a 'practical philosophy of nature' (K. M. Meyer-Abich: *Wege zum Frieden mit der Natur – Praktische Naturphilosophie für die Umweltpolitik*, München 1984). More than that, the physical law concept of nature generally amounts to calling all material and energy systems nature, since matter and energy are the subject of physics. From the theoretical concept of matter, however, it is only a very small step to the practical concept of *material*, or economic resources. The homogeneity of the (classical) physical perception of the world, therefore, paves the way to the homogeneous treatment of everything as material, or as a resource in anthropocentric practice. This is an example of why the Marxian dictum: 'Philosophers have so far only interpreted the world, but the real issue is to change it', in my view should be reversed by now: 'We have changed the world too much – let's step back for a critique of our conceptual interpretation, which is leading our actions, especially in industrialization.' The environmental crisis has turned out to be a mental crisis.

Samuelson's textbook on economics may perhaps serve as a representative example for the correspondence between the matter and material, or resource, interpretations of the world. The book has a very detailed index (30 pages), but there is no reference to nature – irrespective of the fact that the economic process is based and rooted in nature at both ends (resources in/garbage out). Instead of nature, between 'NATO' and 'needs' only the heading 'natural resources' is found, and even this only with the reference: see resources. Looking up 'resources' then, one is referred to the chapter on underdeveloped countries. Evidently, in those parts of the world, nature still has to be taken into account. One also learns that there are two kinds of resources, natural and human, and thus the implications of Cartesianism are fully realized.

Production functions in neo-classical economics confirm the impression given by Samuelson's textbook. Although

some economists, like Kapp and others, have from time to time endeavored to consider the natural basis of life and of economic theory, the dominant stream of thought in economics has unbrokenly retained its roots in Locke who thought that economic production is 99% a result of human labor and only 1% due to nature.

To sum up: Neither wilderness nor what is subject to the laws of physics can provide an adequate understanding of nature that in turn could help us to relate to the world in which we live in a new and in a different way. Using one definition, all artifacts are *excluded*, and with the other they are all *included*. What we need is an understanding of the human relationship to nature to which some artifacts correspond (in peace with nature) while others do not, violating peace with nature.

As opposed to this, an everyday understanding of 'nature' draws at least a distinction between a garden and a garbage deposit. Could not the – so to speak, healthy – feeling that this distinction ought to be observed be framed conceptually?

Being interested in practice, it seems to me that there is a practical meaning of 'nature' which so far has not been taken into account. I am referring to what is called *natural behavior*, in the sense of the unconstrained behavior of men. This is when somebody casually does by himself what he does, and is not led or compelled to do so by external motives. An opinion also is called natural when it occurs to us spontaneously – as in Plato's dialogues – and is not forced upon us.

The same conception of nature is implied when beings that develop by themselves – plants and animals, for instance – are *themselves* called nature. Then, however, the basic meaning of nature is not a realm of beings, the *beings of nature*, but now our attention is drawn to the *nature of these beings*. The truth behind the everyday understanding of nature is thus that the beings of nature are called nature *because* the nature of things and beings (*natura naturans*) comes into being here and lets them be what they are (*natura naturata*).

Nature now emerges as being creative power, and this leads me back to Goethe because the condition which he gave for nature bursting out into jubilation (*dann jauchzt sogar das Weltall auf*) was precisely that of the healthy nature of man acting as a whole ('wenn die gesunde Natur des Menschen als ein Ganzes wirkt', HA XII.98). In my understanding of man, the nature of man is nature herself, the one nature, as she comes into being humanely.

Nature generally, then, is acting nature, or creative power, and in this sense is equally the nature of the beings of nature. This is my answer to the question what nature is. And referring to her, the realm of beings of nature is called nature: Wind and rain and the ocean, light and landscape, animals and plants are nature insofar as acting nature lets them emerge as being what they are. In this

sense, nature may thus finally – as in everyday language – again be considered a realm of certain beings, namely those which are in harmony with the one nature.

4) Conclusion

My conclusion is that *some artifacts are natural* – those which have been produced by healthy nature acting as a whole in man (rephrasing Goethe) – *while others are not*. Now I assume that those artifacts, or technologies, which turn out to be natural will be non-violent, and in this sense give way to *peace with nature*, or peace of the part with the whole. Non-violence is especially a character of art, so that art redeems nature, and technologies are the better, the more they may be considered to be art. Of course, the criterion of non-violence has to be developed in much more detail. Even then I assume that it will not be easily applied to discriminating between natural and unnatural technologies, but this is the case with most ethical criteria. And still we are much better off with a complex answer to the right question than with an easily-produced answer to the wrong question.

In the industrialized societies, peace with nature is beginning to emerge on the horizon as a new paradigm of human relations to nature. For those countries to which industrialization so far has brought more poverty than wealth, the problem is more complicated. Obviously it would be a mistake to follow yesterday's paradigm of economic development in the technologically advanced countries. Not only can it not be generalized for all peoples, but – as argued in this paper – it is also a wrong pattern for relating ourselves to nature. I do not know an appropriate economic paradigm for Third World countries. An optimistic outlook, however, is the following: *The mistakes which have been made in the industrialization of the North have nevertheless led to a level of technology at which those mistakes can from now on be more easily avoided. If this were so, Third World countries could finally really benefit from Northern industrialization.*

One final conclusion remains to be drawn. When nature in man does not necessarily act healthily or non-violently, the same must be expected in our fellow world as well. And in fact, as St. Paul said, our fellow beings are suffering, suffering from violence and cruelty not only by man. Not everything that happens in the non-human world, therefore, may be termed natural; not even without human interference, if my interpretation of the meaning of nature is accepted. Rather, in Ernst Bloch's words: 'Ultimately manifested nature, like ultimately manifested history, lies on the horizon of the future' (*Das Prinzip Hoffnung*, 1959, p. 807).