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- ⁵ Tymieniecka, "First Principles", *op. cit.*, p. 21.
- ⁶ A.-T. Tymieniecka, *Logos and Life*, Book 1: *Creative Experience and the Critique of Reason*, *Analecta Husserliana*, Vol. 24 (Dordrecht: Kluwer Academic Publishers, 1988), pp. 15–16.
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- ¹⁷ *Op. cit.*, p. 418.
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- ²⁴ *Ibid.*
- ²⁵ A.-T. Tymieniecka, *Logos and Life*, Book 3: *The Passions of the Soul and the Elements in the Onto-Poiesis of Culture*, *Analecta Husserliana*, Vol. 28 (Dordrecht: Kluwer Academic Publishers, 1990), p. 137.
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- ³¹ *Ibid.*, pp. XXXIV–XXXV.
- ³² *Ibid.*, pp. XXXIII, XXXV.
- ³³ A.-T. Tymieniecka, "From the Sacred to the Divine", *op. cit.*, p. 11; p. 17; p. 18.
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INDEFENSE OF A MOTH. THE SEARCH FOR FOUNDATIONS OF ENVIRONMENTAL ETHICS

CENTRAL QUESTION

My dissertation "Über Leben" (Würzburg: Ergon, 1996, 400 pp.) (several meanings: beyond life, about life and survival) attempts to answer the single question: How is the preservation of "pterophorus pentadactylus" to be accounted for? This inconspicuous species of moth is scarcely known and its extinction is irrelevant to statistical ecology.

By going through various fields of knowledge (technology assessment, generation ethics, theology of creation, landscape aesthetics, natural philosophy), the different argumentations are critically analysed as to the extent that they can contribute to the defence of this moth. At the same time, it is methodically doubted that natural preservation can be totally translated into motives for human preservation. Is there an ecological ethos which is neither motivated by pity for a tortured creature (individual human interest) nor by impending consequences for the natural balance (generic human interest)?

1. NEED FOR ECOLOGICAL ETHICS?

My investigation was, therefore, occasioned by the threat to species and organisms. The first critical question to be voiced is: Does not an ethic, which is need-orientated, lose its obligatory character because it has been already instrumentalized for a purpose (e.g. prevention of the extinction of a species)? It's therefore essentially a mistake to use the ecological threat as an opportunity not only to design an eco-ethic, but also to found such an ethic.

Ethics, however, do not assert values in order to make certain norms justifiable, but must put forward norms so that presupposed values are afforded support.

Hypothesis 1: Ethics cannot be founded on needs, but can be situation-orientated.

A discussion can too quickly end up facing the alternatives of own or natural rights vs. granted or awarded rights. If one asserts a natural right for whatever reasons, one exposes oneself to the accusation of committing the naturalistic fallacy, i.e. of confusing "is" and "ought", naturally given facts and moral obligations.

If, however, one asserts the juridical principle that "legal responsibility requires obligation responsibility" (only that which is ethically able has a right to be treated ethically), one cannot award the *moth p. p.* any natural rights. For humanitarian reasons, this position must, however, make exceptions for those who are only potentially ethically-capable. The under-aged, mentally immature, temporarily unconscious, comatose must also be allowed to keep their rights independent of their actual ethical capacity. This position thereby exposes itself to the accusation of the teleological fallacy, according to which everything which can achieve a certain state should also achieve that state.

Hypothesis 2: Whoever wants to avoid the natural fallacy will commit the teleological fallacy.

2. THE ECOLOGICAL CRISIS AND ITS PHILOSOPHICAL PREREQUISITES

At the beginning of the modern age, the classical concept of nature was questioned with increasing vigour as to whether it discerns the essence of things adequately, or whether it rather presents a superficial view of nature. Only when an object obeys the prognosis of a scientist, can a scientist ascribe certainty to his knowledge. For this, it was necessary to extend the human sensorium by developing technical equipment and dissecting one's research object (the "experiment"). In this way, a technosphere was introduced and a second-order nature began to emerge. As man became divorced from a nature of the first order, he was only aware of the efficacy of the new mechanical concept of nature and not of the desirability of its consequences, or indeed, its aim. From now on the project of world-humanization and the advancing mechanization of nature did not have to coincide. In order to prevent the technical advance from becoming circular and therefore ruthless, the memory of a given first-order nature, which represents the normal situation, has to be cultivated. Without such a memory there is neither measure nor limit.

Hypothesis 3: We must act in accordance with the memory of nature's normal situation and keep this memory in mind, in order to keep technical changes perceptible.

Only as the confidence in an inexhaustible nature began to falter and the globalization of cultural consequences became apparent, did the painful awareness of a world crisis break through. This can be documented by the year of publication of several leading books concerning central topics of discussion on this subject.

- In 1952, R. Jungk's "The Future Has Already Begun" formulated the first unease regarding the mechanization of everyday life and the landscape. The finiteness of aesthetic resources came to light.
- In 1962, R. Carson's *The Silent Spring* stresses the growing circulation of toxic substances (in particular DDT) and aroused shock at the inability to restrict the consequence of technology and the limited capacity of natural absorption.
- With the publication of "Limits of Growth", 1972 can be seen as the year in which the ecological discussion began. The "report" predicted the finite nature of economic resources and of the economic prosperity of industrial nations.
- In 1982, the German government's report on dying trees confirms "Waldsterben", the demise of forests. The concern about the finiteness of biological resources became public and official.

Together with this sudden turn from demanding a total availability of nature to the awareness of a total dependency on planet earth, several quite different alternative courses of action were proposed: panic-stricken deployment (a so-called "life-boat ethic"), a cynical last fireworks display of self-fulfilment, or rational resource allocation.

Although the collapse of the inexhaustibility paradigm resulted in a higher awareness of danger, it did not, however, elicit a higher degree of solidarity. Awareness of shortage does not necessarily produce an awareness of value. How broad the spectrum of eco-ethics is can be clearly seen on my map (Figure 1) of possible positions.

3. TECHNOLOGY ASSESSMENT

The first chronological and systematic reaction (to these developments) was a programme of self-restriction in order to cope with the shortage. The need for a higher degree of economization, together with the min-



In front of our hotel, first row from left to right: Tony Raczka, Jari Kauppinen, Christer Bjurvill, J. Ev. Hafner, Francesco Totaro; second row: Daniela Verducci, A.-T. Tymieniecka and Christine Berthold.

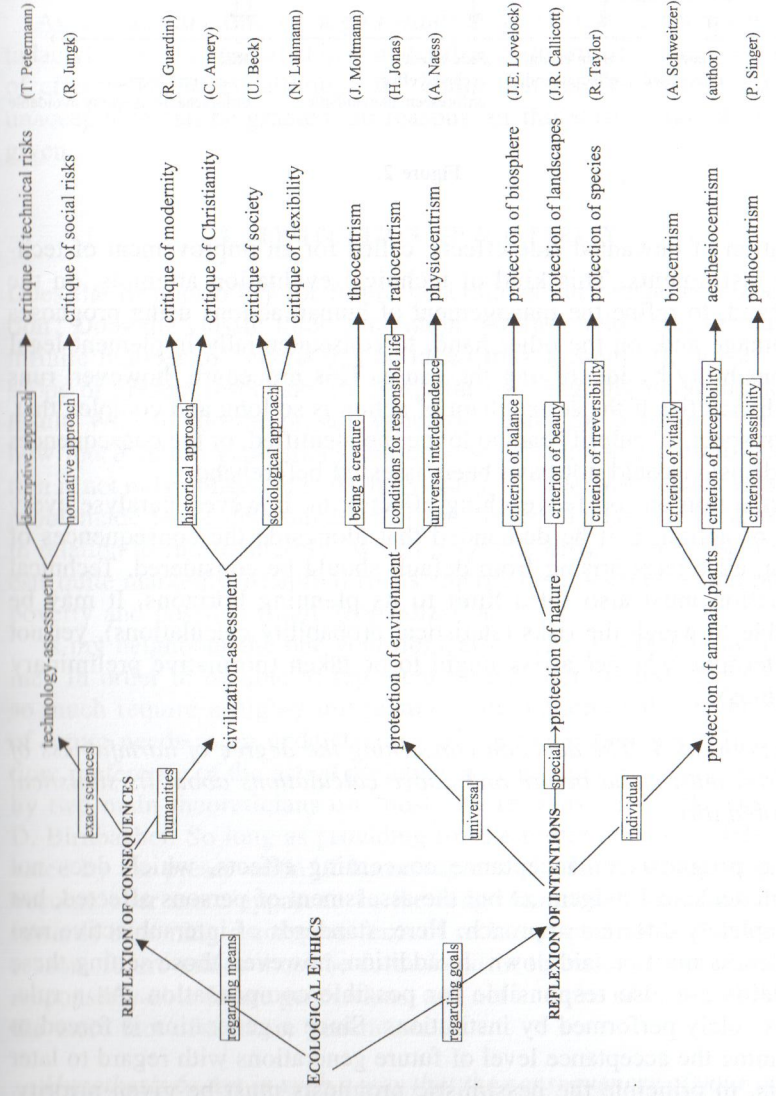


Figure 1.

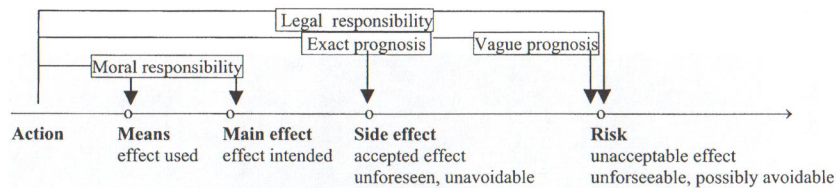


Figure 2.

imization of unwanted side effects, called for an improvement of technical instruments. This kind of technical evaluation attempts, on the one hand, to refine the management of human actions using prognoses of damage and, on the other hand, to consequentially implement legal responsibility by identifying the cause. This procedure, however, runs into difficulties if the serial chain of action is so long and complex that, in retrospect, a "culprit" can no longer be identified, or the consequences of a decision could not have been assessed beforehand.

Reflection on too far-reaching effects can, however, paralyse every form of action, if it be demanded that alongside the consequences of action, all effects arising from default should be considered. Technical evaluation must also set a limit to its planning horizons. It may be possible to weigh the risks (statistical probability calculations), yet not to determine whether a risk ought to be taken (normative preliminary decisions).

Hypothesis 4: The decision concerning the degree of harmfulness of a risk must stand before and above calculations about its statistical probability.

The prognosis of acceptance concerning effects, which does not include technical judgement but the assessment of persons affected, has a completely different approach. Here, standards of intersubjective reasonableness must be laid down. In addition, however, those setting these standards are also responsible for possible compensation. As a rule, this is solely performed by institutions. Since a generation is forced to determine the acceptance level of future generations with regard to later effects, in principle the pessimistic prognosis must be given priority. The absolute limit is the diminution of the ability affected persons to act, due to irreversible consequences.

Hypothesis 5: Act in such a way that future generations will remain able to correct the effects of your action.

As far as this line of argumentation goes, the pterophorus pentadactylus appears to fall at best under the prognosis of future acceptance of effects. However, although the claim that its extinction would be unacceptable can be granted, no reasons for this unacceptability can be given.

4. PROTECTION OF POSTERITY

Does the responsibility for future generations curb resource consumption? Does the classic three-generation contract hold here, or must an infinite number of generations be taken into account? If, however the scope of present responsibility is too far-reaching, discouragement will result. Why should the present generation carry the burden of deciding how much future generations can cope with? Thus the present generation is not only obliged to make provisions, but also to evaluate. Ethically problematic is the determination of the present demands (Third World) in relation to future interests, which may well differ from present interests quite markedly. Manifold rivals emerge here, such as actual present poverty and possible future jeopardization.

Is my neighbour the one genealogically or geographically nearest to me? In order to be able to represent future interests today, we do not so much require a highly imaginative anticipation of the development of future needs as an understanding of the interests of today's generation: preference of the actual preferences. These questions are discussed by two main theoreticians on "posterity-responsibility", H. Jonas and D. Birnbacher. So long as providing for the future remains solely motivated by the preservation of homo sapiens, the limits of this approach become ever more apparent. In the long run, namely, its tendency, is towards becoming a complex form of reckless species-egoism. For this reason, future ethics must be formulated in terms of responsibility for responsibly-able future generations, and not in terms of responsibility for the mere fact of a future generation.

Hypothesis 6: Act in such a way that the consequences of your actions are compatible with the permanence of humanity ability to be responsible on earth.

The obligation to be responsible is neither an ethical decision nor a self-commitment, but a call which man cannot give himself. Is it the claim of God or the claim of the tortured creature? It belongs to human morality to care for more and *other* concerns than solely our own humanity. Human morality needs the sub-human in order to prove its responsibility most adequately. At least, this is the assumption of my thesis.

Today's generation can only be convinced that the pterophorus pentadactylus must be protected for the sake of posterity, if it can be reasoned that a future generation could be interested in a moth species. So the explanation is merely postponed.

5. LANDSCAPE AESTHETICS

What exactly is this sub-human? A phenomenology of landscape can be drawn up, in which nature can be experienced as purposefully structured and something to be cared for as an aesthetic resource.

The prerequisite for this is the assumption that a beautiful nature is a human need, but that a beautiful nature is never dependent solely on our need to experience nature as such. On the one side, wild and proliferous nature is too alien to be meaningful. On the other side, a monotonous, domesticated nature is not experienced as worthy of being given meaning.

Hypothesis 7: Act in such a way that the landscape retains its capacity not only to serve the human need for that which is independent of our needs, but also to surpass this need.

This line of thought aims at founding a most metaphysic-free and most humanly independent basis for the protection of nature. Its weakness, however, lies in not being able to distinguish between a "natural" landscape and an "adventure" landscape planned by aesthetically schooled gardeners, an open zoo with scenery and equipment to which the unwitting human stroller also belongs. This paper examines, therefore, whether independence of need is a feature of nature even before the human being develops a need for nature.

In order to differentiate between merely natural objects, which edify us, and natural subjects which perceive the observer, a central difference is used in landscape aesthetics: namely, between overwhelming but lifeless elements in nature (massifs, oceans, deserts) and the appealing but fragile side of nature endowed with life. That man needs a metaphysic

and is liable to be easily deceived is explained in theology by the Fall of Man, which portrays man's prehistorical relation to nature. Theology of creation traditionally examines to what extent the creativity of man (human likeness to the Creator) is bound by man's character as a creature (which he has in common with all living and non-living things).

Hypothesis 8: Act in such a way that your ability to perceive not only the factual but also the symbolic is promoted.

The view that divine presence reveals itself in nature, but that mankind has forfeited its ability to perceive this presence directly, has also entered philosophical concepts, such as "deep ecology" (A. Naess) and "structural anthropology" (H. Rombach). Both of these exemplary theories demonstrate a tendency to totalize all phenomena and erect infinitely circular systems of relations, which become immoral. For this reason, natural aesthetics must be traced/led back to its irreducible structuring principle: Life. This is the topic of the following two chapters.

If pterophorus pentadactylus were only worthy of protection due to the human need for its beauty, the existence of this moth would be dependent on that human need and would be endangered if this need could be satisfied by a substitute for pterophorus pentadactylus, or, indeed, if the need began to fade.

6. LIFE AND DEATH

Whereas in the previous chapters were discussing the meaning of the living world (landscape, environment, biotopes), Chapter VI of my dissertation analyzes the expression of life itself. With reference to the organic philosophies of H. Pleßner, H. Bergson and H. Jonas, the philosophical alternative is presented which conceives of "Being" as either "dead" (life becomes merely an additional ascription) or "alive" (life is seen as a universal concept arising from the self-experience of thought). The chapter serves, methodically, to prepare for the central discussion (Chapter VII) and aims at defining what is meant by "life". Is thought itself alive, or a lifeless observer?

Hypothesis 9: If it is assumed that all beings are without life, the exception made for thought – which does the assuming – is inapplicable. If, on the other hand, it is assumed that all being is alive, the individual organism becomes enveloped in the all-embracing

process of life, so much so that its identity is lost. Interchangeability of individuality correlates proportionally to the measure of totalization.

This is exemplified by the one extreme of Bergson's philosophy of life (which construes the entire universe, including the mind, as an indivisible living flux) and the other extreme of modern science's deadening method (which translates all intensity into a putative/objective extension). My aim is to ascertain whether a regional ontology is possible between "Being" in general and reflective thought. Is it possible to talk about life without psychological empathy and without physio-chemical reduction? The living body is taken as the paradigm as it presents us with a pre-reflective familiarity. Our bodily perception is never totally penetrable by self-consciousness. Life always escapes the reflective act.

Whether the moth species *pterophorus pentadactylus* can be credited with life does not essentially depend on biological knowledge or on the theory of evolution, but on preliminary decisions in ontology.

7. A PHENOMENOLOGY OF ORGANISM

In Chapter VII, the abstract category of "life" is intensified by using the concept of a single organism. Here, the (human) perception of organisms is understood as a living perception (in this case man's perception is less rational than organismic). This serves as a foundation for an eco-ethic, which is concerned with man's decision to be moral but without forgetting the aboriginal status of life and corporeality. The section discusses representatives of organic philosophy (H. Driesch and H. Jonas), of life-philosophy (A. Schweitzer and G. Simmel) and of philosophical anthropology (M. Scheler and H. Pleßner). By using a four-stage phenomenology of organic development (sensual feeling, emotional perceiving, self-ish feeding, awareness), biological differentiations are successively and distinctly developed on a philosophical basis: urge-inhibition, inside-skin-outside, sensoric-motoric, interest-disassociation, intention-emotion, assimilation-reproduction, aging-death, perception-expression.

Hypothesis 10: An eco-ethic can only be formulated then, if an organism is no longer described as an object but as a self, an end in itself.

Every form of responsibility needs, over and above the willingness to self-obligation, the demand of a foreignly obligating purpose. For this reason, it is the aim of this investigation to describe organisms as principally responsible to and directed by the outside world, whose self-development is continually impeded by other organisms, i.e. as "constraint-transcending" beings. They are not survival-machines but have a "self", which is more than can be defined in terms of food and reproduction. In this context, the complex history of the concepts self-direction and self-preservation can be outlined as follows:

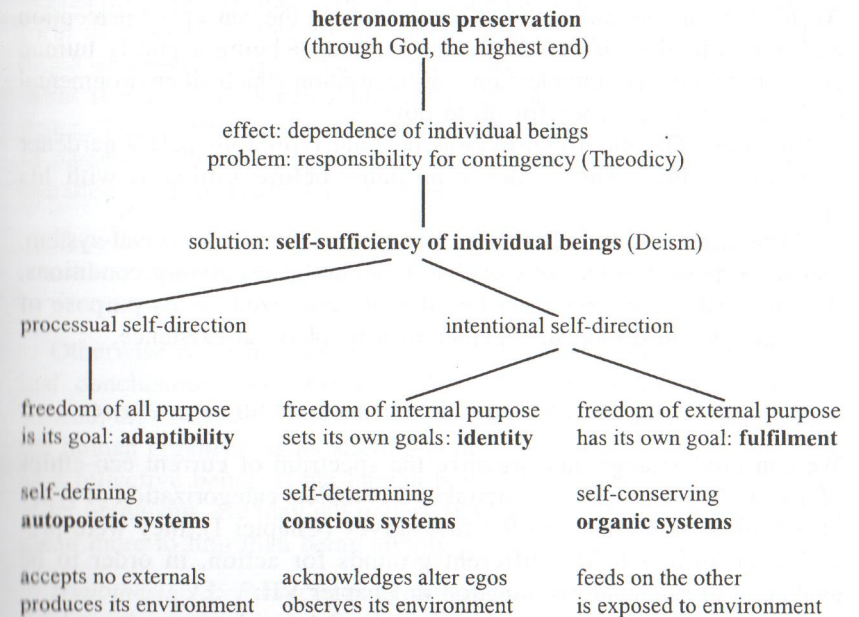


Figure 3.

Since the process of being perceived by other organisms belongs to a proper understanding of an organic self, using this basis, the possibility of "communication" between organisms can be argued for independently of the borders set by individuality and species. An asymmetrical relationship regarding expression exists, with which man's relationship to animals and plants can also be described. In order to escape the

accusation of human projection, we should not only talk about animals/plants, but also reflect upon how our talk of animals/plants changes when we acknowledge their perception of us. On seeing a worm wriggling underneath my shoe, my perception of its wriggling becomes identical with my recognition of the worm as an organism, and is not just simply a predication. Although no communication involving content or intention has taken place, the expression is perceived in such a way that the presence of a living self makes itself be known. Thus the worm ceases to be merely an object for an observer, and its wriggling ceases to be interpreted merely as a chemically explicable functional disorder. As this type of communication is obtained using the concept of perception and not reflection, it avoids the accusation of being a purely human concept of (self-) communication – an accusation which all environmental ethics can be reproached for up to now.

Situation: The moth *pterophorus pentadactylus* flies past a gardener and startles him. The gardener hesitates before killing it with his spade.

Reflection: If this moth can be interpreted as a self-survival-system, whose purpose is solely to establish other self-preservatory conditions, then its destruction could not be ethically criticized, as its purpose of existence would disappear together with its physical existence.

8. CONSEQUENCES FOR EVERY POSSIBLE ECO-ETHIC

We can now arrange and organize the spectrum of current eco-ethics afresh. My dissertation undertakes a complete categorization of types of environmental ethics. In the first survey (Chapter I), they were presented according to the different grounds for action, in order to be evaluated in a second examination in Chapter VII:

- A. formal-anthropocentric: ethics based solely on human reason (vicarious ethics);
- B. physiocentric: ethics for the sake of all "Being" (relaxed ethics, Gelassenheitsethik);
- C. material-anthropocentric: ethics for the sake of mankind (self-precautionary ethics);
- D. pathocentric: ethics based on ability to suffer (pity-ethics); and
- E. biocentric: ethics based on life (reverence-ethics).

All positions are traced back to their philosophical roots (A: Kant, B: Heidegger, C: Hedonism, D: Schopenhauer and E: Schweitzer).

Hypothesis 11: The anthropocentric perspective is inevitable but must not necessarily be structured centrically, if it can be restricted to the necessity that, as human beings, we act and perceive humanly (i.e. as reflective, self-conscious organisms).

In the end, the change of viewpoint from acting person to affected "person" results in the questioning of any concentric order, and with it, every centric-structured ethic. Instead of extending itself to new areas of concern (animals, plants, landscapes), must not an eco-ethic rather let itself be "told" what is entitled to protection by the other side, by non-human life? For this reason, the present author would plead for a modified form of biocentric ethics, more specifically an aesthesio-centric ethic, based on an asymmetrical, but reciprocal recognition between organisms. What is perceived as being interested can be granted eco-ethical relevance. This position avoids too highly complex moral discussions (life of parasites vs. well-being of mankind), but allows for a graded differentiation in accordance with the four-stage phenomenology (above).

Hypothesis 12: Treat a being with all the more care, the more you assume that its perception of you is comparable to your own self-perception.

Otherwise eco-ethics shall never escape anthropomorphism, analogical conclusions and merely emphatical attempts at understanding. Instead, the demand for an ethic has been outlined which abandons taking the human organism as its starting point. Only as an organism, and not as a reflective being, is the human being exposed to the expression of other organisms. He may not understand these organisms, but they must mean more to him than being simply given factuality.

Hypothesis 13: Protect or regenerate nature so that organisms can show themselves in her independently, and so that nature can offer encounter-opportunities for man to perceive himself as being perceived more.

The moth "*pterophorus pentadactylus*" can hardly be saved as an object of interest for others. The human being will most certainly survive without this species of moth, but he will know increasingly less about what it means to live.

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