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Ecological ethics and creation faith

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Over past decades a concept of ecological ethics has taken root, which is often equated with environmental ethics. Church and theology have also responded to the environmental crisis. In the last third of the past century an intense discourse about the concerns and extent of a so-called creation ethics was conducted. In connection with the question of a creation ethics, and the global responsibility of humans for the biosphere of our planet, the topic of creation has also gained new attention in dogmatics. In this way, ecology has also become a topic of systematic theology. The article focuses on the debate in the German speaking context. Occasionally, a quasi-religious elevation of ecology to the status of a doctrine of salvation is observable. Because theology always also has a function of critique of religion, it must also critically engage the sometimes open and sometimes hidden religious contents and claims of eco-ethical concepts. For this purpose, the first step of the present contribution is to more precisely determine the concepts of creation and nature. Thereafter, the problem of anthropocentrism is analysed. In a further step, the concept of sustainability is analysed. In conclusion, the main features of a responsibility-ethics model of ecological ethics are outlined.

Ecology and ecological ethics

In 1866 Ernst Haeckel coined the concept of ecology to designate of a new branch of research in biology. By ecology, Haeckel meant 'the whole science of the relationships of an organism to the surrounding environment, to which, in a broader sense, can also be reckoned all "conditions of existence". These conditions are of a partly organic and partly inorganic nature. The former as well as the latter, as we have already shown, are of the greatest importance for the form of the organism, because they force it to conform itself to them' (Haeckel 1866:286). Haeckel, the medical practitioner, zoologist and natural philosopher, significantly contributed to the spreading of Charles Darwin's theory of evolution, which he expanded and could even refer to as a 'monistic religion' (cf. Dunkel 2000). Thus ecology, in Haeckel's sense, has nothing to do with biblical creation faith. Today, ecology is understood as the science of the relationships of organisms to one another and their environment, which are thereby placed in interdisciplinary exchange with chemistry, physics, geology, hydrology and meteorology (cf. Vogt 2000). Human ecology is more precisely concerned with the relationships between the human and her environment. A monistic worldview, in Haeckel's sense, is not necessarily presupposed:

> Ecology has experienced an enormous boom as a result of the ecological crisis diagnosed in the 1970s. However, its theoretical status as a science is contended (cf. McIntosh 1985). Although some representatives see in ecology a kind of leading science [Leitwissenschaft] or super theory,[1] others ascribe to it merely an interdisciplinary bridge-function. This view was taken by the German Advisory Council on the Environment, which termed the cross-sectioning, coordinating and connecting characteristics of ecology as bundling competence. (Der Rat von Sachverständigen 1994:69)

It cannot be denied that ecological systems make up a comprehensive order, in which human life is not only biologically but also existentially embedded, which is why they are attributed such an important role in the self-understanding of humans. Nevertheless, 'The mix – often difficult to grasp – of hermeneutic, system-theoretical and therapeutic elements of ecology is a major reason for its special appeal, but also for its especially problematic nature' (Vogt 2000:801). Scepticism is especially appropriate *vis-a-vis* conceptions which declare ecology to be a comprehensive, basic science, or respectively, who desire to transcend its limitations in the direction of an ecological wisdom-teaching.

In spite of this, a concept of ecological ethics has taken root over the past decades.[2] It often functions as a synonym for environmental ethics, that is, for the ethics of the human dealings with

1.See for example Böhme 1985; Naess 1989; Capra 1996. Cf. also Mayer-Tasch 1991. Criticism of such concepts are expressed, for example, Bayertz 1988 and Trepl 1991.

2.Cf. Curry 2011,Keller 2010. For the German context see Krebs and Leist 1996; Von der Pfordten 1996; Birnbacher 2001; Brenner 2008; Krebs 2009. For theological discussion see Holderegger 1997.

nature and its resources as a whole. Although the concept of bioethics primarily has the dealings of humans with non-human life forms as its object, ecological ethics aims at the preservation of the earthly biosphere as a whole, although non-living nature can also be included in ethical reflection.

Theology – Protestant as well as Catholic and Orthodox – and Churches, which belong to the World Council of Churches, have also responded to the environmental crisis. In the last third of the past century an intense discourse about the concerns and extent of a so-called creation ethics was conducted.[3] There is also an international debate not only on Christian ecological ethics (cf. Hart 2006) but also on ecological ethics as issues of comparative theology (cf. Scheid 2016). In the African Context Christian ecological ethics is facing the concept of Ubuntu (cf. Kaoma 2013). An important driver for the international debate was the Conciliar Process for Justice, Peace and the Integrity of Creation, initiated by the World Council of Churches in the 1980s. Addressed there were the Christian tradition's deficits in the areas of environmental ethics and animal ethics, which had already earlier been emphatically pointed out by Albert Schweitzer.

What environmental-ethical potential the biblical tradition and biblical creation faith actually possess is a matter of controversy among German-speaking scholars. In his Essay 'Das Ende der Vorsehung' [The End of Providence], Carl Amery castigates Christendom for the supposed ruthless consequences of the biblically based disenchantment and instrumentalisation of nature by the instrumental reason of modernity (cf. Amery 1972). Against this, the Protestant theologian Udo Krolzik maintained that, in no way, can a direct line, from biblical creation faith to the modern exploitation and destruction of nature, be drawn (cf. Krolzik 1979).

The result of modern science's triumph is that the doctrine of creation has lost ground in Christian dogmatics since the Enlightenment. In the course of this, creation faith was reduced to individual, religious consciousness, according to which the individual understands itself as a creature of God, while leaving questions of cosmology to the natural sciences. It has been shown, especially since the triumph of Charles Darwin's theory of evolution, that the origin of the world and of life on earth is possible without the God-hypothesis.

In the train of the new question of creation ethics and the global responsibility of humans for the biosphere of our planet, the topic of creation has of course gained new attention. Thus, ecology has become a topic of systematic theology. Theologians such as Jürgen Moltmann emphasise the close connection and the interdependencies between dogmatics and ethics of creation, and advocate the idea of an overall ecological theology (cf. Primavesi 2003). Thus, theology should encourage a holistic thinking that does not view nature merely as environment and a resource for raw materials, but as co-world [Mitwelt], of which the human is a part. According to this view, the goal of the story of God is not solely the human as the supposed crown of creation, but the biosphere as a whole.

A key concept taken over from biology is that of symbiosis. All life is cohabitation and communication, even at the elementary metabolic level. Ecological theology and ethics emphasise that the human can only exist in cohabitation with all other creatures and the creation as a whole. Humanity only has a future as co-creature and as a part of the entire creation. As a prominent representative of an ecological doctrine of creation, Moltmann understands symbiotic life at the legal and political level as a 'covenant with nature', in the area of medicine as a 'psychosomatic whole' and in the religious context as the 'community of creation' (Moltmann 1987:18). He writes: 'Integrative and holistic thinking is led by the intention to usher into this covenant, this whole, this community. After having neglected it to become conscious of and deepen it; after its destruction to restore it. In this sense, a theological doctrine of creation, in this age, is led by the intention to usher into the community of creation, to once again become conscious of and restore it' (Moltmann 1987:18).

Moltmann's ecological theology leads to 'an ethics of the earth' (Moltmann 2010:127ff.), which, like James E. Lovelock's Gaia-theory, conceives of the biosphere of the earth as one whole organism (cf. Lovelock 2000; Moltmann 2010:128ff). Like other representatives of an ecological ethics, or a creation ethics, he criticises the anthropocentrism of conventional ethics, which views humanity in the centre of nature, or respectively, creation, and grants it priority over all other living beings.

Where traditional theology speaks of the economy of God, that is to say, of his saving action for the world, to wit chiefly for the benefit of humanity, Moltmann speaks of the 'ecology of God' (Moltmann 2010:132), which is oriented toward the welfare and the salvation of the entire creation. Although, for Haeckel, the concept of ecology was a category of the natural sciences, which was capable of joining with a decidedly atheist worldview, for Moltmann, as for other representatives of an ecological theology, the concept acquires a decidedly religious meaning.

Today, the necessity of an environmental ethics, which takes the interwovenness of human life with the totality of the biosphere, is beyond dispute. Justified as well is the question as to what contribution theology and Churches can make to an ecological ethics. However, their task does not consist in merely religiously reinforcing or even superelevating ethical convictions won elsewhere and the demands of environmental politics. Friedrich Wilhelm Graf derides:

> eco-political life reform movements, in which the biblical creator God serves as a morale booster, in order to hold us to the 'preservation of creation': with the Trinitarian self-differentiation of the creator God, to the three-bin waste separation system. (Graf 2014:80; cf. Moltmann 2010:200)

3.For the German discussion during the 1980s see Frey 1988, 1989.

To some this may appear to be a malicious caricature, arising from the desire to stultify the concern of an ecological ethics as well as that of an ecological theology. Yet, Graf's criticism is not all that far-fetched. Just as theology always has a function of religious critique, so now as well, it is necessary to critically engage the sometimes open and sometimes hidden religious contents and validity claims of eco-ethical concepts. In any case, the occasionally encountered superelevation of ecology, to a doctrine of salvation, is diametrically opposed to the Christian doctrine of creation and salvation (cf. Körtner 1997:16ff.).

In order to counteract this, in what follows, the concepts of creation and nature will be more precisely determined. Next, we will grapple with the accusation of anthropocentrism. In a further step, we will discuss another guiding concept of ecological ethics, namely the concept of sustainability.

Creation and nature

The problem of how scientific, philosophical and religious views of the many-layered phenomena of life can be communicated to each other ranks among the basic issues of ecological ethics. What is needed here is not only a careful analysis of the different uses of the word 'life' in the biblical tradition of Old and New Testaments, including talk of eternal life. Rather, a distinction must be made between the linguistic signs, 'nature' and 'creation'. The sign, 'nature', always only has its meaning in different scientific and cultural practices of interpretation, and the same is true of the sign, 'creation'. It acquires its sense within the framework of specific religious language games and their grammar. Thus, a general, natural philosophy cannot be the basis of a creation ethics or an ecological ethics in theological perspective.

Martin Luther gives existential expression to creation faith in his explanation of the Apostolic Creed:

> I believe that God has made me and all creatures; that He has given me my body and soul, eyes, ears, and all my limbs, my reason, and all my senses, and still preserves them […] and all this out of pure, fatherly, divine goodness and mercy, without any merit or worthiness in me. (Small Catechism)

Although creation faith understands all life as originated and willed by God, so that it has a sense and a purpose, the modern theory of evolution clearly excludes the notion of a universal teleology. 'Evolution' and 'creation' represent different views and experiences, which stand in tension to each other, of what is referred to as nature. Thus, what is meant by the idea of creation is, on the one hand, to be distinguished from nature; and yet, it has, if it desires to claim to plausibility for itself, to be identified within nature cf. Frey 1989:222f.). These perspectives – intension, creation faith and the theory of evolution, are not capable of being integrated into a supertheory. Rather, they can only be referred to each other as complementary views.

Theological ethics has a difficult task of translation to perform. On the one hand, it must endeavour to carry its specific, religious, biblically-based view into the bioethical and biopolitical discourse of a pluralistic and secular society. In other words, it has to be able, hermeneutically and argumentatively, to mediate between biblically-based substantiation, and substantiation based on reason. On the other hand, as with every work of translation, the question of the limits of translatability also arise with respect to religious language and language games. Thus, opposite a secular ethics, theological bioethics has always also to critically and productively assert the surplus of religious language, which proves to be resistant to translation and which contains unsatisfied interpretive potential for humans and nature.

Articulated in talk of the creatureliness of human beings and of their being created in the image of God is an understanding of existence, open to faith, that claims even in the present day to be a possible human self-interpretation. Helpful for a better understanding of this is the distinction between instrumental knowledge [Verfügungswissen] and orientational knowledge. Our way of living and our conduct do not find their fundamental orientation in abstract principles, but in meaningful stories, in metaphors and symbols. Belief in creation and the assurance of one's own creatureliness also reside at this level.

The frequently observed confusions of the concepts 'creation' and 'nature' or 'evolution', are manifestations of a syncretistic religiosity, which, although it also borrows from Judaism or Christianity, nevertheless flattens essential aspects of a biblically-grounded doctrine of creation, as happens, for example, with the distinction between creation and creator. As has already been said, that which is theologically meant by creation has, indeed, to be demonstrated within nature. However, the language games of theology and the natural sciences have, at the same time, to be clearly distinguished. Ecology makes us urgently aware that the human has a natural basis that he must not destroy, because his own life is bound to it. However, theological critique is in order whenever the dependence of the human on nature is confused with that of its categorically different absolute dependence on God, expressed by the biblical talk of creation.

In ethical perspective, it is problematic when the attempt is made to transfer the many-layered concept of nature immediately into an ethical sense of action. This happens, for example, when descriptive-analytical general principles such as 'ecological balance' or 'ecological stability' are immediately reinterpreted as ethical and normative concepts of value. Such 'ecologism' commits a naturalistic fallacy, which reasons from an *is* to an *ought*, although it must be added that the supposed factuality of nature is highly dependent on interpretation.

It is precisely in matters of ethical discernment that everything depends on distinguishing between nature as an object of scientific research and nature as a bearer of meanings, or respectively, between the level of empirical science that works with cybernetic and system-theoretical models, and

the level of value judgements. If, however, ecology indicates an empirical, descriptive-analytical science, then it would be, 'for methodological reasons, and despite all its bundling competences, hopelessly overextended in the role of a social, even global, orientating and guiding authority' (Münk 1999:281).

Concepts of environmental ethics can only be founded with recourse to ethical value conceptions or principles. Of course, a reasoned ethical decision, supported by arguments, cannot dispense with as comprehensive as possible, and sufficiently differentiated and complex, analysis of factual connections. For, just as ethical norms cannot be derived from the factuality of specific natural contexts, so also the normativistic fallacy, which considers a sole moral principle to be a sufficient ethical criterion for decision making, is also to be avoided. The following is basically valid: 'The more concrete the ethical question is, the greater is the quantity of scientific information which has to enter into the process of determining norms' (Gorke 1999:104).

Problems of environmental ethics are, to be sure, 'mixed' states of affairs (Honecker 1990:XII). That is, a complex of empirical circumstances that are, in addition, a complex interplay of natural developments and human actions, and ethical assessments. Already owing merely to the contentious nature of the facts, and yet also because of today's dominant pluralism of models of ethical reasoning, there is an inherent uncertainty in every ethical decision. This is also basically true of theological ethics (cf. Honecker 1995:XI; Körtner 2012:15ff.108ff).

All problems of environmental conservation are also mixed states of affairs, because the 'nature' spoken of is largely already culturally adapted and moulded. To be sure, it makes sense, in certain respects, to distinguish between nature and humanly produced culture. Ultimately, however, culture also has to be viewed as a part of nature, and respectively of the evolution of the biosphere. It must also be pointed out, in theological perspective, that the biblical creation-mandate, charging humans to 'work and keep' the earth (Gn 2:15), in no way means only the conservation of a pre-existing natural state, but also the cultivation of nature, that is, actively to shape it. The Garden of Eden (Gn 2:4ff.) is, as the word already makes clear, cultivated land and not wilderness.

Although it is certainly the case that creation faith, in the sense of the Judeo-Christian tradition, has an orienting function for ethics, direct instructions for action cannot, nevertheless, be derived from it. In the sense of the biblical tradition, the creation is anthropomorphic. That is, it is the culturally formable living space [*Lebensraum*] of humans, who are, in turn, the co-formers of creation. In other words, the biblical tradition approves of the human's being not only a product, but also a factor of evolution. It is ethically relevant if the human understands itself as a creature of God, and its environment as God's creation, because the question of the essence of the human, and the meaning of its actions arises in all of its planning and acting. However, the individual goals of actions are to be again distinguished from the meaning of the whole conduct of life. Although creation faith is a specific answer to the question of the meaning of the human conduct of life, it is not an answer to the question of individual goals of actions.

However, insofar as each human has to have other life at its disposal in order to be able to live, the biblical creation-mandate to rule over the creation, to work and keep it (cf. Gn 1:27; 2:15), is to a certain extent democratised. Thus, basically corresponding to Christian creation faith is the approach of a responsibility ethics, which conceives of responsibility, in the area of bioethics, as the responsibility of all members of society, and which, as a political consequence, demands the greatest possible participation of all concerned in pending decision-making processes.

A rejection of anthropocentrism?

An ecological ethics takes as its task the dealing responsibly with every kind of life, and the biosphere as a whole, and not only human life. Upon which moral foundation this should take place is, of course, just as controversial as the question whether and in how far a difference in value exists between human and non-human life. In general, it is possible to distinguish between *anthropocentric* and *physiocentric* approaches to bioethics (cf. Krebs 2009). Although anthropocentrism gives the human a special moral status, physiocentrism confers a moral status also to nature.

Normally, three variants of *physiocentrism* are distinguished, namely, (1) pathocentrism, (2) biocentrism and (3) radical physiocentrism. Pathocentrism, or sensitivism, ascribes moral value to all living things capable of suffering or sensation, biocentrism ascribes moral value without exception to all living things, and radical physiocentrism ascribes moral value to nature as a whole. Beside pathocentric arguments (e.g. Peter Singer, Tom Regan, Ursula Wolf, Jean-Claude Wolf) there are also teleological-natural law (e.g. Hans Jonas, Klaus Michael Meyer-Abich), creation theological (Günter Altner, Bernhard Irrgang) or indeterminate religious argumentations, such as Schweitzer's doctrine of reverence for life. 'Holistic' conceptions of natural ethics sometimes argue with a rather fuzzy notion of the holiness of all life. The moral status of nature, that is, its morally relevant intrinsic value, can also be substantiated with the help of a natural aesthetics. The naturally beautiful can be interpreted, in the sense of a material value ethics, as the intrinsic worth of nature, for which reverence is morally imperative or intuitively imposes itself.

With regard to anthropocentrism, two basic positions can be distinguished, namely, (1) methodological or epistemic anthropocentrism and (2) moral anthropocentrism (cf. Irrgang 1992:67–73). Whereas epistemic anthropocentrism emphasises the fact that the humans can only epistemologically and ethically access the world in human terms, and is perspectivally limited in the observer and participant positions; moral

anthropocentrism considers the human as the sole bearer of moral values. Beside approaches of a pathocentrically expanded anthropocentrism, there are also arguments which indirectly substantiate a moral regard for animals by the fact that, although no direct moral value accrues to them, or to nature as a whole, they nevertheless – from the human point of view – have an aesthetic and pedagogical value. On this basis, arguments can indeed be made for the conservation of animals and plants, which, however, are only considered to be morally important, because the torturing of animals, or the arbitrary destruction of plants, contributes to the coarsening of human morals and to the blunting of human moral feeling. A nature-aesthetics conception also has an anthropocentric core, when veneration of the beautiful and sublime in nature is interpreted as meaningful experience for human self-understanding and the possibilities of human life (cf. Düwell 2008:129).

The aforementioned distinctions are also significant with regard to medical ethics. There are approaches to medical ethics which reject and criticise as 'speciesism' the idea of a special dignity of the human, which would distinguish it from animals and plants (cf. Kuhse 1994; Singer 1994:82ff). According to these approaches, the right to special protection is not granted to the human as such. Rather, it is only granted inasmuch as the human exhibits attributes such as self-consciousness, self-control, memory and the ability to communicate. According to this conception, animals, to the extent that they achieve a certain tier of consciousness and the capacity for suffering, deserve the same, or even more comprehensive, safeguarding of their lives as, for example, embryos, the severely disabled, or the terminally ill in the final stages of their illness.

The representatives of a utilitarian bioethics in particular reject and criticise moral anthropocentricism as speciesism. However, even if, like Peter Singer, one demands equality for animals, one cannot escape the problem of methodological or epistemic anthropocentrism. Belonging to the species can indeed serve as an ethical argument. Jürgen Habermas, for example, argues thus, with the concept of a species ethics, in favour of a moral delimitation of eugenics, against genetic enhancement by virtue of which future parents decide over the genetic equipment of their children, and against reproductive cloning (cf. Habermas 2001).

Yet, the utilitarian reproach of speciesism fails to recognise the basic ethical situation of humans. According to the general utilitarian outlook, the subject of moral judgements adopts the position of a non-participating, and yet benevolent spectator, or the role of an impartial arbitrator concerned with fairness. The moral subject is, by implication, envisaged as an isolated ego. However, morals and moral competence are, in truth, founded on intersubjective and interpersonal accountability, which are bound up with linguistic communication. As a result, the speciesism accusation made against non-utilitarian ethical conceptions is problematic from the start. Indeed, the question is rightly posed as to whether behaviour in human relationships alone should be the object of moral reflections. Decisive however, is the question as to who are possible subjects of moral judgements and morally based actions. As such, only humans are basically eligible. Because morality is a specifically human and intersubjective phenomenon, we humans have not only the possibility, but in fact the duty of moral reflection and morally based action.

In the case of ethical conflict, as beings with a moral obligation, we occupy neither the role of non-participating observers, nor that of the impartial arbitrator. Rather, we are participants, actors possibly entangled in guilt, and accountable to another authority. This is also true if the existence of God, as the authority with regard to ethical responsibility, is denied, and in God's place, transcendental reason or the universal human communication-community is declared to be the final moral authority.

It is precisely the capacity and duty for moral responsibility that accounts for the special dignity and burden of being human. This has nothing to do with Singer's insinuation of biological speciesism. Even a species-ethics, as advocated by Habermas, does not acquire its conception of the human, and that of human dignity, on the path of a purely biological conception of species; rather, it explains the exceptional position of the human via the phenomenon of morality and the experience of conscience. The same is true of theological ethics.

According to the current German state of theological discussion, a moral anthropocentrism, that is, an ethics that orientates itself exclusively toward the vital interests of the human, also stands in contradiction to biblical creation faith. As we shall see, the idea of the human's being made in the image of God (cf. Gn 1:27f) and the divine requirement to subdue the earth and rule over the animals (Gn 1:28), in no way justifies a purely instrumental human handling of the animals or the reckless exploitation of nature. However, the demand to have regard for animal and even plant life can always only appeal to human responsibility. That is the objection against so-called biocentric conceptions of bioethics, which assume an equal-validity (and thus all life-forms equalising) concept of life, as well as against so called pathocentric conceptions, which declare the human and animal capacity for suffering to be the highest criterion for bioethics.

Radical physiocentric conceptions are theoretically inconsistent, and as well, often commit naturalistic fallacies. That there are absolute values in nature, which exist independently of a value-assigning being, is a meaningless representation. If one begins with the assumption that God is the creator of these extra-human values, it should be remembered, that in this case also, it is the human who assumes a corresponding value perspective. Under this conceptual premise, it is the human who, after a fashion, views the world with the eyes of God. Against this, the pathocentric argument from sensation can be

made comprehensible. This succeeds, however, only by means of hermeneutical considerations and analogical conclusions. Albert Schweitzer already knew that, 'being can only be recognised by us as life by means of analogy with the life that is in us' (Schweitzer 1999:163). However, the further a form of life is from us, the more difficult and more speculative such attempts become. This may be seen in another passage, from one of Schweitzer's lectures:

> The poor fly, wandering about, which we would kill with our hand, has come into existence just as we have. It knows anxiety, it knows the longing for happiness; it knows the anxiety of living no longer. (Schweitzer 1974:165)

On the contrary, whether a fly actually knows anxiety and happiness is very much the question. In every case, however, it is always the human who has a moral regard for animals, and never the other way round (cf. Kohlmann 1995). Thus, while a moral anthropocentrism can be criticised with good reason, nevertheless, in every case, a methodological and epistemic anthropocentrism remains unavoidable.

This also can be illustrated with reference to Schweitzer's ethics. However, to cite Schweitzer's ethics as an example of a biocentric ethics is only half of the truth. Indeed, a basic anthropocentric feature can also be discerned in Schweitzer's ethics, because reverence is a specifically human property or posture and is not to be found in the rest of nature. Following Charles Darwin, Schweitzer construes nature as an 'eat' or be eaten style battleground. Although Schweitzer may have failed in his claim to deliver an ultimate grounding of ethics, the idea of reverence for life can, nevertheless, be appreciated, as a form of the theory of virtue, within the framework of an integrative responsibility ethics. Schweitzer himself speaks of the attitude of reverence for life, which implies 'an elementary concept of responsibility' (Schweitzer 1981:92). Admittedly, this attitude is in no way sufficient to establish a complete responsibility ethics; it can, however, be interpreted as a virtue-ethical moment of such an ethics. Perhaps, as Heike Baranzke has pleaded, Schweitzer should anyway be interpreted less as a moral theorist than as a moral psychologist. According to Baranzke, 'reverence is not a founding principle of ethics, but a moral-psychological principle of sensitization for developing the willingness to take responsibility' (Baranzke 2012:25).

Sustainability

A guiding thought of ecological ethics is the sustainability of human dealings with nature. In the last two decades, the concept 'sustainability' enjoyed the status of an eco-political and ethical guiding concept. In the political context, the concept of 'sustainable development' first emerged in the 1987 Brundtland Report of the World Commission of Environment and Development (WCED). Today, a development is deemed sustainable (i.e. lasting, fit for the future or of enduring environmental soundness), 'which satisfies the needs of the present, without putting at risk the ability of future generations to meet their own needs' (Hauff 1987:46).

Compared with the political discussion, ethical theorising about the guiding principle of sustainability is more advanced. The same is true of churches, the ecumenical movement and academic theological ethics (cf. Cobb 1997; Lienkamp 2009). In environmental ethics, a fundamental ecumenical consensus has evolved, concerning the precise determination of the concept of sustainability and the ethical principles derived from it.

However, the practical implementation of the guiding principle of sustainability has posed some difficulties. It still has the 'character of a fascinating vision, rather than a differentiated conception' (Münk 1999:277). Massive concerns have been registered, especially from the side of economic ethics. Just as controversial as its operationalisability are the socio-ethical and bioethical implications of the guiding principle of sustainability. The ruling consensus is that, at its core, the discussion of sustainability is a debate about justice. It is also unanimously held that the postulate of sustainable development is a question of *inter*generational as well as *intra*generational justice. Thus, the aim is not only a balance of interests between the current generation and future generations, but also justice between poor countries and rich countries. The sustainability debate is linked to globalisation (cf. Münk 2000). However, the extent of the sustainability concept requirements of social, or respectively, economic system-critique is disputed. Also a matter of controversy is whether the conception of sustainable development merely requires the transformation of the capitalist economic system, or if it requires the radical rejection thereof.

In the sustainability debate, the problem of justice is extended to the non-human environment. Sustainable economic activity has to fulfil three criteria, in the short term as well as in the long term: the criteria of the humane, of economic appropriateness and of the environmental soundness. The postulate of an 'ecological social ethics' (cf. Lienkamp 2000:469) rests on these three criteria of justice. However, the concept of environmental soundness is dubious. It leaves open the question as to whether ramifications of economic and social developments are merely to be considered from functional viewpoints – that is, insofar as they have repercussions for the conditions of life of today's and future generations of humanity – or whether intrinsic value and intrinsic rights are to be conceded to nature or non-human life (species as well as individuals).

In the sustainability debate, within which the discussion between anthropocentric, pathocentric, biocentric and physiocentric conceptions of bioethics is continued, there are two basic, opposed positions, which are designated as 'strong' and 'weak' sustainability. Both positions agree that the generation currently living is only permitted to maximise its economic profits so long as future generations are not deprived of comparable chances of well-being. There is also a consensus that all wealth rests upon two factors: on the one hand, it rests on the natural resources of the earth, and on the

other hand it is based on the share which humans add to the equation, that is, work, investments or knowledge. Both positions (the 'strong' and the 'weak' conceptions of sustainability) assume a total capital, consisting of these natural and human resources, which has to remain untouched. Humanity is only permitted to live, as it were, on the yearly interest return of this capital.

However, the extent to which the share of natural endowments (ecosystem, species, resources) can be substituted by anthropogenic shares is a matter of controversy between the two basic positions. The majority position in economic science, which supposes that almost all resources (whether natural or man-made) can, should the need arise, be substituted, is referred to as 'weak' sustainability. The position of 'strong' sustainability disputes this possibility, at least in those cases in which the irreversible loss of natural assets (e.g. the extinction of whole species) has undeniable consequences for future generations.

The question as to whether it is permissible to impose such a loss of important parts of ecological wealth on coming generations is not answerable solely by means of the economy, because at issue here are questions of distribution which have to do with intergenerational justice. The difficulties increase in assessment of, for example, biodiversity, when its different geographical distribution is taken into consideration. This is indispensable in questions of distributive justice between poor and wealthy countries, in the discussion of bio-patents.

The argument of the intrinsic value of existing species, which is capable of being theologically undergirded, can be invoked for the concept of 'strong' sustainability. According to this argument, non-human living beings are not merely resources, arbitrarily at the disposal of human beings. Rather, they are entities with a significance of their own. According to the position of 'strong' sustainability, non-human life does not represent something sacrosanct. However, interventions in such life require legitimation and are subject to a careful weighing of the interests of humans and the intrinsic value of non-human life.

The concept of 'strong' sustainability points in the right direction. Yet it suffers from several weaknesses. Besides the fact that the concept of intrinsic value remains fuzzy, it is not satisfactory to ascribe an intrinsic value to *nature*. For, the concrete question arises as to *which* nature is to be protected based on its intrinsic value. Is original nature untouched by humans, the 'wilderness', as it is called in English speaking environmental ethics, what is meant here? Or is it culturally adapted, that is, anthropogenically altered, nature? As has already been discussed in the previous section, it is by no means the case that human interventions in nature always have destructive consequences. For example, a great variety of species of plants and animals is discoverable in parks or agricultural landscapes. Even in urban regions there are animal species which live as 'synanthropes' in symbiosis with humans.

The question concerning which nature possesses intrinsic value, or respectively, which nature should be protected, is apparently answerable neither in a way which is generally valid, nor in a way which is independent of history. Neither nature, nor the human and its culture are statistically immutable entities. Consequently, it is a matter here of weighting processes influenced by the criteria of pluriformity, beauty, rarity, of that which fascinates or awakens awe, but also criteria of functional indispensability and necessity. Likewise, in such processes, these criteria continually compete with each other. This observation is also valid when the world is theologically interpreted as God's creation. The ethical demand to preserve the creation, or to maintain its integrity, as it is more appropriately termed in the English speaking discussion which speaks of the 'integrity of creation', does not mean the fixing in place of a momentary situation, or the restitution of a mythical primordial one. Rather, it means the recognition and further development of the possibilities (and of course also the limitations) inherent in the creation.

In accordance with this, the guiding principle of 'strong' sustainability can be modified to one of *medial* sustainability. It 'aims at a preservation of the functionality and carrying capacity of ecological systems', and yet bears in mind 'ancillary productive functions of nature, including, for example, cultural-symbolic ones' (Lienkamp 2000:467). Although concepts of 'strong' sustainability are prone to declaring a static concept of nature to be immediately ethically normative, the concept of 'medial' sustainability operates on the basis of a dynamic-evolutionary concept of nature that includes human evolution. Conceived systematically, at issue is 'the permanent securing of the functionality of the interweaving conditions of human systems of civilization *and* the carrying capacity of nature' (Korff 1997:82), and not the maintenance of a specific natural state or a supposed, static 'ecological balance'.

The position of 'medial' sustainability is not biocentric but anthropocentric. However, it is concerned with the position of an epistemically and ecologically enlightened anthropocentrism, and not a moral anthropocentrism which includes animals' right to life in ethical reflection. Of course, it is also the case with the concept of medial sustainability, that the question as to how this principle can be operationalised has not yet been answered.

Ecological ethics and responsibility ethics

The line of thought pursued up to this point leads to a responsibility ethics conception of ecological ethics. This conception begins with the following insight, which results from the foregoing considerations: Even if ecological ethics declares the biosphere as a whole to be an object of ethical reflection and concern, it is always only the human who is and remains the subject of ethical judgment. This assessment is anything but trivial. Although the human may feel morally

responsible for non-human life and for nature as a whole – which taken by itself already demands justification – and although animals and plants, living individuals and entire species, may be thought of as carriers of moral rights or morally relevant interests, this nevertheless still always takes place from the human standpoint. Even if we wish to found an ethics which calls for protecting non-human life for its own sake – and not, say, because it benefits humans – it is nevertheless only humans who can discourse and arrive at an understanding of such an ethics, its principles and its conclusions. If need be, animals can be included in ethical discourse. It is possible to come to an understanding *about* plants' and animals' moral worthiness of consideration, not however *with* them. Viewed purely biologically, the human is an animal among animals, even if, according to their own understanding, gifted with reason as that which distinguishes them from animals and which is the necessary presupposition for morality and ethics. To be sure, there is something like moral behaviour observable among animals (cf. De Waal 1997; Lorenz 1963), but nothing like moral reflection. In this respect, a so called moral analogy in the behaviour of animals is still to be distinguished from human morality. A bioethics of non-human life, which does not limit itself to the self-interest of humans in the protection of animals and plants, can, at best, take up the task of advocacy for non-human life.

I advocate the position of a theologically reflected responsibility ethics, also in the field of bioethics and ecological ethics (cf. Körtner 2015). With respect to bioethics and environmental ethics, the concept of a theologically reflected responsibility ethics generally says that plants and animals, as well as the earthly biosphere in its totality, are objects of ethical reflection insofar as they are impacted by human actions and their consequences. The more non-human life is involved in human contexts of action, the greater the responsibility, although it is not a matter of reciprocally, that is, symmetrically, proportionate responsibilities. Rather, it is a matter of a relationship of responsibility which could be called paternalistic or advocational. With respect to morality, animals and plants are not actors, but the object of morally acting subjects. In English, they have been called 'moral patients' (cf. Brenner 2008:51, 126, 193).

That animals and plants are to be included in ethical reflection at all is based on the fact that humans and the human community cannot exist without interchange with these life forms. Humans live in earth's biosphere together *with* animals and plants, beginning with the air that humans need to breath, being turned from carbon dioxide back into oxygen by photosynthesis. Yet, humans also live *from* plants and animals, which they need for nourishment. In order to live, humans have to destroy other life, even if they have previously cultivated, nurtured and cared for it. Whether they necessarily have to, or are permitted to, kill animals for the sake of food intake is ethically contested. However, humans can in no way abstain from consuming plants and their fruits – if they do not wish, at least partially, to replace vegetable nourishment with the meat of animals or other animal products.

Plants and animals do not merely belong to the human environment. Rather, humans take them into their life-world in a cultivated form. Early in their history, humans began domesticating and breeding animals, as well as cultivating plants. Also to maintain their health, humans have always made use of plants and animals. This begins with the use of medicinal herbs and extends from the use of animals in shamanistic rituals, to the production of medicine from animal tissues in traditional, premodern cultures, up to experimentation on animals in modern medicine and pharmaceutics.

In the framework of an ethics of responsibility, it is quite possible, and also theologically justified, to assign an intrinsic dignity to non-human life forms, which, however, is to be distinguished from human dignity. The practical consequence is that extra-human life does not constitute something inviolable. However, interventions into such life are in need of legitimation and are subject to an ethical weighing of goods between the interests of humans and the intrinsic value of the non-human life. In the same way that human dignity is linked to inalienable human rights, the consequence of the analogical conclusion, is that the conferring of a special dignity upon animals and plants implies the supposition of specific animal rights and the rights of plants. Yet these can only ever be formulated by the human legal community. They are also asymmetrical insofar as animals and plants do not have moral or legal duties opposite other animals and plants. Thus, they remain tied to a weak form of anthropocentrism, namely the already described methodological and epistemic anthropocentrism.

Taken theologically, this anthropocentrism opens into the marvelling question of the Old Testament prayer in Psalm 8:4: 'what are human beings that you are mindful of them, mortals that you care for them?' (NRSV). In amazement verging on disbelief the psalmist realises that God has made humans just a little lower than himself, crowned them with honour and majesty, and made them lords over his creation – not only over sheep and cattle, but also over 'the beasts of the field, the birds of the air, and the fish of the sea, whatever passes along the paths of the seas' (Ps 7:7f, NRSV). In theological perspective, ecological ethics interprets the here described position of humans in the creation as radical responsibility towards the creator.

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