

NATURE AND MAN: DILEMMA OF THE PRESENT AND THE FUTURE*

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ABSTRACT

There are three kinds of nature singled out according to the physical contact with the man: "nature immune from man", "nature touched by man", and "nature transformed by man". The latter type is of highest relevance for the man's present dilemmas. The extrapolation of present tendencies of the man-nature relations is summarized in the two basic dilemmas: ecological dilemma /either the development of the modern technologies or the destruction of human ecological environment/, and peace dilemma /either to continue the nuclear arms race or the total nuclear disarmament/. There are four types of situations facing the man when avoiding the negative results of trends in the transformation of nature, which are linked with legal philosophy. The man-nature relations are axiologically ambivalent because the transformed nature is the challenge, but calls for looking at nature as a part of our life, and to exist with it in it.

I. Introductory Observations

1. Relations between man and nature are in the present quite peculiar from the point of view of the history of human existence. For the first time the man has reached so far in his conquest of nature that he has the possibility to change radically the conditions of his existence. He is challenged because he can rise the level of the satisfaction and development of his needs in the unprecedented scale, but also he can destroy his biological existence.

These possibilities are at hand in the present and the tendencies for the future are also at hand. This is one of one highly relevant feature of human existence and has or should have the impact on his social and legal philosophy too.

The present essay could only outline some of the problems related with the man and nature relations¹, and aims at pointing at the dilemmas which the man faces and which he should take into account in thinking about himself in the world of nature.

The two main problems of the present essay are the relations of man and nature and the dilemmas the man faces in relation to the nature.

II. The Man and Nature Relations

2. The concept of man in various areas of human thought is rather differentiated.

In the biologically oriented anthropology man is a product of evolution which, after many divergent lines of organic development, has resulted in the *homo sapiens*². This organism has a special place because of his capacities of practical activity connected with the development of the brain and efficient use of it in transforming the environment he lives in. The biggest problem of our time is that he has now the powers at his disposal to destroy his environment and his own existence.

There are various conceptions of man in philosophical and/or cultural anthropology³. He is *homo faber* who invents and uses tools for his productive work. This is the essential feature of his behaviour, which is always a social behaviour and demands an interaction with others co-existing in smaller and larger social groups. The human *fabricatio* is, of course, not the only philosophical perspective of man, because he is treated also as *homo ludens*: he is playing with others in his social life and with nature trying to gain as much as possible.

The man is also *homo cogitans* and *dzoön politicon*, he is the thinking animal and the social animal. The former insight deals with his mental activities of reasoning and invention, which only in part are to-day copied in the artificial intelligence mechanisms. The latter is still the relevant feature of the man's involvement in political groups existence, although the historical scope of the global societies he lives in is changing from the family and tribal societies to the contemporary states organizations and to an emerging supra-global society of the whole mankind.

For the particular areas of human activities and their theories

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there are particular conception of man, as e.g. *homo oeconomicus* or *homo iuridicus*, singled out according to the idealized patterns of their behaviour and specialized knowledge ascribed to them.

The oppositions of biological and culturalist orientation is, however, only relative. Man has to be conceived as a product and factor of a biological and cultural evolution, is a part of nature and the maker of culture, and his dilemmas are related with this duality⁴.

It is evident that all these conceptions of man are used in the social and/or political philosophies and are deeply involved in the axiological thinking about human existence.

For the purposes of the present essay it is sufficient to observe that the *homo sapiens* living in the global societies, has the technical possibilities of changing his environment thought of as the nature, and that his actual potentialities in this respect present a challenge to himself and make him face some dilemmas he has to be aware of for choosing his activity.

The man is, thus, treated as *homo cogitans* and as *homo faber*, and is always treated as a *dzoon politicon*. From this last conception it is expected that he will chose reasonably the way in which he ought to behave in the present and future situations of his existence.

3. The nature is treated here as the environment of man in the largest sense of this term - it is the world he lives in from the farthest confines of the universe to the basic elements of the matter immersed in spatiotemporal dimensions.

This wide conception of nature is, however, too heterogeneous to be dealt with according to my interests here. I am, therefore, singling out three types of nature relevant for my analysis of the man-nature relation. I use for them the conventional mataphorical terms: "nature immune from man", "nature touched by man" and "nature transformed by man". These three types are singled out taking into account the physical contact between the man and nature expressed in his practical activity, not the contact of pure cognition. It is a phisical act of contact and/or manipulation which I have in mind, the behavioralistically understood man's activity towards nature.

"Nature immune from man" means that part of environment which has not been in a physical contact with the man, although the man awing to his technical and scientific capacities, knows about it and

is under their influence. The obvious examples are stars including the sun, either worshipped as the god or treated as a source of energy.

"Nature touched by man" means this part of environment with which the man or has a contact either personal or by the mediation of instruments as his artefacts, but this contact does not result in any transformation but only as imprints of his existence and/or of his exploration activity. The obvious example is the moon or the deepest bottoms of oceans or highest mountain's peaks of our globe. The borderline between this "touch" and "transformation" is not sharp, but for typological purposes it seems to be sufficiently clear.

"Nature transformed by man" means that part of environment that has been affected by human activity in such a degree that one can use word "transformation" understood in a rather ample and loose manner. One can even argue that at the present time the environment the man lives in is always transformed by man, because everywhere - if the analysis of it is deep enough - one can discover some epiphenomena of our civilization. Probably it is so, but still one can distinguish several levels of intensity of this transformatory impact from the traces of man-made chemicals in plants to the landscape changes resulting from the irrigation of the deserts or making artificial lakes.

For the present purposes I single out three types of the "nature transformed by man" phenomena. Firstly, nature as a reshaped relatively large parts of environment. The standard example is the change of a landscape by agriculture, the construction of big architectural units from the Chinese wall to urban agglomerations and highways. Secondly, nature as human artefacts being a transformed nature, such as mechanisms or works of art, which transform the elements of environment into something different according to the purposes of man following his intellectual and/or emotional activities. Thirdly, the nature is transformed as a side effect of human activities, which I name a "waste"; the standard examples are not only the tons of garbage or of industrial waste which are rather difficult to dispose of /e.g. atomic waste, the garbage of modern food industry/, but also the heat and various chemical compounds as not wanted effects of production of energy.

4. The formulated above typology of nature /par. 3/ is based on the types of relation between man and his environment.

The "nature immune from man" means that part of environment

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which is not related with man in a way in which the man can physically either "touch" or, *a fortiori*, transform it. During the life of our generation the first step of changing this part of nature to the "nature touched by man" has been made, but the rest is rather the topic of long-range planning only. The change from the science fiction to reality has been so rapid that one cannot be too cautious in this respect.

The "nature touched by man" is the area for the future human activities. This "touch" is understood here as the direct contact either by man or by his artefacts, i.e. with the instruments used for the exploration. This is mostly but not exclusively and impact of cognitive interest, but also sometimes of a ludical one. The former is the exploration of our solar system, the latter the achievements being more in the sport than in the science interest.

The "nature transformed by man" is the presently most relevant issue. Man transforms the nature making from it an object of culture. The borderline between reshaping and artefacts is, of course, fuzzy because it depends on the scale of the transformation and on the "in-put" of human thought in the transformed nature. The relevance of the "transformed nature" is based on the scale in which this transformation can effect human existence and human life either in the positive or in the negative sense.

5. The "transformed nature's" impact on social problems cannot be overestimated. The transformations of to-day⁵ and of yesterday in the technology and in their social effects have many dimensions. There are huge demographical changes⁶ due not only to the lengthening of human life and the cataclysms of the diseases, but also on the map of the hunger areas in the world. There are economical problems of the distribution of wealth in various parts of the world symbolized as the opposition between the rich North and poor South, the problems of unemployment and of the skilled work and education. All of them influence the sociopolitical tensions and conflicts between men, which are intensified in our time: the man, has, therefore, "to be protected against himself"⁷. There are problems of pollution, of diminishing resources and their distribution on earth, and political implications of it. All these problems are our everyday reality.

But there are also some perspectivistically stated problems which have to be analyzed to-day. On the one hand there is the problem

of deterioration of the man's environment treated as a "waste transformation" of nature coupled with the technical possibilities of bettering human life. On the other hand there is a possibility of atomic war, resulting from the tensions among the global societies organized in states, and having as the possible effect the annihilation of human biological existence on earth by complete physical destruction of the large part of *homo sapiens*, and by his extinction because of the transformational changes of the environment he is adapted to live in.

These problems are, thus, the those of destructive human artefacts and of waste - the forms of the "nature transformed by man".

III. Man and Nature Dilemmas

6. The problems of the future mentioned above are deeply involved in the facts of the presents, and are based on the extrapolation of the observed tendencies.

The extrapolation of the present man and the "transformed nature" relations is based on two factors.

The first factor is a transformation of the changes described in the quantitative terms into qualitative ones. This means that the step by step increasing of the transformations made by man can lead to qualitative changes. The model historical example is the exploitation of forests which results in the erosion of the denuded soil. One can wonder whether the slow deterioration of the environment we are witnessing to-day will not lead to the degrees of devastation which will make an actual way of life impossible. The spreading of nuclear armament devices together with their use in the outer space may be a step which means not only quantitative possibility of the "over-kill", but could result in quite new world strategic situation.

Secondly, in some areas of the transformed environment there is a cumulative effect which results in irreversible changes. For example in one of the hypotheses of the ecological catastrophe the warming up of the atmosphere cannot be practically changed by cooling it. Or one cannot stop the effect of nuclear tests, accumulating on our planet, but one can stop these tests by banning them effectively.

For the sake of argument we can assume that extrapolation of the tendencies of the transformation of nature occurring now are well founded, and that they are directed towards the ultimate extremal

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consequences. Then we can formulate two basic dilemmas, I call the ecological dilemma and the peace dilemma.

The ecological dilemma is reduced to the following formula: either the development of the modern technologies or the destruction of human ecological environment. The peace dilemma is: either to continue the nuclear arms race resulting in atomic holocaust or the total nuclear disarmament.

Both dilemmas are strictly connected with the transformation of nature, viz. with the "waste" effects of the modern technologies and with the energetical possibilities used to fight with the others, based on the deepest going transformation of the nature on the atomic level as a source of destructive energy.

Both dilemmas are, thus, based on the transformation of nature by man. It seems that the technological progress is rather hard to be stopped, if it is possible at all, but this does not mean that there are no ways out of the dilemmas presented above.

Both dilemmas can be summarized with deep concern in the words of the great humanist A. Schweitzer: "Man lost the capacity to foresee and to forestal. He will end by destroying the earth"⁸.

7. The analysis of these dilemmas should not miss the possibilities of the positively appraised consequences of transformation of the nature by the modern technologies. There is a possibility of rissing the standards of life in the widest meaning of this term the development of the new sources of energy, by construnting more and more sophisticated machinery serving the satisfaction of human needs in the area of production, consumption, communication and information retrieval. All of these achievements are already at hand but their use and/or application is restricted to some privileged parts of the humanity.

The humanity faces, thus, a challenge of the two possibilities: use of the transformed nature for the good of man or for his destruction.⁹ This duality is patent in almost every area of advanced technology: from the use of nuclear energy to the biotechnology, from the construction of the intelligent machines serving human life to construction of sophisticated instruments for killing.

8. For our argument I assume that we have do with some negatively appraised consequences of the modern technology, and that the trends in the transformation of nature are directed towards the environ-

mental crisis and nuclear war crisis as well. The question is whether, and eventually how, it is possible to avoid the negative results of these developments, and to solve the ecological and peace dilemmas.

Generally speaking there are four situations, when we deal with the negatively appraised results of determined processes.

/a/ Firstly, there are situations in which one can avoid the negative results by proper counter - measures, e.g. an use of effective anti-pollution devices.

/b/ Secondly, there are situations in which the negative results of the process cannot be eliminated and, thus, be avoided, but can be diminished to a relevant degree, e.g. the antipollution devices efficient in the degree thought of as relevant in a determined axiological framework.

/c/ Thirdly, there are situations in which one cannot avoid the negatively appraised results, but one can restitute the *status quo ante* e. g. the good or even advantageous recultivation of the land devastated by industrial activities.

/d/ Fourthly there are situations in which one can neither avoid nor diminish, nor restitute the negative effects of the process. They are unavoidable and there is no recompensation possible.

The ecological dilemma linked with environmental problems in world scale can be easily placed in the typology given above. The /a/ and /b/ situations occur when the more modern technology is used to eliminate the effects on the less modern technology. There is, however, always the question of the costs involved. The strong ecological consciousness is needed to be taken into account for an assessment of the balance between the environmental damage and the cost of the means necessary to avoid /situation /a/ / or to diminish /situation /b// the negative results. The same holds for the third type of /c/ situation. The most dramatic is the /d/ situation, some elements of which are also implied in the /b/ situation too. There are consequences of the use of modern technology which cannot be avoided, and, thus, one has either to stop using them or to continue their use being aware what it means for the present and for the future.

The problems of the peace dilemma and of the nuclear war issue are the evident case of the /d/ situation: if one starts this war then there is only one possibility, viz. the destruction of the humanity

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as whole. There are no costs to compensate the damage, and *ex hypothesi* no restitution is possible, and any avoidance of negative results seems a pure utopy.

So for environmental issue of the potential negative results the situation is clear: the balance of the negative results, and the costs of avoiding them or restitute the damages, has to be compared with the positive value ascribed to the use of the technology in question. The level of ecological consciousness determines the criteria of this comparative evaluation. When there are negative results as side-effects of technological transformation of nature one always has to pay and, therefore, it is the question how much in comparison of the damages and the benefits expected.

For the nuclear war or peace issue the problem of negative potential results is much clearer. There is no price worth to pay for nuclear war and, thus, no price for peace either. Some political discourse is, however, not refered to the situation /d/ type, but to the /b/ situation, i.e. to a limited war giving some advantage for the winners in the strategic game. This seems a rather weak argument, whereas the use of /a/ and /c/ situations is evidently absurd. The weakness appears when one takes into account the rather small probability of limits of the war in question and the high probability of the disastrous results not only fir the parties of the conflict, but for the whole humanity.

9. The nature and man relations have some reflections in law and, thus, in legal philosophy.

There is a growing bulk of statutes dealing with the protection of environment and health issues, both in the law of particular states and in international law. The statutory instruments are, however, more concerned with the existant facts of ecological damages and the protection of environment writ large, than with the ultimate issue of the biological existence of the man on earth put in real danger according to the catastrophist /or realist?/ ecological hipotesis. In any case, from the point of view of the legal philosophy the problem of the homeostasis of biological existence of *homo sapiens* is at stake.

This existence is evidently at stake in the case of the possibility of the nuclear war. Here the law dealing with disarmament, prohibition of nuclear tests and elimination of the war deals directly with the issue. Legal instruments in the form of international law conventions are,

however, only the result of political agreements deeply involved in the whole framework of the world strategies of power based on technical knowledge of using the nuclear energy as a weapon. The maintaining of peace and restrictive measures put on armaments are directly connected with the danger for the homeostasis of biological existence of the humanity as a whole¹⁰. The care for this humanity stimulated by the feeling of potential danger of the biological existence of *homo sapiens* is felt as the beginning of the new form of human integration as the super-global society of the whole mankind¹¹.

Legal philosophy issues cannot be separated from those of social philosophy issues. The value of social co-existence in a global society implies the conditions in which this co-existence takes place, *inter alia* the environment thought of as a transformed nature. The preservation of this nature in the form enabling social co-existence of man means that his basic needs could be satisfied making the life in global society possible. These needs form biological imperatives valid also for the biological existence of the *homo sapiens*. The value of this existence can be explained philosophically as the condition of the possibility of all other values forming human culture as such¹². In social philosophy one can argue, therefore, that preservation of human existence has a basic value, and that putting his value in danger is always axiologically negative. This holds for the ecological dilemma and for the peace dilemma too.

The nature and man relations are linked not only with the dangers facing the humanity to-day and lurking in the future sinister possibilities, if some trends of them actually present would be intensified in the future. There are also the broad positive possibilities for bettering human life open to the man by his exploration of nature and his transformation of nature. The use of nuclear energy opens the vistas of elimination for ever the crisis of energy. The biotechnology can at least push away to very remote times the spectre of a hunger of overpopulated humanity, giving some hopes for controlling the biological features of it. These immense possibilities can be used and misused too and, therefore, the society ought to have rules and values safeguarding their proper use. This calls for legal regulation of the human technological activities, which takes place to-day, and perhaps will even enlarged in the future¹³.

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10. The nature and man relations are, thus, axiologically ambivalent. On the one hand, the transformed nature opens big chances of bettering human life as never in history. On the other hand, it puts before man the dilemmas of his own biological existence. This ambivalence goes very deep into philosophical thinking concerning the man himself and the nature.

It seems that the ethos of man fighting against the nature, conquering it, using the natural resources thought of as limitless, is adequate neither for to-day nor for the future¹⁴. We have to look at the nature as a part of our life, with which we can play a game for our survival¹⁵. Perhaps man has to control his own cultural evolution recognizing "... how are constantly cause change in the environment by our own behavior"¹⁶. Perhaps we should enlarge our notion of co-existence so, as not to use this term only to the relations between men, but also between men and nature? It would mean an anthropomorphization of nature as a part of co-existence which cannot be jeopardized without the negative consequences for the man - nature relations. The transformation of nature forms, thus, the condition of human existence, and in this transformation the man cannot go too far, because the nature has the demands of its own, and they have to be satisfied if this co-existence has to be developed. Then man should adapt his doings to the features of the nature he transforms. It is the philosophical question whether this mutual adaptation of man and nature call a "symbiosis" or "co-existence" or with some different terms.

Concluding Remarks

11. The nature thought of as the environment *homo sapiens* lives in is differentiated in respect to man. There is the nature immune from man: the man has no physical contact with it but cognizes it only. There is the nature touched by man himself or his artefacts, he leaves same marks of his presence, but cannot transform it. This part of nature will be in the future enlarged step by step. This is the area in which the old ethos of man the conqueror or the nature can have an attractive force. There is, last not least, the nature transformed by man, who reshapes it, makes his artefacts and leaves a waste as the side - effect of his activities.

The transformed nature appears as the challenge to man and

for his future. The man can either use the powers he has for to bettering his life, or for destroying it within the ecological dilemma and the peace dilemma. Some destructive consequences of his normal productive activities appear in the deterioration of his environment, and the question is, how to prevent them or how to minimize their negative impact. Other potentially destructive consequences of the transformed nature is the misuse of the powers, especially of nuclear energy, the man has now, in the modern nuclear war technology.

The transformed nature puts, thus, before contemporary man serious dilemmas, and there are no natural mechanisms substituting his decisions. The biggest problem is the threat to human biological existence on the earth. One can ask whether these dilemmas do not stimulate the new human attitude towards nature, by substituting the ethos of conquering the nature to the ethos of co-existencial living in it, measuring human potentialities with the features of the nature transformed by man.

NOTES

/*/ The text is the enlarged version of the paper prepared for the IVR'87 Kobe World Congress, August 1987.

- 1 For general reference cf. Brown /1958/, Budyko /1980/, Fedorov /1980/, Kuusi /1985/, Laptev /1977/, Wróblewski /1980/.
- 2 Brace and Montagu /1977/, Dobzhansky /1967/, Simpson /1952/.
- 3 Kłoskowska /1983/ and bibliography cited p. 564-585.
- 4 Kuusi /1985/ chapt. 4,12 and passim.
- 5 This is the issue if the present "technological era" whose features are investigated e.g. S. Cotta /1968/ chapt. IV-VI; This era is also called "*era planetaria*" Frosini /1986/ sub-title.
- 6 E.g. Kuusi /1985/ chapt. 13,14 and cit. lit.
- 7 Kuusi /1985/ chapt. 15 and lit. cit..
- 8 Words of Schweitzer cited in Carson /1962/ p. V cf. also Cotta /1968/ p. 119; Simpson /1952/ p. 328; Kuusi /1985/ p. 188, cf. p. 48.
- 9 Cotta /1968/; H. Brown /1958/.
- 10 Wróblewski /1981/1/ The idea of this homeostasis does not however, presuppose an existence of self-regulating mechanisms operative in human existence and co-existence, and at this point I cannot agree with Kuusi's idea of the functioning of such biological and cultural systems /cf. Kuusi /1985/ p. 182/. But these mechanism are not sufficient because the author sees the need of human steering of his own revolution cf. note 16 below. From another point

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of view there is an emerging ideal of seeing the whole humanity in a man and vice versa.

- 11 Frosini /1986/, p. 9. About the need of the solidarity for the whole human species cf. Kuusi /1985/, p. 38, 260 sq.
- 12 Wróblewski /1980/ p. 674-677. About conditional relativization of evaluative statements cf. Wróblewski /1981/2/ p. 621 sq. The argument going in the same direction but based on cognitivist presuppositions cf. Cotta /1981/ chapt. V.2. Culture depends on human existence cf. also White /1964/, p. 407, 411; Kuusi /1985/, p. 31.
- 13 cf. e.g. about the health and privacy issues Frosini /1986/, chapt. 9-14; /1981/ part II chapt. 1-4, 6 in general Cotta /1968/, chapt. 9.
- 14 About the "provocation of Nature" cf. Heidegger /1953/, p. 29 cited in Cotta /1968/ p. 40, cf. also p. 50, 53.
- 15 This seems to be, however, another kind of game that these ascribed to *homo ludens* cf. Huizinga /1985/.
- 16 Kuusi /1985/ p. 57. This is the crucial issue for the survival of man as a species on earth according to this author cf. p. 188 sq. and passim chapt. 12-15.

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