

CONTENS

Introduction	7
1. At the Sources of Human Ecology	13
1.1. Ecology as a Natural Science	14
1.2. Ecological-Theological Dialogue: Needs and Possibilities	23
2. The Man-Person in the Natural Environment	39
2.1. Man and the Person. Toward an Integral Vision of the Human Being	40
2.2. The Natural Environment of the Human Being	53
3. Human Ecology as the Fruit of Ecological and Moral Theological Dialogue	59
4. Ecological – meaning being in Accord with the Nature	67
5. The Integrated Development of the Person as the Essential Category of Human Ecology. Anthropological-Theological Bases of Development	73
5.1. The Essence of Integrated Development of a Person	75
5.2. Integral Development as a Vocation and Inalienable Right of a Human Being	81
6. The Postulate of Sustainable Development and the Idea of Integrated Development of a Human Being	89
Conclusion	93
Notes	97
Books and papers cited or recommended	119

INTRODUCTION

Even a superficial observation of nature leads to the conviction that there must exist certain principles and laws in accord to which it functions. People, as rational beings, from ancient times have asked about these principles, wanting to get to know and understand them. Therefore they ask themselves and others – as well as scientists – about various matters concerning the realities surrounding them and more than once find answers to the questions they place. Often, however, getting to know and understand processes turns out to be unsatisfactory. This knowledge reveals further regions of lack of knowledge – it becomes the motivation to ask questions on the sense and goal of these phenomenon. Among others, such probabilities contributed to the arising of human ecology, meaning the concept which attempts to observe people in their natural environment, pointing to relationships which link them with this environment, and discern the sense and goal of all of this.

The attitude and model of human ecology is ecology in its basic, “traditional” meaning, whose genesis ought to be sensed in the searchings of nine-

teenth century naturalists. They perceived that in wanting to describe the world as a certain closed whole, which it undoubtedly is, it is not sufficient for one to concentrate on detailed studies concerning every creature being an element of this world. It appeared to those scientists as something more than the simple sum of parts composed by the individuals. Attention was therefore paid to relations which join these individuals. It proved that these dependencies have a great significance for many life processes of observed beings. It was also perceived that based on these relations, one can observe certain truths and principles. It allowed, and on the other hand demanded, the distinguishing of ecology – speaking very generally – as a science about these relations among the remaining naturalistic fields and clearly describing its subject and method as well as distinguishing its principle sections.

The most often found division is the one in which three basic trends are distinguished: plant, animal and human ecology (however, it ought to be indicated that not all authors agree on this division). Even though from the naturalistic point of view and in applying biological systematics and nomenclature there is no doubt that in accord with this key, people should be included in the *Animal Kingdom*, however, the majority of naturalists do not ask the just separation of human ecology, as a self-functioning ecological concept. This is dictated by the fact that representatives of the species *Homo sapiens* to a significant extent differ from other representatives of the kingdom of *Animalia*. But these differences, to a inor degree, refer to biological-ecological matters, although

they appear even here. They primarily concern that which is described by the term “internal life” (it is worth noticing that here it concerns not only the psyche).

This, however, is impossible to grasp, study and describe without the help of methods and language used in natural sciences, even with certain ties to psychology. Consequently, it appears that to present the integrated truth about the life of a human being and their natural environment, human ecology is not sufficient, which in its research refers to sociology and the mentioned psychology. This, however, does not mean a critique of human ecology, for there is no doubt that it comprises a solid and fulfilling all demands of a scientific field of knowledge. It is one of the natural sciences, which describes individuals of the species *Homo sapiens* in their natural environment. It draws attention to various relations which he enters into and analyzes important particular problems, which are, among others concentration, distribution, and generation of people. It also elaborates on postulates concerning environmental protection and the health and life of man. But its assumptions and competencies do not allow it to reach every sphere of human life.

The above mentioned issues concerning the “place of man on earth” are the main subject of this publication. However, the contents of this book are not limited to them. Its essential goal is to present human ecology as a concept assisting to understand the dependency existing in the world as a tool in organizing a human being’s relationships in their integrally understood natural environment. The essential trend is also discussing these relations. Based on this, it is possible to elaborate on certain general postu-

lates, as well as some detailed indicators of a normative characteristic, meaning those which ought to be incorporated into life to maintain natural order in the world. So it is worth noting that this publication comprises a novelty in the way of presenting “order in the world” in the complete earthly reality. Undoubtedly, this is also a novelty in the trend of analyses and in theological-moral argumentation. This results from the same innovative issue, and also from basing research on the theses elaborated upon by empirical sciences.

Honesty requires stating that the fact is that it is not difficult today to find publications concerning ecological problems in a strictly naturalistic understanding. Such are also available which see nature from the point of view of philosophy or theology. But it is not easy to find books containing an integrated view of the world; this view refers to empirical experiences and also to knowledge being an effect of reasonable speculations and analyses written in the revealed texts of Sacred Scripture. Most often these aspects tend to be divided. Nevertheless, this does not mean that publications pertaining to human ecology do not exist at all. They are just not very lengthy articles and – as mentioned – there are not many of them. Consequently, even though the very term human ecology functions in science since the 90’s of the XX century, however, till present it has not seen a thorough and detailed report.

Apart from meritorical matters showing the significance of human ecology and the need to pay attention to it, and even to make it into a unique key

enabling the observation and evaluation of the human being's relationship with their natural environment, as well as the lack of its holistic, monographic report, it became one of the important reasons for making from its concept a main subject of research, which as a result is the following report. This book is a translation of the first part of the monograph distributed in Polish entitled *Ekologia ludzka. Osoba i jej środowisko z perspektywy teologicznomoralnej*, KUL, Lublin 2007 [*Human Ecology. The Person and their Environment from the Moral-Theological Perspective*]. Interest in this issue can be shown among others by the renewed publication less than half a year ago after the release of the first edition.

The research carried out in the field of human ecology, even though undoubtedly accomplished in the sphere of moral theology, still on account of the defense of the topic quite often refers to theses elaborated on by natural sciences, but particularly by ecology and biology in general. Oftentimes, also, information is supplemented from philosophical branches. Such a solution somewhat imposes the very concept of human ecology. Accepting an interdisciplinary perspective demands a main subject of research, upon which is composed the person and their natural environment. As it turns out, these matters comprise such a rich and multi-level reality, that an attempt to grasp them by only one branch of knowledge seems to be impossible to realize.

Clear and decided use of the heritage of empirical sciences results not only from the need for an interdisciplinary way of treating the issue of the human

human ecology

being, but also has as a goal to emphasize the relation of theology, and especially moral theology, with other branches of knowledge and showing the mutual complementarity of these sciences. It fosters the presenting of theology as an academic field – without a doubt specific, since in contrast to other sciences it refers to Revelation as one of their main sources – contributing to discovering the truth about the world, which is always one, without regard to the method of reaching it. Human ecology is an attempt at an integrated view of the human being and one's environment.

chapter 1

AT THE SOURCES OF HUMAN ECOLOGY

The last several decades are a time of great progress practically in all spheres of human existence. One of them is science. This scientific progress is expressed among others in that the described disciplines reach newer, more particular and more precise conclusions. A symptom of progress in science is the arising of new scientific fields, which allow people to get to know the truth about the reality surrounding them in a new way. One of such new trends is the concept of human ecology.

This new concept is a result of an original “clash” of ecology belonging to natural sciences with moral theology. Here this does not concern a simple transfer of theses worked out by naturalists to theology. But the concept spoken of is an effect of many scientific proceedings, which emerging from empirical premises characteristic of ecology, one gets to conclusions of a theological-moral character.

1.1. Ecology as a Natural Science

Studies carried out by biologists, meaning – in brief and quite generally – scientists concerned with the issue of life in nature¹, prove that all of nature appears as a great system composed not only of unending number of diverse living and inanimate compounds, but also from a complex net of mutual reactions among them². This claim became so significant, that it caused the genesis of one of those “scientific novelties” which is ecology.

It arose on the basis of biology. Distinguishing it as an independent discipline in the second half of the XIX century was done by the German biologist E. Haeckel. He was the first to define the sphere of this field, and in 1869 for the first time also used the term ecology to name it³.

This formulation comes from the Greek phrase *oikos*, which can be translated as home, household or place of living. *Logos* means science. Therefore, ecology literally means the science about organisms in “their home”, in their family environment⁴. In the understanding of its founder, and therefore in its primary and most basic meaning, ecology is a science concerned with the “household” of an organism (or organisms), meaning its (their) environment, upon which are built all inanimate compounds surrounding the given individual (group of individuals) and all other live organisms⁵.

The above formulation undoubtedly can be used as an attempt to define ecology. However, wanting to

describe it more precisely, one ought to use natural terminology. Meanwhile, it ought to be mentioned that ecology is the science that seeks to describe and explain the relationship between living organisms and their environment⁶. In some reports, at the same time can be found the claim stating that it is evident that in ecological research, first and foremost emerges the issue of the relation of the organism with the environment, and therefore, attention is paid to the properties deciding that it can from these surroundings draw elements indispensable for life and also shape this surrounding⁷.

Ecology perceived as such is not a homogenous science. Although not all authors clearly point this out, it can be accepted that – on account of which group of biological systematics organisms are placed, whose relationships with the environment must comprise the main subject of ecological research – this science is divided into three parts: plant ecology, animal ecology and human ecology⁸.

From the above presented definition, one can conclude that two of the most important realities, to which attention should be paid during ecological research are: some concrete, select individual and its environment. Even though this last issue will be viewed somewhat later, however, already in this place one ought to at least generally point to that, which is understood within this idea. It is necessary in order to properly understand what ecology is.

The most general and shortest response to the question of the environment comprises the claim that it is indirectly the surroundings of the researched or-

ganism; the surroundings, which other live organisms create co-habiting in it on a designated terrain, also including the very same terrain and all the inanimate compounds forming it⁹. This clearly points to the fact that ecology is not “a science about single organisms” but deals with the biology of entire groups of organisms and the connections of these groups with the environment in which they live¹⁰.

Characteristic for ecology is also that its representatives do not study and describe “from the beginning” everything which concerns some organism (such as various processes in the cells or the functioning of particular tissues, organs or systems and so on). It is concerned with all this only when it is essential to establish certain facts or explanations of ecological phenomenon, and consequently those problems, which concern the relationship between the observed organism and its environment. These abovementioned phenomena are not however without meaning for the whole of ecological research. Oftentimes they actually point to their particular profile¹¹.

Ecology in such an understanding which was briefly presented above is practiced in reference to various levels of biological organization. Its studies concern the molecular level as well as the entire biosphere, meaning all the live organisms on and also about and in the Earth¹².

Although, as a result of the above, innercell and dependencies appearing within organisms are processes not foreign to ecological studies, still, as a principle ecologists are concerned with the highest levels of organization of life¹³. In accord with the

present state of knowledge of nature, four of these levels have particular significance for this science. These are: the individual level – meaning single organisms, populations – the group of individuals of this same species inhabiting the same terrain at the same time, biocenosis – in literature sometimes called a natural biotic group – a conglomeration of population of all species settling the same terrain and on the terrain of those entering with each other into various dependencies, and the ecosystem – biocenosis together with its complete inanimate surrounding, meaning the biotope¹⁴. For a full understanding of the ecological divisions it ought to be added that in this science also functions a single biome. This one, sometimes called the biogeographical sphere, is defined as a collection of all ecosystems occupying a designated, vast region of Earth, which is chiefly characterized by a similar climate, but also type of soil, flora and fauna¹⁵.

Wanting to organize all these concepts and dependencies appearing among them, one can, somewhat simplifying – claim that all biocenoses are found on the surface of the Earth's globe and along with all of its organisms compose the biosphere. Organisms are dependent upon the inanimate environment of the Earth's globe, from the atmosphere encircling the Earth, the hydrosphere composed of ocean, sea, ice-berg, river, and lake water, as well as the lithosphere, meaning the soil and earth rock crust. Sometimes the ecosphere is also spoken of, which is composed of the biosphere and its mutual relations with the atmosphere, hydrosphere and lithosphere¹⁶.

All these concepts are important for the proper practicing of ecology. But in this context, one must clearly state that the principle unit organizing the “classical” or “traditional” ecology is the ecosystem (this is shown by the very name of this unit)¹⁷. This term is tied from the beginning with ecology. It can already be found in the nature works of the second half of the XIX century. The founder of the concept of ecosystem and the introduction of this term in ecology is considered to be A.G. Tansley. According to him, this name designates all plants and animals settling a certain region together with the physical and chemical environment, in which these organisms live and with which they remain in mutual bonds. Therefore, it can be said that the ecosystem is a place or environment, it is a group of animal and plant teams, it is also a collection of codependencies among them. The ecosystem is characterized by particular elements from all those remaining and in addition – their junction¹⁸. Recently, in defining the ecosystem and characterizing its properties, special attention must be paid to the processes of the flow of energy and the circulation of matter in the system¹⁹.

Studies and the description of the ecosystem appear consequently as the basic assignment of ecology. Besides this, ecologists attempt to respond to a series of specific questions, among which are those such as: what lives in the shade of what, which organism eats which, what influences the population and their propagation, in which way does energy transfer from one individual to another in the food chain, why are concrete biocenoses and ecosystems composed of

such and not other organisms, and also among them and their broadly understood environment as well as in which way is man able to cause control over the natural biocenoses as well as ecosystems and maintain them in an undestroyed state. Ecologists are also attempting to define and analyze the characteristic traits of the population and get to know the factors influencing the coming into being of teams²⁰. As results from the above words, the essence of ecological scientific studies is expressed in the “questions and disputes” concerning the analyzed systems²¹.

The described above issues are fundamental for ecological research. They do not exhaust, however, the entire richness of ecology. Apart from these, there are also such matters, whose omitting would in a significant way distort the real picture of ecology. It seems that it would not be a small error to omit relating to perceiving the world of nature through an evolutionary key. Consequently, there is no doubt that evolutionism and ecology mutually help, supplement and clarify one other²². In a significant way this repeatedly expresses the evoked by ecologists claim which states that “understanding ecology is possible only in the evolutionary aspect”²³.

In this context, it is worth noticing that ecology differs somewhat from other particular natural sciences. This “otherness” concerns somewhat written into the assumptions of ecology the possibility of error to exist in the obtained results. Namely, this concerns the theses from time to time worked out based on research carried out in a concrete ecosystem not being in accord with the results of another, even identical

arrangement. This is due not on account of a concrete method or ignorance of the ecologists, but from the fact that random phenomena play a major role in ecology. Acknowledging the importance of random phenomena does not at all signify that all ecological phenomena are unpredictable, it does, however, create the need to point to boundaries of precision in predictions²⁴.

It should also be addend that ecology does not limit its studies to only so-called natural systems. In the sphere of its interests is also found the whole broadly understood environment. That is why an important object of interest for ecologists are the anthropogenic systems, meaning those formed by people²⁵. In describing relationships in such systems, they also draw attention to the influence of all incidents of people's activity on the functioning of nature²⁶. The realizations and conclusions being a result of these same observations – which will be more broadly spoken about – repeatedly theses confirm, that human activity unfavorably influences the state of nature (though it ought to be noted that not always – there are also incidences of positive effects of man on nature). This chiefly concerns transformations related with farming and the food industry as well as civilizational progress²⁷. They sometimes cause that nature is destroyed. That is why among various theses worked out by ecologists, there are such which speak about the necessity to limit the influence of man in natural systems of nature. In this sense, ecology may be perceived as a science striving to protect the environment. This concern for the natural environment is not,

anyhow, the main assignment and subject of ecology, but only the consequence of the claims worked out by it²⁸.

Even though concern for nature is one of the postulates of ecology²⁹, sometimes it is treated even as its original mission³⁰, and some naturalists agree on calling ecology environmental protection³¹. However, it ought to be clearly stated that this is not correct. Such a situation leads to unclarity. That is why it is appropriate to strive for consequently using the term “nature protection” and avoiding the unjustified substitution of it by the term “ecology”³².

From this, which was up to now said, it clearly results that ecology is a strict natural science; it is an academic discipline, whose assignment is to study and clarify the dependencies among organisms in the broadly understood environment of their lives³³. As such it possesses a precisely specified subject and is characterized by its own research methods. However, one must agree with the statement of those biologists who claim that despite such clear descriptions, it is “the broadest and least homogenous biological discipline” often referring to other biological disciplines and willingly reaches to other natural sciences, particularly often to geography and earth sciences, which becomes simply indispensable when the subject of interest also incorporates the inanimate environment³⁴. One can – generally speaking – state that the subject of ecological research is nature, in which “everything is linked with everything”³⁵. That is why in looking from the point of view of a naturalist, it can be added that “in such a grasp there is very little of that which –

at least potentially – ecology is not”³⁶. Certain issues or data can not be examined, however, in separation from oneself. Because if this were to be done, at that time the presented result of studies would not only be incomplete, but simply untrue³⁷.

To the essence of ecology belongs, therefore, its tie with other areas of knowledge. This tie appears as a two-sided dependency. This is because on the one hand – which was spoken of above – ecology makes use of the heritage of other sciences. On the other hand, however, the theses worked out by ecologists are taken into consideration in research carried out by scientists dealing with other areas of knowledge. This also concerns humanistic sciences and theology. An artificial separation among particular areas is at minimum unjustifiable. Without a doubt, it is also harmful for the integral concept of science³⁸.

1.2.
ECOLOGICAL-THEOLOGICAL
DIALOGUE:
NEEDS AND POSSIBILITIES

Ecology in its basic meaning – which is repeatedly underlined – is the natural science having a strictly defined subject, language and method. In using this workshop, it tries to describe the world, and especially the relationships entering into it and mechanisms which regulate it, paying great attention to the diversity and distribution of organisms in nature as well as underlining the evolutionary development of the world.

The continued advancement of knowledge somewhat obliges ecologists to ask constantly newer questions, since the obtained answers oftentimes lead to new unknowns. The mentioned scientists are also not in a state to answer all of them when using the competencies of the science they practice. It is also not always sufficient enough to refer only to other biological sciences. This is because a thorough performing of ecology oftentimes leads to a deeper reflection on the identified and studied natural systems; but in the end, it will place questions to the inquisitive researcher, among others about the sense of these phenomenon, about their first cause, and also about the sense of the very research. This somewhat will demand referring to other sciences.

Without a doubt these claims can and ought to be applied to ecology. It seems that this field can not develop when guided by a scientological concept of science. The era of contrasting one science with another has ended, where one is separated from another. Being directed by only ecological rationalism not only is insufficient, but on the contrary becomes an obstacle in the development of science and getting to the truth³⁹. That is why – with the goal of obtaining the full picture of such complicated realities, which are among others: life, the person, the world – it is not only justifiable, but the use of theses worked out by various sciences becomes simply necessary. So therefore in the entire understanding of scientific studies, it is unusually helpful in getting to a constantly fuller picture of the world, and dialogue between natural and humanistic sciences appears. Its particular expression is dialogue between ecology and theology⁴⁰.

The above proposition does not suggest the obliteration of differences among particular fields. It only turns attention to the need to see the individual sciences as diversified “tools” adequate for getting to know and describe the reality from many various perspectives. Multi-faceted issues somewhat demand being examined “in parts” giving for analysis every area of knowledge in this field which it is in the condition to test and describe. The results of these “partial” studies are always very essential for the whole of knowledge. At the same time, they cannot be perceived as the ultimate answers to the questions asked concerning such very complex realities, which are the

world, the person or life. None of the empirical sciences should attempt to stand as the “all-knowing” nor even presume that it knows the ultimate replies, but must admit that not everything is found within its reach⁴¹.

That is why scientists ought to always be aware of searching for the truth, even when this concerns a limited reality of the world or man, which never ends, always referring to something, which is beyond the direct subject of research. An integral vision of the above-mentioned realities and relationships among them can consequently be obtained exclusively through “a research effort of many disciplines”. If one gets to the conclusion that world unity implies scientific unity, then it ought to be accepted that the source and guarantee of the certainty of knowledge is broadly understood scientific dialogue, in which dialogue links data and conclusions stemming from the various cognitive levels. The result of this is that in searching for a holistic vision of diverse scientific issues, even – as the pope stated – “the most natural and ‘secular’ the effort of the mind searching for truth must and ought to be joined with the faith, which also in its areas finds its confirmation and deepening”. Such “joined with the faith” scientific reflection in an inevitable way, however, leads to theology.

Theology is a science which in its searchings refers to transcendental realities, being the contents of religious faith. It ought to clearly be stated that it is an error to identify theology with faith or with religion. Religion is a reality in a certain sense institutional, sociological. Faith, however, is a personal act; it is a certain type of response to the call to “be religious.” It

is a unique communion of God and man, fully giving self to God by man and man to God and an attitude and act of real personal contact between the human person and the Divine Persons⁴². Theology, on the other hand, attempts to describe and systematize the contents of religious faith and apply this to the appropriate methodological principles⁴³.

Wanting to at least generally characterize this science, we ought to begin by analyzing its name. In searching for the meaning of the word “theology” and looking through the evolution of its meaning, one must agree with S. C. Napiórkowski, that generally the formula “study of God” is accepted, even though strictly speaking, the Greek compound word signifying “word (speech) of God” or eventually “word (speech) about God”⁴⁴. It seems, however, that such a translation somewhat restricts the meaning of theology. Recently it comprises the vast area of knowledge at the same time incorporating Biblical studies with systematic and practical theology. In all these sections, its fundamental subject is always God, but an important place is held there also by man in relation to God⁴⁵.

Bartnik, in attempting to show the deepest sense of this area of knowledge, writes that it is always and primarily a study of God. However, he does not stop on this statement, but adds that in a broader meaning it deals with all realities in “relation to God.” Dogmatic theology begins its subject from a treaties on God, even though it could evenly well begin with a treaties on man. There can not be mention of God without man, as anyway there can not be mention of man without God⁴⁶. All of this, which theology teaches about,

is not to be however exclusively knowledge concerning its subject. The rational effort, which is a response to the challenge of faith searching for understanding, which has as its goal to reveal to man (apart from that about God, about himself and the whole world) also the truth about his predestination and pointing out the way of obtaining it⁴⁷. Theology, therefore, appears as such a scientific concept which deepens the religious truth under rigour of rationalities, explanations, interpretation and logic, joining them into one consistent, relating to systems of other masteries (philosophic and scientific), and transfers to correcting the action of man (orthopraxis)⁴⁸. This last serves first and foremost all of moral theology. It not only responds to the question: who is God? It concentrates, however, on presenting ways to unite with Him; it formulates the question: in which way ought man to respond to the revealing God? Next, however – as writes W. Bołoz – based on Sacred Scripture and Tradition, it attempts to answer this question⁴⁹.

Though it ought to be stressed that the principle subject of moral theology is God revealing Himself⁵⁰, however one can not forget that it concerns a scientific reflection on the entire reality in reference to Him. This reflection ought to ultimately lead to a response to the question “what should I do to obtain eternal life?” (Mk 10, 17; Mt 18;18)⁵¹. That is why among the sources of this science – apart from the basic above indicated: Revelation contained in the Bible and, even though not inspired but objectified, meaning Tradition – the majority of theologians include yet other so-called not objectified, in which are included among

others the signs of the times, man, faith and the experiences of individuals or communities⁵². It seems that besides all these mentioned factors, some theses should also be pointed out which are worked out by empirical sciences, among which is ecology. From this the thesis stating that empirical sciences compose a unique source of contemporary moral theology appears as the one which is difficult to ignore⁵³. Such a conclusion can lead away from the concept of theological cognition⁵⁴, therefore, the words of John Paul II are a confirmation of its appropriateness, who states that in the contemporary theological context there ought to be reference to other forms of human knowledge, such as those including natural sciences. Referring to natural sciences can be in many cases useful, since it allows obtaining a fuller knowledge about the subject of studies⁵⁵.

In this place it is worth going to the claims of M. Heller, who has no doubts that despite the discussion and uncertainties concerning methodological issues, dialogue between empirical sciences and theology is possible and profitable for both sides. As one of the arguments speaking on behalf of this thesis, the mentioned author refers to the experience drawn from history, which according to him teaches, that methodological barriers have never yet won with that which is really occurring⁵⁶. In searching for further arguments, it is worth in this context quoting the words of Bartnik, who writes that theological cognition cooperates with philosophy and many humanistic and hard sciences⁵⁷. It ought to be emphasized that this concerns cooperation fully organized from the me-

thodological point of view. The essential issue, which must here be clearly accented is that in dialogue or cooperation between such different sciences, which are ecology and theology, one can not overlook the need to refer to philosophy. Here, philosophy so to say “imposes” itself. It appears to be not only a necessary tool, but simply an indispensable instrument whose role and significance is difficult to overestimate in this place⁵⁸.

The need to refer to philosophy becomes apparent in the first place on the epistemological plane⁵⁹. Dialogue spoken of can never be a simple “transfer” of knowledge worked out by natural sciences (here: ecology) into theology. This principle is binding even when if the subject of research is the same reality, meaning nature. This results from the fact that “dialogue” between disciplines belongs to two different orders (spaces) of cognition, which in consequence observe and perceive this subject from various perspectives. In studies therefore, problems are always formulated and facts are written and so the conclusions are drawn by using the language appropriate to the field, in the framework of which they remained observed and studied. This is a methodological requirement of all sciences. Proceeding against it disturbs the principles of methodology, which most often bears fruit in that the resolution being the result of such disorganized studies comes out to be a solution that is uncertain or apparent⁶⁰.

In wanting to straighten out the “scientific” demands created by its own system, theology can not consequently directly include into its considerations

natural data, but only their philosophical interpretation⁶¹. Methodological discipline also requires a predecessor, who ought to lead his research in such a way so that their clarifications would not go beyond the real world. Heller in discussing this issue writes that one ought to always “clarify the world by the world itself.” In science it is never allowed to resign from clarifying some “material phenomenon” with the help of some other “material phenomenon”. Resigning from such an explanation and referring to the explanation going beyond the material world” would be blocking further scientific advancement, and therefore departing from the scientific method⁶². This does not at all signify that of concern here is proving the inexistence of whatever “cosmic causes.” It is only a methodological assumption demanding not referring to such causes. It only concerns the underlining of the autonomy of every science⁶³. This autonomy – which was already noted above – should not anyhow signify a lack of possibilities in comparing the results worked out by natural scientists with theses taught by theologians, but only postulate on the order of epistemological-methodological behavior⁶⁴. It should also be the guarantee of avoiding the error which Heller gives by the expression “God of filling the gaps”⁶⁵.

Consequently, the conclusion seems appropriate that ecological-theological dialogue on the epistemological plane in an unavoidable way leads to metaphysical reflection. In wanting to contrast the theses worked out by ecologists and theologians without committing a methodological error, we automatically place ourselves in the position of “meta” in relation to

both these disciplines. And this already suffices to claim that we do not find ourselves within the reach of any of them, but in the sphere of philosophical reflection on one and the other⁶⁶.

An observation of ecological phenomenon – as already stated previously – provokes one to constantly ask new questions. Among them are such which concern the first and ultimate causes of existence in the observed ecosystems and creating its plants, animals and phenomenon, as well as their mutual relations. Unavoidable are also such questions which search for a response to the topic of ultimate reasons for practicing ecology, the meaning of its discoveries and destinies. Wanting to reply to these and similar to them questions, one must go out of the region available to ecologists. This is because empirical sciences are not in the state to understand themselves, and also respond to the “non-empirical” question concerning the observed realities, since such knowledge does not belong to the area of these sciences; they can not test and express them with the help of methods, concepts and the language of physical sciences. It is because these refer only to the subject studied by them. Describing a given empirical science remains therefore invariably the assignment of philosophical studies⁶⁷. In this context, it is worth repeating John Paul II that in analysing the situation “the assistance of typically philosophical reflection, critical and able to raise itself to the appropriate level of generality [...] is indispensable”⁶⁸. Here, this concretely concerns metaphysics, which is a philosophical discipline dealing with the theory of being, identifying the nature of things and

searching for the ultimate causes of the existence of beings. All this ought to make it possible to show a complete picture of the world. Metaphysical reflections are consequently the most general, but at the same time primary scientific studies. This is because they provide the fundamental premisses for understanding reality⁶⁹.

Such a metaphysical reflection on ecology must be thorough and responsible. This therefore means that practicing it can only be done then, when it concerns things really existing and verified by such. In the framework of such getting to know there is no room for manipulating facts, but their explanations. Particular real subjects are not treated as ‘an occasion’ to check scientific hypotheses created a priori, but compose “the book of knowledge” about the world⁷⁰.

Metaphysics – as noted above – among others requires searching for the necessary and objective conditions of the subjective human experience. This is done thanks to the method, which based on reductional understanding and based not on the result of logical relation, but on the necessary relationships ontically set in the theory of being, allows one to grasp with certainty the simple states of being and in essence ask the question about the ontic reasons of these states⁷¹. This makes it possible to find the real facts of such factors of being, which explain it and which are not able to be ignored without falling into conflict with presently undertaken theses of the theory of being. In using this tool, realistic philosophy comes to the conclusion and stands at the position that the holistic view of the world also belongs to the Absolute. In get-

ting to discover His existence, the searching of ultimate reasons of things is fulfilled. Absolute as the ultimate reason for the world's existence is in getting to know the metaphysical fulfillment and crowning of the understanding of reality; it is the keys-tone of the rational and coherent vision of the world. In looking for the ultimate reasons of existence and activity of beings, one is convinced of the necessity of the existence of such a being, all of which is ultimately explained. Being which in philosophy is called the Absolute is the equivalent of the theological concept of God⁷².

It is worth clearly underlining that philosophy is not in the state of proving the existence of the Absolute. It can only point to such a necessity resulting from the rational messages. In taking advantage of them and in using the available to it methods, this means the firing in it apart from philosophical also prephilosophical approaches, and also referring to experiences of empirical sciences, since philosophy gives a rational bases for theology⁷³. Z. J. Zdybicka states, that a thorough reflection on the whole of reality must lead man to becoming aware that in that which can fully meet, the natural human strivings and desires that comprise the threshold of human cognition and human love, can not be anything else other than the Personal Being, the living God, whose existence points out our uncertain existence and the existence of the whole world – Fullness of Existence, Pure Act, identified with the God of Abraham, Isaac and Jacob⁷⁴. Such an understanding is in accord with the thesis taught by John Paul II, that detailed sciences are the appropriate tools for discovering truth.

However, here it ought to be stressed that the empirically known truth always refers to the questions opening access to the absolute Truth; in discovering certain mystery one gets to another, greater Truth: “God Himself placed in the human heart the desire to get to know the truth, whose ultimate goal is to get to know Himself”⁷⁵. In this sense – which was already noted above – empirical sciences, in this also ecology, can comprise the *loci theologici* for contemporary theology.

According to some scientists, going from the so-called scientific understanding to theological understanding is the natural consequence of human striving to the fullness of truth. Rejecting this thesis is therefore an expression of misunderstanding the goal of science perceived integrally as a system of many activities striving to get to know truth. That is why a constantly greater group of learned point to the limitedness of the academic paradigm. It ought to be clearly underlined that all philosophy, which closes in on its system, which encloses its own infallibility and perfection, is an ideology. An ideology is thinking with eyes covered up. Most of all, science forgets that everywhere, wherever we turn, we have to deal with mystery. This mystery is an unending mystery. Science, flinching and grumbling, must admit its one-sidedness. Science only incorporates one part of human experience. Man however, seeks fullness. In the human heart there remained written the search for God. The search for God is the search for Wisdom. This wisdom comes today, here and now, in the Holy Spirit. It incorporates the Wisdom of God, places before phi-

losophy a new path of knowing through faith, and therefore through Revelation, which surpasses the cognitive abilities of the human mind and throws a completely new light on experience⁷⁶.

In this context one more “moment” ought to be mentioned in which empirical sciences somewhat demand being fulfilled through theological reflection. Entering into the diversity of methods and perspectives of getting to know the world and life, one must however state with J. Wróbel, that even the most controversial understandings are not in the state of shaking the truth, but just like science has its source in man, so also in him is found his sense⁷⁷. Empirical sciences must therefore be directed to the good of man, since this gives them sense. Since they do not strive to its depths (not only are they not in the state of grasping and testing the rational soul, but also the sphere of experiences, feelings, spiritual needs, moral unrest and the like) and stopping on the biological-physical structures, they can not know on what really this good must depend on. That is why if a specialist of empirical sciences wants to take into consideration the whole as well as the particular good of man, he ought to refer to theology or at least to philosophy⁷⁸.

The above reflections point out the logical contrasts between any types of true knowledge. Particular areas speak in various ways about the world, man and life and their mutual relations and sense, since they take into consideration their other aspects and make use of varying sources. Nevertheless all the worked out by various sciences theses create a unified “doctrinal” structure on fundamental matters, even though diffe-

rent epistemologically and methodologically. The theses ought to therefore be accepted that supernatural knowing, referring to Revelation, does not destroy the natural (sense, rational) but fullfills it⁷⁹.

The person getting to know something must in the end reach that moment in which cognition in using the methods available to natural sciences will not give new effects, and the person getting to know will have the awareness that there are still mysteries which he did not discover. Such a situation does not however mean the limit of human research. In this place – as John Paul II teaches – “faith is irreplaceable, which goes to the front and shows the concrete possibility of obtaining the goal of this investigation”⁸⁰. In this way – in accord with the teaching of Vaticanan II – man filled with knowledge and the natural desire for good “goes from things visible to things invisible”⁸¹.

The Pope, in speaking of fully getting to know the truth (Truth) states that it must be done through the help of reason and faith⁸². Reason in reaching the limit of its possibilities points to the necessity of faith, however faith “demands” that its subject be known through the help of reason⁸³. Ultimately therefore, this means order in how to perceive a fact, since human cognition is done on many various plains; beginning from the sensate, empirical, to that, which is based on Revelation⁸⁴. Each of them however analyzed in an honest way leads to one absolute Truth, even though it is not always refered to directly. Sometimes it stops on particular truths, whose meanings can not be lessened. It ought to be however stressed that in wanting to

obtain an integral view of the world and man, one ought to use the statements of all sciences, which study and describe this reality. One can not allow the conviction that in describing the world one ought to take into consideration two alternative truths: the truth of reason and the truth of the heart⁸⁵. One must claim along with John Paul II that the whole, “deep” scientific knowledge must be based on “the discipline of reason” and “honesty of heart”⁸⁶. This does not at all signify reducing “scientificness” of theology, but only exposes the fact that its methods are different than those, which are used by empirical sciences.

It seems that the best knowledge can be obtained by contrasting in a methodologically organized way the results of particular sciences. Because they will not exclude each other is proof of their truthfulness. Authentic truth, therefore can not be a subjective conviction about the validity of the basic thesis, but must be “a universal and absolute truth”. Only such is in fact truth, which by its nature, if it is really true, appears as universal. That, which is true must be always true and for everyone⁸⁷. This is so because the unity of truth is the principle postulate of human reason⁸⁸.

chapter 2

THE MAN-PERSON IN THE NATURAL ENVIRONMENT

An attempt to get to know the world and the relationships ruling in it is the key proposed by ecology which leads to the conclusion that among many ecological elements, one of the most essential and some-times most important appears to be man. That is why the perception, establishment and systematization of the main truths concerning man and his environment seem to be for ecology one of the principle issues. Wanting to present the problem of ecology in the best way it is not worth stopping at empirical knowledge, but search for broader knowledge concerning the relationships entering into the world; knowledge being a result of the above described dialogue among sciences.

2.1.
Man and the Person.
Toward an Integral Vision
of the Human Being

The words *man* and *person* are universally seen as meaning the same. That is why in the title of the following section the expression may bring wonder. Placing *and* between these two expressions suggests their diversity in contents. The answer to the question if such a differentiation is justified seems to be a complex issue.

The way of viewing the material subject in the concrete field of science depends on the formal subject and from the accepted research method. That is why in such a situation, when the material subject is the same reality, the results might be different. An honest practicing of whatever kind of science should not lead to the situation in which the results would exclude themselves. However, the results of the research undertaken in the framework of particular sciences are various and this is a result of the fact that the researches pay attention to other aspects of the observed subject; it is a confirmation of the methodological specifics of every one of the sciences and their autonomy. It is not an astonishing fact that also man, in placing the principle subject of interest in many scientific fields, is perceived by them in a different way. Therefore, wanting to obtain the full and integrated picture of a person, one ought to refer to many

various sciences and in a methodological way compare the claims¹.

The first phase of cognition – which was mentioned above – is empirical knowledge. That is why for an integral vision of the person, it is necessary to use the claims of natural sciences, which are particularly based on experiences. These, in observing man and his life, perceive it as a living heterophysical being. That is why, in accord with biological systematics, he is considered a representative of the Animal Kingdom². Particular zoological analyses allow us to notice that man is a being, who is characterized by a complete two-leggedness, longer lower limbs than front, an exceptional development of the brain, strong contrasting thumb and ungrasping feet, a parabolic tooth arch, small fangs, which do not protrude beyond the tooth line, a tendency to growth of the chin, long hair on the head, the appearance of gender dimorphism, the existence of social life and progressive psychic development³.

Looking at people from somewhat another perspective, one can notice that they are a land species of mammals of the leading group, characterized by the following ecological demands. They live on the land and are active in the day. They demand particular protection during sleep. They must avoid injuries to the body, large predators and overcome the invasions of many parasites. They respond heterophysically – omnivorous, since their food can (and ought to be) plants as well as animals, who must be found, gathered or caught and prepared to eat, while avoiding toxic substances. They must drink water, but un-

fortunately not from the sea. The optimum temperature of the surroundings must be close to 25°C. They breed not too prolifically on account of their long time of maturing and long period of intergenetics. They live relatively long (several decades), in groups and – in taking advantage of a well developed nervous system, primarily the brain – they can exchange information on topics of personal experiences (including between generations), and also gather it, which significantly makes it easy to cope with everyday problems. Ultimately however, from the quantity and quality of this information depends what habitat they will be able to survive⁴.

The above characteristic is quite general and not completely gives the specifics of the species *Homo sapiens*. In wanting to grasp these specifics in a fuller way, zoologists pay attention to the series of properties of man, among which one stresses the characteristics related with complete uprightness of the body and two-legged movement. Also untypical, in comparison with other species, is the landbasing of man. The brain mass is also not without significance, which in comparison with the body weight is unproportionally greater than in other living beings in the world⁵. The development of the brain and the entire nervous system has a big significance in the processes of learning, meaning modification of behavior under the influence of the acquired experiences, conditioning of reactions and memorizing, which in the case of man are much more complex and developed than in other species⁶.

In making precise the thoughts concerning the exceptional abilities in learning for man, it must be added that this does not concern only the ability to transmit experiences related with appropriate behavior in determined, previously experienced existential situations. This concerns authentic knowledge; about the ability to relate facts and reach conclusions, meaning the existence of reflective awareness. Unusually important is the fact that experiences, which were spoken of, were repeatedly acquired by individuals living in another time and in other geographical-natural conditions. An important role here plays the ability to understand one another, which in the case of man is unusually complex and is called speech. In transmitting knowledge and understanding each other is tied the ability to create tools and to use them. All of this is described in zoology and called the psyche⁷. On this level, a significant difference is able to be noticed among the mental abilities of man and the highest psychically developed representatives in the leading order. It is most fully expressed in a distinct ability to generalize, the bases for logical understanding. Man shares with animals the instinctive forms of behavior and physically induced motivation systems. Nevertheless that, which he learns, remembers and integrates, composes the raw material for his rational thinking and at least partially – for his emotion. In the context of psychic activities, some scientists also stress the unusual manual abilities of humans in comparison with other species⁸.

The next typical property of reasoning man is that which in zoology is called the herd life. It is one of

the many representatives of this option. However, in contrast to other species, in the case of *Homo sapiens*, group life is not only directed to the common acquiring of food or mutual protection from predators, sexual partnership and care of offspring. A characteristic trait here is that, thanks to taking advantage of experiences and abilities in transmitting the acquired experiences among particular individuals and those belonging to the group, man was in the state of enlargening his number in an unproportionally large way in comparison with other beings and the majority of possible to live in environments⁹.

In describing the characteristic biological traits of man, it ought to be stressed that completely original in him is the nuptial behavior, also called sexuality. In contrast to the majority of living beings, in the case of man, there is a lack here of seasons in feeling sexual drive and determining this life by chemical elements, and regulating it by psychic elements¹⁰.

Some contemporary naturalists decidedly stress the fact of exceptional relations, which enter into the *Homo sapiens* species between adult individuals and their offspring. It is a fact that the mother takes care of the child, the case in mammals – to which man belongs – and it is a completely natural matter¹¹. It is also nothing unusual to protect the young from the widely understood unfavorable influence of the environment and teaching them how to deal with difficult situations. However, it is completely original to transmit the experiences belonging to other spheres of life. If in the majority of species the offspring learns to observe the common life of adult members, so

much more in man, then adults care for the acquiring experiences through their children. From the biological point of view it is a situation which occurs only among representatives of the human species¹².

Another factor pointing to the particular place of man in the world is the fact that in a significant way he influences the whole of nature and its processes. In comparison with the time of the duration of life on Earth (about 4.6 billion years), the age of the species *Homo sapiens* (about 200 thousand years) is only a small part of it. This also comprises a less than an era of other species. Despite these differences, it is precisely man who wrested the greatest influence on the shapping of life of all the inhabitants of the planet. Even he, to an incomparable greater degree than other beings, takes advantage of the natural resources of the Earth and shapes its environment creating in it the most advantageous for it conditions. In this way man adapted for his needs the most places, in which life can exist and survive. The crowding of human population in relation to the average number of organizms and life-span of particular individuals are so great, that they can not be compared with whatever other species and can not apply schemes used in ecology in relation to other living beings¹³.

The above analyses lead to the conclusion that on the one hand it can not cease, since man is an element of the biosphere, on the other hand he appears as its completely exceptional element. That is why in the statement of some naturalists, in ecology man must by presented as a rational element of the biosphere and the principle factor of ecology¹⁴. This

leads to the conviction that it is not possible to look at him in purely naturalistic categories, since his – in relation to nature – changes in attitudes of value, cultural phenomenon, ethical and religious attitudes, resulting from political systems – comprise an equivalent factors with the natural inside the ecosystem¹⁵.

These exceptional, beyond nature abilities, place man clearly above other living beings in the world. They present him as the one who is in the state to rule over them and influence their existence. This also concerns the unique difference in quality (from the purely natural point of view, it can be noticed that some animals are in certain matters better specialized than man). Some scientists want to stress to a certain degree the dominance of man in the natural world, that they claim he is in the state to so greatly influence nature, that even though he is its element, he does not completely yield to some of its laws. The most important of them is the law of evolution¹⁶. The thesis about the possibility for man to control the course of evolution and setting himself somewhat beyond it somewhat comprises an attempt to find out that from the biological point of view man is close to perfection, that his somatic structure and everything, which is concerned with it, allows him to occupy the central place in the world and maintaining this place is not threatened by anything. This claim is known in physical sciences under the name of the antropic principle¹⁷.

Some biologists attempt to lead this exceptionality of man from his natural biological functions, which arose as a result of evolutionary processes¹⁸.

Some, however, do not agree with this statement, that from the purely biological point of view man should not occupy such a position among other creatures. In analyzing these matters they reach the conclusion that man is different from the rest of creation by something which can not be described with the help of DNA¹⁹.

This “something” integrates with the body, creating unity of the named person. In this place, the difference between understanding the expressions man and person becomes clear. One can not deny natural scientists the possibility to do studies on man. One can not blame them either as an error the fact that when they describe him from the point of view of biological sciences they treat him as one of the living species on earth – *Homo sapiens* in the framework of the kingdom *Animalia*. The research tools and methodology of the natural fields allow viewing man only in such a way. And this is precisely how one ought to understand the expression man. Person on the other hand means something more; it is “man with a soul” – man with all these elements and references, which are not in the state of interpreting natural sciences. The person is something more than the living being²⁰.

The above thesis does not signify however a lessening of the value of the body. On the other hand – they perceive it as an integral element of the person being a necessary reason for its existence, meaning that element, thanks to which the person exists in time and space, and also as a factor, which the person communicates with the world, and through which the person expresses themselves and manifests their

individualized life – the body ought to be esteemed, as well as its natural needs and tendencies. One can not however, avoid the truth, that the human body is spiritualized, this means that with the soul creates an unbreakable whole. That is why perceiving the body of a person only in biological categories does not give its full picture; it can not fully be characterized. Meanwhile – what was noticed above – such a “person” would appear as a temporary element of being one of the many creations of evolution. Avoiding the truth about the spiritual nature of a person is not only a sign of serious reductionism, but a unique anthropological falsehood. That is why the body itself should not be identified with a person, but see in him its integral element. Speaking about the person demands not only at the same time perceiving the spirit and body, but perceiving those realities as undivided unity and in this way creating the being, which is not either body, nor spirit, but a reality of a new quality, different from those two, and at the same time linking them in a way appropriate to them: the person is like a third, other type of being, not only body plus soul or material and spirit²¹.

There is no doubt that in order for this above mentioned “third type of being” to be appropriately understood, it is not sufficient to only use natural sciences. They loose competency at the moment when research goes beyond the sphere of empirical experiences. That is why in order to speak with certainty about a person, it is necessary to refer to humanistic sciences, thanks to which reasonable speculation finds their response on the first and ultimate existential question²².

In referring to the history of philosophy and taking into consideration the contemporary philosophical concepts, an unequivocal definition of the person can not be found. However, generally taking the subject – as Krapiec claims – “person” is understood as some commanding and uppermost formation of being with intellectual cognition. Everywhere a person is grasped as some most perfect “form” of being. And in this all these systems of philosophy are in accord. Speaking about the person in philosophy, its following properites are underlined: the ability of intellectual cognition, ability to love, freedom, subject of laws, dignity and completeness. The reasoning of a person is also accented²³.

In deepening this issue and searching for an unequivocal answer to the question about that, which ultimately causes that one can say about the person, Bartnik reasons in the following way: He is not only nature or being, but must be something added to nature, in order for him to become a person. This something is subsistence – self-existence, personality – and this comprises the formal element which constitutes the person. Contemporary science underlines in the human person the conscious, real element, the element constituting the person is substance in the way of self. Speaking in other words, to be a person means to self-exist with a goal²⁴.

In getting to know the fullness of truth about the human person, not only is it very helpful but actually indispensable appears the recalling of theses worked out by theology. This science, drawing from Revelation, allows getting to know not only those truths to

which one can get to with the help of empirical knowledge and intellectual inquiry, but also those, which God Himself gave to people in His Word²⁵. Among the revealed truths concerning the person, the most important place, as John Paul II teaches, comprises the truth about him, which is that he is the image of God²⁶. This claim of the inspired author on the one hand shows the fact that the human person is even the image of God, from which results its exceptionality and incomparable dignity with other creatures, who are not such an image; on the other hand, it brings out the fact that the human person is only an image of God, which means that he is not god and never will be.

It is also accented that the human person, as an image of God, who “is only Good” (Mt 19, 17), strives by their nature to good. Such a striving points to his dynamic character; even though the human person never will be “like God” but in a natural way tries to be His “most faithful copy”. This therefore can be done and revealed only in relationships, among which the most important appears to be love. All these theses found the fullest realization in the life of the God-Man Jesus Christ. That is why the full understanding of the truth about a person must be based on getting to know and understanding the truth about the Son of God²⁷. All this leads to the conviction, that in wanting to define the person, one ought to pay attention to morality as one of the main properties of a person, since, as the pope states, moral values “are values of the human person as such”²⁸. The realization of these values in life or their avoidance is visible primarily in concrete relationships and to a great degree this actually

comprises the in fact existence and development of a person as a person²⁹.

With moral values is linked the religiousness of a person. Already the observations of some natural scientists prove, that the man-person is singled-out among other creatures by an attempt to seek out deeper values and the sense of one's existence beyond the world perceivable to the senses. In this they perceive a qualitative difference among the representatives of the species *Homo sapiens* and the remaining species living in the world³⁰. In referring to theological research, it can also be additionally said that not only searching for "higher values" but a "religious sense" meaning referring to the transcendental, singles-out the person among all the earthly living beings³¹.

In summarizing the above reflections, one must state that defining the person is not an easy undertaking, and every such attempt often contains in itself elements of reductionism. Nevertheless, in paying attention to the main theses concerning the human person, one can with certainty claim that it is a dynamic reality, a being unceasingly "becoming"; in a natural way permanently striving to reach their fullness. Development consequently appears as one of their principle attributes. Another important property of the man-person is relationality. This results almost directly from claims about the development, and means that the development of a person can be done through various interactions, in which the person is involved. Through these references and dependencies the person shows who they are and how they are and what they become. Among these relationships the

principle one is the relationship with God. In it one can distinguish two basic aspects. On the one hand it stresses the direction of reference to everything, which encompasses the person.

This results from the fact that being in good relationship with God implies a positive attitude to His creatures. On the other hand, however, in relationships with creatures the relation with God is partly verified. In this context it is worth paying attention also to the fact that thanks to various relations the person can, but also must actualize all their potential, undertaking a determined activity (intellectual, volitional, physical and the like). That is why precisely the relational character of the person causes, that it is a dynamic reality. These relationships shape, and somewhat form the person and show who they are and what kind they are. This is because the person, despite that they are really existing beings belonging primarily to the order of creation, still the ontology of the person does not mean stability³². The human being permanently becomes (or at least ought to become) a person.

In gathering these assumptions it can be said that the human being is a being created (able to describe their beginning and end, goal and sense of existence), being an element of the world of nature, but transcending it through their activities: being in relationship with nature, but also with other people and with self, and more concretely with individual elements of their existence. All activities undertaken in the framework of these relationships and being in accord with the nature of a person attribute to their development. The sense and goal of life go beyond the

material world and there, on the transcendental plane, is achieved the accomplishment of the height of itegral development. From the theological point of view it is his salvation, in which he enters into perfect communion with the One, Who is the image and from Whom he comes. In this sense, as Bartnik claims, salvation belongs to the essence of manhood³³. He always stands in the face of the chance of salvation, not towards the fact that he might not achieve salvation. And then he goes beyond his possibilities of “becoming human”³⁴. In undertaking the call “to fullness of humanity” he is thus entering on the path of integral development.

2.2. The Natural Environment of the Human Being

In the most general meaning of the word, environment means the surrounding; something which is found about, or the collection of all objects, which were not counted into the analyzed system³⁵. As such this is clearly used in various contexts. Its first meaning, however, concerns studies on nature.

This term is one of the key issues in ecology. Without a doubt, it should not be considered an exaggeration to state that the idea of environment comprises such an essential reality for this science,

since by ignoring it one can not directly speak of ecology. The appropriate perception and description of the *environment* as well as the relationships which join them with a given individual (or group) was – as noted above – an important element of the genesis of ecology and distinguishes it from the whole field of biology, which – in stopping on the concrete functions of particular organisms – has not always fully esteemed its environment.

It is worth noticing that the analyzed word rarely appears without a description. If, therefore, it appears in this way, then quite often it is perceived as clearly abstract. Even though it appears that there is no doubt as to how it should be understood, however, after a more in-depth analysis, it can not be stated that it describes a concrete permanent reality. It is always said that the environment is “something” some “central point.” The most basic description of the environment of some organism is the following statement: that which is not the organism itself, but which surrounds it. In wanting to use the language of empirical sciences, one can say that the environment of the live system (for example the individual) is everything which does not undergo organization in accord with information of the system (genetic information of the individual), is on the other hand the source of effects of energy and the material of this system³⁶.

Such an understanding leads to the conclusion that creating the natural environment does not always mean the same thing. It ought to be also understood as the immediate surrounding of a given individual; the environment, which influences its life and de-

velopment and to a significant extent decides about them, and also is related to the given individual to the extent that serious changes in it influence that individual in such a way that its essential properties become modified. Speaking in other words, the natural environment is the reality in which a given individual exists and the reality which allows that individual to exist in maintaining all its natural attributes. In attempting to define the natural environment in a negative way, one can state that it comprises such a surrounding for the given object, that a lack of some element in this environment causes a distortion and inability for the natural development of the indicated object.

In searching for an answer to the question what the natural environment of the human being is, one can say that it includes the general elements surrounding it, elements which cause that it can exist and develop as a person. The above presented concept of the human being causes that these elements ought to be sought on all essential levels of human existence. In all these dimensions there are such "places" which decide whether the mentioned being has a personal character.

Since the principle dimension of being a person is the natural level, that is why in characterizing its natural environment, this level ought to be pointed out as the first. From the biological point of view, the natural environment of a given organism (as well as a person's) or a group is built by all the physical elements and other live organisms, which can provide

nutrition to the researched object, as well as those, which can serve as a defense or compete with them, or otherwise destroy it³⁷. The majority of contemporary ecologists speaking about the environment clearly point to two of its essential components. The first is the abiotic environment also called the biotope. This is composed of among others light, water, soil, atmospheric gases and also elements such as temperature, humidity, wind speed, soil acidity, landscape and so on. The second of these elements is the biotic environment, upon which are composed all living organisms, joined with each other with diverse effects, among which ought to be noticed interaction of a competitive characteristic, predation, parasitism, or cooperation³⁸. In referring the above contents to the human person, one ought to state that nature comprises an important element of its natural environment.

The above presented concept of the human person points to that which to a great extent influences its life and development, which are relationships with other people. It allows stating that an important element of the natural environment of a person is society.

One can not also avoid the fact that the human person is a reality so very complex, that as such it comprises an environment in itself, with which are related various relationships. Even though at the beginning it may seem that speaking about the relationship of the person to themselves is a dubious issue, however, after a more thorough look at this problem it ceases to awaken doubts. In the category

called the relationship of the person to themselves, it concerns principally the precise interactions joining particular levels of existence of a person or in other words, the relation to particular elements creating the person as a whole. Among them the most important seem to be the following relationships: to the body and everything related with it, to the entire intellectual and volition spheres as well as transcendence.

The final natural environment of the person is the reality which is quite built up. It is composed of the following elements: nature, society and the every person. Each of them appears indispensable so that a person might exist and develop in a way in accord with their nature, this means the way pertaining to their external, internal and transcendental structure.

The above presented vision of man, which is the person or their natural environment of life causes that the full description of the ecological order in which the human person will be the central individual, can not be made up by using only methods pertaining to natural sciences. It is indispensable to go beyond these methods and refer to other sciences about the human person.

chapter 3

HUMAN ECOLOGY AS THE FRUIT OF ECOLOGICAL AND MORAL-THEOLOGICAL DIALOGUE

The attempt to describe the interdependencies which appear among various elements in the world is ecology. It notices that the representatives of the species *Homo sapiens* have a particular place in nature. In attempting to unravel this phenomenon, one gets to the conclusion that it is not in the state to respond to the question in a full and final way, as to why it is so. Being a natural science it can not get to and understand all the relationships entering into the world, but must stop at only those in nature. An in depth observation and analysis of the world leads, therefore, to conviction that not all which is happening in it is able to be understood based on empirical experiences, and can be explained by using the language and methods which particular sciences use. In order to therefore find an answer to the question about these relationships, one ought to view the world more broadly. This requires other fields of knowledge.

Philosophy plays an essential role in this, which going beyond experiences, sets the first and final question, and thanks to the characteristic of its intellectual speculations, searches for an answer to it. A unique fulfillment of the whole process of acquiring knowledge about the world is done when referring to theology. It allows perceiving certain contents, which are not available either to empirical cognition, nor in the way of reasonable searches based on purely theoretical assumptions. Theology, on the one hand based on Revelation, and on the other – in confronting It with life – allows entering into a completely new region of knowledge.

The scientific concept, which is in the state of describing relationships entering into the world in an appropriate way and as the fullest and most integrated, must be therefore characterized by a somewhat “transdisciplinary” concept, since at certain moments it will have meta-scientific traits. This is because it will not strive to a simple set of assumptions worked out by particular branches of knowledge, since this – as noticed above – would be methodologically incoherent, and through this it would not reflect the truth. It would be important for it to find a “common ground” for these assumptions, which would allow for drawing general conclusions, which will next be possible to detail in further analyses. Their results would point to not only the principles of the functioning of the world and the sense and goal of its existence, but also on the particular relationships among its elements which they enter into – their causes and effects.

In accord with this, as pointed out above, the best model for such a concept seems to be ecology. It can comprise its own type of “matrix” for this concept. This means that it will deal with perceiving concrete, selected elements of individuals and relationships, which join them to their natural environment.

Knowledge concerning the world and dependencies appearing in it acquired and systematized from the transdisciplinary perspective – as named above – has a very clear anthropological characteristic. That is why ecology understood in this way points to the person as the primary individual of and the observed by it ecological arrangement. This assumption (which is not only an assumption in the strict meaning of the word, but is also a result of the introductory observations of the analysed system, as well as the precise observations from the point of view of particular fields of knowledge¹) is clearly made visible in the name *human ecology*. This was just the way the theory was described, whose need to undertake in scientific studies was noticed by John Paul II, and which without a doubt replies to the presented here concepts². That is why it seems appropriate to maintain this name, even though there is no doubt that the expression *ecology of the human person* is an equally correct formulation or simply ecology of the person and that these phrases can be used interchangeably. It is also worth noticing that the idiom *human ecology* has entered into scientific language, functions in it and is appropriately identified³.

It is worth noticing that the concept *ecology* is here used in an analogical sense. This is referring to

ecology in its original meaning. Human ecology itself is no longer, however, a concept which can be counted among empirical sciences. It is also therefore not a “pure” ecology, but somewhat “emancipated”.

The basis for human ecology is anthropology, which based on messages worked out by natural sciences, philosophy and theology stresses that the human person must be perceived in personalistic categories. Not rejecting the statement claiming its ties with nature, this concept accents the truth, since it comprises a unique central point to the whole created world. In realizing that the human person is a creature of God being the “image of the Creator” (Gen 1, 27) and redeemed by Christ, it emphasizes its particular place in the world and pays attention to his inalienable dignity.

The goal to which the human person strives for with all his life is the accomplishment of their supernatural calling, meaning to live eternally with God. He is the one who gives existence meaning. The most efficient way to accomplish this goal is the integral development of the whole person. It is achieved by caring for life and health, work, remaining free, searching for truth and permanent spiritual formation. Integrated development understood in this way appears to be the basic category of human ecology⁴. This does not mean that in human ecology, other forms of reaching salvation are not allowed, but only integral development seems to be the most certain and at the same time the simplest and fully in accord with the nature of a person and the world in which they live.

Human ecology is not limited just to only presenting the person in their natural environment. In observing this system, it presents certain postulates which have a normative character. They are to help maintain the natural structure of this ecological system. In noticing the many threats concerning all these relationships, which are present in it, this concept wants to also discover the possibilities of avoiding threats or propose ways out of the already existing ecological crisis⁵.

The basic value of the integral development of the persons is their life. Human ecology accepts respect for the life of the person and the truth about its sacredness. Decidedly, as a priority value, it shows concern for the soul: “What does it profit a man if he gain the whole world but lose his soul in the process?” (Mt 16, 26).

Human ecology is also concerned with researching and describing the natural environment of the human person, meaning the surroundings, which allows them to live and achieve their calling, which is integral development. It notices that in such an understood environment one can distinguish three basic elements. These are: nature, society and the person themselves. An important postulate of human ecology is care for this environment.

The human person (man-person) is an element of nature. From nature come the necessary elements for existing and maintaining life in a material dimension. In this sense nature appears as the reality in a direct way influencing its integral development.

In the life of a human person, interaction is clearly visible, and even social involvement. Already, its very existence is related with relationships entering between the mother and father. In referring to the previously brought up biological argumentation, one can say that the human person being a mammal is in its first environment of life somewhat completely dependent on the mother's organism. No less essential seems the fact that appropriate development on the intellectual level is not conceivable without the participation of other people. Also, in the spiritual sphere, society (e.g. the Church) appears as an important element fostering the development of the person belonging to that society. Human ecology stresses the truth that full development of a person can be reached in the community and through the community. It particularly indicates the role of the family, but also the nation, in which an appropriate social structure and economic system must rule.

As noted above, the development of the human person, who is a unity and undivided whole, comprises an element of their natural environment. This mainly concerns perceiving the relationships which appear among the person as a whole and on particular plains of their existence. Relationships on these plains to a great degree decide on the integral development of the person as a person. It is worth noticing that all of these relationships to a great degree influence the integral development on account of this: that they are the moment of verifying the moral good and evil "worked out" by the person. This therefore is very strongly tied with the possibility of obtaining salva-

tion, which is identified with full integrated development.

Human ecology does not therefore deviate from the main ecological assumptions. However, getting to the conclusion that one can not stop with natural sciences, I refer to other fields, among which an essential place take philosophy and theology. This not only causes that the vision of the human person is integral, but also shows an understanding of the natural environment. In this way ecology obtains a new dimension while maintaining its principle assumption. It continually remains a science that describes the individual – who is the human being – and their relationship to the natural environment. It also tries to point to certain norms describing the development of this individual toward their environment.

The above reflections lead to the conclusion that human ecology appears as an integrated ecological concept. It presents a full picture of the person and the environment in which they live and points out the sense and goal of their life, and also presents certain suggestions helpful in achieving this goal⁶.

Human ecology is therefore the academic concept of ecology with a transdisciplinary character. Based on an integral vision of the human being, whose vision is not only perceived but also stresses the meaning of the transcendental parameter of the human person and the fact that morality is perceived as a basic attribute distinguishing him/her from the whole world of living being causes that it is impossible to perform this discipline without referring to theology. Therefore, theology, in particular moral

human ecology

theology, appears as the basic criterium, or the “tool organizing” human ecology. On the other hand, however, human ecology is written into the trend of specific moral theology, becoming there a unique keystone of the contents, which concern the personal life with those who refer to the social life and with all of that which is related with relationships in the entire created world.

chapter 4

ECOLOGICAL – MEANING BEING IN ACCORD WITH THE NATURE

Among many controversial issues concerning ecology is – as indicated above – the very understanding of this issue. This does not however concern answering the question what ecology is (even though this is perceived in various ways, which was pointed out earlier), but as to the very understood contents enclosed in the word “ecological.” This has a significant meaning in creating the norms of progressing and in creating a certain world-view.

In wanting to respond to the question what the very word “ecological” means, one can state that it describes the natural status of some individual in relation to their natural environment; a status in accord with nature and this individual. The statement that this word ought to describe certain tendencies striving to protect the environment is a certain binding. If one can agree to such an explanation in common language, then it is so far accepted in science that the word “ecology” is equivalent to the phrase

“protecting the environment” and is without a doubt erroneous. This results from identifying the nouns “natural environment” and “nature” which from the scientific point of view is also incorrect¹.

The arguments presented above and a short analysis of the ecological issues causes that many people perceived as ecological everything which is a so-called product of nature. Every human activity is therefore seen as a disturbance of the ecological balance in the world. Even a pious reflection on this issue leads to the conviction that such views are incoherent, and that their proponents due to objective causes are forced to treat them selectively. A radical rejection of all cultural-civilizational achievements, which would be an expression of life in accord with nature, would force people not only to not use any kind of technical machines, but also to reject for example clothing and medicine, which are also something “artificial”.

It is worth noticing that the above proposed argumentation is not only a humanistic interpretation of the ecological facts. Similar conclusions are reached by natural scientists. According to many of them, nature is the totality of things, phenomenon and factors appearing in the universe and creating this universe. The artificial creations of man are quite often separated from this concept, limiting them exclusively to natural products and phenomenon. In such an understanding, can one speak of the essential differences between a termity built by termites and a building built by people? Products described as artificial always arise from natural products and there are no other possibilities. In both cases – in termites and in people

– we are therefore dealing with the transformation of products of nature made by living organisms. Building a home, using a valley, getting to know the surrounding world and exploiting natural resources are biological characteristics of man. New productions, described as artificial, appear in nature, are elements of nature, influence the structure and functioning of the natural environment, and in many cases it is difficult to isolate them from natural elements².

Modern ecological concepts based on a thorough observation of the world do not leave a doubt, that human activity bears fruit in products of culture and civilization, and undoubtedly ought to be perceived as one of the natural ecological factors. That is why more often so-called ecological anthropological systems are mentioned. Essential examples here are cities³. Even though it ought to be pointed out that the ecological status of cities is always a controversial issue on account of the lack of homogenous criteria of evaluation, appropriate terminology and worked-out research methods⁴ nevertheless no one can not perceive the fact that urbanized regions already today comprise an essential part of the Earth's environment and will always quickly expand.

Their effects to a great extent will shape the future face of biocenoses on our planet. This places on us the responsibility to trace the processes of change in flora and fauna, which would make it possible on the one hand to get to know mechanisms of adaptation, and on the other prognose directions of change. The importance of this problem was in a significant way stressed by the International Organization of

Ecologists (INTECOL), which proposed that the ecology of urbanized territories become one of the main directions of research⁵. Based on messages produced by evolutionism, with which – as previously noticed – ecology is quite closely linked, scientists have reached the conclusion that some species have so well adapted to functioning in taking advantage of civilizational products (and even side products of these processes), that getting rid of these elements could cause a very serious disturbance in their lives⁶.

In order to appropriately and unanimously organize this mentioned issue, one must refer to anthropology and the vision of the world included in it. This problem was previously described in detail, that is why here, only some theses will be mentioned, which are necessary for understanding the analyzed issue. The first of these is the concept about the exceptional position of the human person in the world. As the only reasoning creature, being an image of God the Creator, he cares for maintaining the intended by God order and at the same time is the guarantee of this harmony. Another essential anthropological claim mentions that the human person being an image of the Creator is also a continuation of His created activities in the world. In this sense the human person is obliged to be active and work in the world, and therefore also to intervene in the natural environment. In analyzing this issue, Nagórny comes to the conclusion that the mandate to rule over the earth, which man received from God, is ultimately the mandate of civilization and culture. Sacred Scripture consequently points to the need for man to become active in build-

ing and transforming the world in accord with the will of God⁷.

Anthropology which is not reduced to a few chosen people, but according to possibility using the theses worked out by all sciences dealing with the human-person, there is no doubt that it is natural for the human person to humanize the world which expresses itself in creating culture and civilization. Civilizing and making the world cultural is our calling. In this sense it comprises not only an element, but on the contrary, a way for its existence on earth; it belongs to people's nature. It is also the only one of the primary factors of its integral development. It appears that contemporary people are not in the state of living and functioning without civilizational accomplishments. From the point of view of human ecology, for whom integral development of the person is the basic category and first postulate, avoiding creating culture and civilization is not an ecological activity.

All of this which was mentioned to now does not have as a goal working out the claim that every aspect of civilization and culture is good for the human person and their development. There are such products that degrade the person as a person and destroy the natural environment. It is therefore important that these various phenomena be properly understood and in an appropriate way use them or refute them. It is also important to see and maintain an appropriate hierarchy of beings existing in the world, and most of all the place and competencies of the human person.

In conclusion, it ought to be stated that the words ecological and natural are close in meaning. To

human ecology

a great extent therefore the ultimate grasp of this expression depends on the understanding of ecology. One can not however agree with making nature and natural environment the same or reject cultural-civilizational activities of the human person as a supposed appearance of its uncultivated interference in nature and the natural environment. The natural environment in reality is not a reasoning being with goals; the sense and goal of its existence is the human person.

chapter 5

THE INTEGRATED DEVELOPMENT OF THE PERSON AS THE ESSENTIAL CATEGORY OF HUMAN ECOLOGY. ANTHROPOLOGICAL- THEOLOGICAL BASES OF DEVELOPMENT

The world – which was pointed out at the beginning of this report and which comprises a unique assumption of the reflections made here – is a reality with a goal and sense. As such it undergoes various transfigurations, thanks to which it reaches constantly more perfect forms. These processes are described in the science called development.

In the life of the person who is the integral element of the world, permanent development is also written into them. This problem is one of the basic theses of anthropology. It is therefore no wonder that human ecology, which attempts to describe the person and their relationships with the natural environment,

perceives the integral development of the person not only as an issue unusually essential for them, but on the other hand as their basic category. One of the primary thesis resulting from the research carried out in the framework of human ecology is the statement that man develops through his relationships with the environment; in taking advantage of all of that which the environment supplies him with, he is in the state to become constantly more perfect. Material as well as immaterial elements of the environment, particularly activities and various experiences cause that man changes, becomes “more fully a person” which means that he advances toward integral development.

The concept of development in a general sense means the process which leads to a constantly more perfect form of the existence of the given reality¹. The previously described concept of the person does not leave a doubt that it relies on the law of development. A thorough analysis leads therefore to claiming that to be a person means to always become one. This does not concern however development in only certain aspects, but in authentic and full development of the person, meaning integral development – such, which concerns the whole person in all spheres and expressions of their existence. This primarily concerns the process in which the human person becomes constantly more perfect as a person². An unusually important issue in this context is the understanding of the ultimate sense of the existence of the human person. In its achievement is expressed the obtaining of perfection, which is identified with the fullness of development.

5.1. The Essence of Integrated Development of a Person

Integrated development of a person is the process which refers to the concrete person as an individual being as its primary subject. Taking into account the fact of the social nature of man and taking into consideration the truth that he is a being belonging to the natural world and existing among things which do not remain without influencing him, in his integral development one must perceive the height of all development and progress (natural, scientific, technical, and so on). Their purpose, sense and fulfillment reveal themselves when they are promoted and serve in reaching perfection through the human person³. The postulate of integral development of a person appears therefore indirectly as a challenge to take on these changes⁴. In this context one ought to stress that the principle of the primacy of the human person in relation to other creatures and societies is one of the most important assumptions organizing life on earth⁵. Dignity expressed among others in the possibility to use reason, consciousness and freedom and the ability to get to know the truth not only distinguish the person from among all of creation but also make them the priority value on earth. John Paul II stated that he and only he is “the value in

them-selves and through themselves”⁶. That is why other worldly goals ought to be subordinate to his development⁷.

The first, most visible effect of development is the physical development of a person, who grows and perfects their body. In this place also most strongly appears the dependency of man on the external world. This is primarily visible in the biological (physiological) sphere, but also in other relationships relying on acquiring experiences. Here, the above presented thesis on directing and concentrating on all development of the person is clearly verified, who as an element of the world constantly develops.

The development of a person happens not only because as part of the world they become “perfected”. This aspect is somewhat secondary, somewhat less important (even though – which ought to be stressed – it can not be treated lightly). The main trend of development is, however, done primarily in the non-material spheres of human existence. In such a case it is difficult not to agree with F. J. Mazurek, who states that the development of man is the goal which demands responsible means⁸. It ought to be additionally said that the primary such means is humane, meaning so-called free and working to achieve a goal. It primarily has an influence on “becoming” and perfecting – meaning the development of his subject, which in this case becomes his primary subject⁹.

In stressing transcendence of a person towards all other creatures, one can not however forget that it does not have the possibility to fully be accomplished without the surrounding world. Through human

activity, the spirit makes an imprint on matter. The fruit of the transformation of the world is its gradual spiritualization – humanization. The world through the person interfering in it more constantly and more fully becomes “matter for the spirit” however man, present in it and involved in its transformation becomes more intensely and deeply “a spirit in matter” – becoming constantly more of a person¹⁰. Humanization of the world linked with economic-technical progress causes that the conditions of being become constantly more humane. Man gives sense to all development. The essence of progress, social, market, economic, technical and so on fits into service on behalf of the integrated development of the person¹¹. Through his comprehensive activity, man perfects the world, which through his part ultimately perfects himself. The truth is that in the human person matter and spirit create a monolithic whole, and this leaves no doubt that perfecting the material world ultimately implies the development of the person¹². The II Vatican Council teaches about this, stating that “when human activity comes from man, it is also directed to him. Man in working not only transforms things and society, but also perfects himself”¹³.

The complete development of a person can therefore be fully done through “external” activity which is interference in matter, through which a person is perfected as an element of the world and through simultaneous “internal” perfection – the spirit of this person, which relies on opening up to transcendence during activity. The person living “in the world” is “not of the world” (J 17, 13-19), meaning

they transcend the world. That is why their ultimate calling is to fullness of life in community with God, even though – as stressed above – it can not occur “beyond the world” meaning beyond nature and society, however it is a very personal and internal calling¹⁴. J. Alfaro accurately grasps this problem in writing that “‘the internal world’ and community dimension of man implies the essentially historical dimension of his life, the calling to development in time and to being incorporated, by degrees becoming the whole of humanity” and causing that the concept of integral development is directed to God as its ultimate goal “which goes beyond the horizon of time and history, since it locates it in the personal and direct dialogue with Eternal God”¹⁵.

W. Granat presents this problem in an interesting way, according to whom man during his life constantly comes closer to God and becomes similar to Him. The Lublin theologian, not directly teaching about integral development, indirectly analyzes this problem. He does this emerging from the idea of life which to a full degree he ascribes only to God. Man therefore participates in the life of God. The very fact of life is therefore a participation in the nature of God and this precisely means being an image of God (this only concerns people – other living beings only contain traces of God and are not with Him in a personal relationship). In the end he states that the greater the activity and strength of mastery of self and the surrounding, the greater degree of life¹⁶. From this the conclusion can be drawn that man, in caring for his body, working, acquiring knowledge and caring for

religious and moral development, increases within themselves the level of life. Thanks to this, therefore, he constantly becomes more of a participant in the life of God. The crowning of all of this is therefore the fact that God works in the soul of man, and he in God¹⁷. Without a doubt this process can therefore be identified with the integral development of a person.

Integral development which means becoming constantly more and fully a man appears through activity directed at perfecting one's personality, developing abilities and also through the way in which a man overcomes certain limitations and constantly more becomes master of self – conscious of his calling and ready to accomplish it. Ultimately therefore perfecting self does not rely on overcoming existence in the world as given circumstances which are quite burdensome, but on making real in the material world a full equilibrium of ontological and moral selfbeing¹⁸. In grasping this problem in another way, one can state that going in the way of development is opening up of the person to transcendence and striving to be united with it¹⁹.

A person being an image of the Creator (Gen 1, 27) achieves perfection not only by being ready to open up to Him and dialoguing with Him, but by constantly more faithfully becoming like Him, in accord with the challenge written in Sacred Scripture "Be holy, for I am holy" (1 P 1, 15-16; Lev 11, 45; 19, 2; 20, 7). The summit of integral development of a person is their holiness, meaning eternal life in the Kingdom of God, and also making this Kingdom a reality "here and now". The condition of reaching such

a state, besides God's grace, is the effort of a man, through which his development is undertaken in the sphere of religion and morality. Also, as John Paul II states, "it is not only a 'secular', 'lay' concept, but appears – along with its social-economic accents – as a contemporary expression of the basic dimension of the calling of man"²⁰.

The true and full development of the person means therefore their integral development. This concept contains within itself not only the complete meaning, but also a scaling, creating a whole²¹. The integral development of the person means therefore not only the biological development and their comprehensive development, but that development which is tied with one whole. This concerns quantitative as well as qualitative development; it means the development of everything, which in whatever way is linked with the human person and which causes that they become constantly more perfect as a person²².

In discussing the issue of integrated development of the person, one must stress that presenting the person as a being undergoing unending development is not synonymous with presenting them as an imperfect or incomplete creature. This only means that the person is a dynamic reality, directed to perfection in the physical aspect, psychologically, intellectually, spiritually, and morally, but from the beginning a perfect and fully in the ontological meaning and from the metaphysical point of view²³.

**5.2.
Integral Development
as a Vocation
and Inalienable Right
of a Human Being**

Human ecology, in observing the person in their natural environment, without a doubt is called to permanent development. This anthropological thesis can be drawn from academic studies carried out by natural scientists, philosophers and theologians.

Contemporary biologists have no doubts that the issue of development is one of the key issues in the science carried out by them. Vigorous advancement in genetics and in research concerning evolutionism led some scientists to the conviction that from the biological point of view, life appears as a process of the passing of organisms (and their entire groups) to constantly more perfect states. In this sense biology, which is the study of life, can be treated without exaggeration as a science about development. Therefore, taking into account the fact that man from the biological point of view is one of the organisms living in nature, he also undergoes the law of development as the principle biological law²⁴.

In wanting to obtain a full picture of man and his development, one can not stop at the natural messages. One must also refer to those which were worked out by way of philosophical and theological analyses.

In the scientific works of many thinkers, beginning with antiquity, it was pointed out that man is born “incomplete” and that throughout his whole life he undergoes development, which is directed, has a goal, is in accord with striving for the good, and therefore towards human happiness, is natural, since it is in accord with human nature. In striving to perfection, being an expression of the spiritual potential of man, it is built into the universal evolution towards perfect-ion²⁵. Contemporary times rarely speak of the “in-completeness” of man, therefore often the fact is stressed that he comprises a dynamic reality and is directed towards perfection. This permanent striving to perfection being an expression of the spiritual potential of man is in accord with evolution, the self-projecting perfection of the cosmos, and therefore with the general law of creation; one can say that it is built into the universal evolution toward perfection, to the Highest Good²⁶. Development, therefore, appears as the postulate of natural law, meaning founded on the ontic nature of man and that is why he possesses an unloseable, inviolable and universal character.

In the law to develop, one can perceive the crowning of all rights of a person. It is not a usual addition to the list of laws already existing, nor even their simple summary, but – as states Mazurek – asynthesis of the dynamic penetration of all basic laws²⁷ which comprise a certain indivisible whole. Such a way of perceiving the law to development is in accord with the teaching enclosed in the document of the Papal Commission “Iustitia et Pax” which states: “All people and all nations are granted the right to

development understood as a mutual and dynamic realization of all of these basic rights, upon which are based the main aspirations of individuals and nations”²⁸. The philosophical-social reflection concerning the development of the person leads to the conclusion that this development is for the person the fundamental right, and as such also a priority assignment²⁹.

For human ecology as a concept written into moral-theological teaching, theological arguments based on Biblical texts have a great significance³⁰. Tak-ing into consideration the order of Sacred Scripture, the first such pericope is the description of the creation of man, at the end of which the inspired author wrote the words directed to man by God with the following contents: “Be fruitful and have many children, so that you will inhabit the earth and bring it under your control” (Gen 1, 28). In this expression one can perceive a somewhat double calling to development. First – which was already mentioned – the very transmission of life shows the achievement of development, and also “possessing” life appears as its indispensable condition³¹: man must live, in order to be able to fulfill the function of ruler of the world. I repeat, from the will of God he became someone, who in the name of God rules over all which He created; in the name of God, since he is similar to Him, since he was created in His image (cf. Gen 1, 27).

Man therefore is a creature that in quality and ontologically differs from the rest, is “the only creature on earth which God wanted for Himself”³². The human being is a personal being, through which he becomes a partner of the Creator. God somewhat

shares with him His reign over the world, giving him the ability to participate in his reign. Man is called to use creation. He was placed in the garden, in order to supervise and to cultivate it. God's intention was singular: man must "cultivate the garden." In this way humanity, in the person of the first man, is called to development³³. God somewhat intentionally "did not complete" his work of creation. He did this so that someone who is "like Him" who is "in His image" would always more fully use created things. This is a clear indication for man to perfect all that which is found in his surroundings, since thanks to this he will be able to live more worthily and will himself be able to become more of a person. Pope Paul VI states that "in equipping man with reason, the ability to think and feel, God gave him the tools, whose help man must use to perfect the work begun by God"³⁴.

The Constitution *Gaudium et spes* deepens this thought in stating that "by the work of his hands and with the help of technical means, man tills the earth to bring forth fruit and to make it a dwelling place fit for all mankind; he also consciously plays his part in the life of social groups; in so doing he is realizing the design which God revealed at the beginning of time, to subdue the earth and perfect the work of creation"³⁵. The challenge to be ruler of the world does not therefore mean only "subjugating" nature (which might suggest an image of a garden). This concerns an active and full involvement in perfecting creation, ultimately bearing fruit in the development of man³⁶.

Human activity in the world is essential in order for it to "become free from the limiting mechanism of

its own laws” and in order for him to strive to “obtain perfect and ultimate dimensions”³⁷. The transcendental directing of the world is accomplished through man. The world must be such through his management, “so that in accord with God’s plans, it experiences transformation and reach fullness of perfection”³⁸; he ought to be unceasingly turned to God. This can happen in no other way than only through a continual striving for its “betterment”, in it being given over to man. Rule over the world is therefore not only a gift from the Creator, but also an assignment. Man must “rule over the world and matter through reasonable and free activity”³⁹.

The vocation of man to development does not rely therefore only on that he reign over the world and constantly more fully use it, but also – and rather primarily – that through this himself become constantly more similar to God, whose constantly more faithful image he is to become. Man therefore was not created as a static and motionless being. The first Biblical description of the creation of man “presents him as a creature and image, described in his deep reality through his origin and likeness, which he is composed of”⁴⁰. The image of God in man is associated with – as Alfaro writes – with his constitutive existence as a “spirit in matter”⁴¹. Thanks to his spirituality and consciousness as a person, which is the principle reflection of the soul, man is able to perform rational – subjective activity. His ability to reflect on himself makes him able to reflect on the whole world, to get to know it, to subdue and perfect it⁴².

This last thought can be even more perceived in the second creation account of man, according to the relation in which “the Lord God made man from the dust of the earth and breathed into his nostrils the breath of life” (Gen 2, 7). The spirit and matter creating man mutually permeate each other and condition their existence as a spiritual-material whole. Therefore, man belongs to the world of nature (matter) and appears to be “a spirit in nature”. This state causes within him “an existential tension” which causes the need to exceed self. The result of this is man’s activity, making it possible to actualize the will and possibilities of development⁴³. Through his activity, man implants into the world spiritual values, which he previously received from the Creator. In analysing this issue, Alfaro writes: In the objectivity and in the subjectivity of man (in their mutual indivisibility and confrontation with each other) rules a common and higher than they law of the primary opening up of man to the unlimited horizon of being⁴⁴.

In the New Testament, there is also a clear challenge for man to develop all that which he received from God. Christ calls us to this Himself, when He says to his disciples: “Become therefore perfect as your Father in heaven is perfect” (Mt 5, 48). Here again encouragement to perfect oneself is a fact of spiritual likeness to God⁴⁵. Jesus nevertheless not only encourages, but on the other hand commands one to develop their talents. This is the meaning of the Parable of the Talents (cf. Mt 25, 14-30; Lk 19, 12-27). The severity with which the “worthless servant” is treated, the one who did not use his talents, shows

that striving to perfection is in accord with God's will, and also points to the fact that in the teachings of Christ the issue of development has a great significance⁴⁶. Man can not therefore sway in undertaking assignments to perfect the world. That is why it must be said, in the words of John Paul II, that "whoever would want to abandon the difficult but noble assignment of perfecting the condition of the whole person and all people under the pretext that the battle is too heavy and due to the constant effort of overcoming obstacles, or even on account of setbacks and regressing to the starting point, would be going against the will of the Divine Creator"⁴⁷.

The issue of development also appears in the writings of St. Paul. This Apostle teaches that God wants "everything that was created" to be lead to "complete Fullness". This will happen thanks to Christ, who is "the first-born of all creation", not just man, but all of creation, of which Christ is the "Head"; it will have its part in the redemption of the world, meaning introducing it to another, transcendental level of being – in making it more like the Creator. This happens thanks to human activity joined with the sacrifice of Christ. Such an attitude leads the world to participate in "complete Fullness" (Col 1, 15-20)⁴⁸. Human activity in the world, therefore, also has an eschatological dimension. The Constitution on the Church *Gaudium et spes* clearly states this, teaching that human activity on earth prepares the "material of the Kingdom of Heaven"⁴⁹. As such it is an opening up of the world – and ultimately the active person – to transcendence. It is therefore undoubtedly a manifestation of its development.

The challenge to development appears to be a privilege for the human being. At the same time it is an assignment, whose idea is to oblige them to unceasingly undertake efforts in striving towards authentic and full development. The positive reply to this challenge comprises an expression of obedience to natural law and Divine moral order. It is also the acceptance of God's proposal, with which undoubtedly is linked the endowment with various predispositions necessary for fulfilling one's vocation. Living in accord with the Creator's designs in addition proves the respect a person has to the obtained by them image of God in the act of creation⁵⁰.

chapter 6 – supplement

THE POSTULATE OF SUSTAINABLE DEVELOPMENT AND THE IDEA OF INTEGRATED DEVELOPMENT OF A HUMAN BEING

In looking at the contemporary world from the point of view of human ecology, it is impossible for one not to pause on the rather broadly in present times discussed issue of sustainable development. This is important at least on account of the fact that the name of this idea sounds very similar to the name of the concept of integrated development.

The postulate of supporting sustainable development became popular thanks to the regularly organized since 1992 by the UN international meetings nicknamed “World Summits” (full name: World Summit on Sustainable Development). These meetings set as their main goal the most thoroughly possible observation of the whole reality, its evaluation and based on this data to work out a strategy of sustainable development¹.

In the estimation of the UN, sustainable development relies on the simultaneous progress of “all nations” living on the earth. The essential trait of this concept is the fact that in speaking on the subject, almost always there is mention of some group of people and not a concrete person. This primarily means the annihilation of differences which exist between rich and poor societies, and equal access of all to information, knowledge and food; this also concerns making it possible for all to take advantage of natural resources. In this matter, one also takes into consideration future generations of inhabitants of the Earth.

It is precisely problems related with appropriate husbandry of nature that are the most important issues in the concept of sustainable development. Particular attention is paid to the following topics: water, energy, health, farming and biological diversity. Obtaining stability in these fields is perceived as a sign of sustainable development². Therefore, ultimately this development is practically identified exclusively with technical progress and possessing appropriate knowledge and health as blessings which all people should use. A very essential element of sustainable development is the postulate of environmental protection³.

The above carried out and very superficial presentation of the supported and propagated by the UN idea of sustainable development allows perceiving the differences which – despite very similar sounding names – exist between this concept and the theory of integrated development in understanding human ecology. This does not mean arbitrary criticism of sustainable development nor a complete rejection of its

postulates. It merely concerns not presenting it as the ultimate goal of all activities. Such an understanding, in which sustainable development becomes the priority goal of life and human activities leads to disrupting the appropriate hierarchy of values in the life of a person, and ultimately to degrading the person as a person.

This disruption of natural relationships can be repeatedly observed in the modern world. It concerns various areas of life and is expressed in many ways. It is important to pay attention to its manifestations, which seem to be the most visible. One of them is “health obsession”. It concerns the desire to constantly raise the quality of life interpreted only in biological categories. Another example may be the excessive care for all material values, which are perceived as being able to lead the person to full happiness, which will be more broadly discussed further on in the work. Also not beneficial from the point of view of human ecology is the excessive stress of the bond between people and the environment. In presenting the human person only as an element of nature, without drawing greater attention to other properties of their nature can lead to perceiving the world in holistic categories. This however – which will be mentioned in detail later – is not able to be reconciled with the concept of human ecology.

The appropriately understood postulates contained in the idea of sustainable development appear as one of the more important potential elements fostering integrated development of the human being. It should however be strongly accented that in order

human ecology

for sustainable development to become integrated development, it ought to fulfill appropriate conditions. The primary one is perceiving every human person as a valuable being and blessed with inalienable dignity; perceiving in them value precedent to society and all which is tied with social-political-economical life. Sustainable development, which would become identified with integrated development of a human being must also maintain appropriate proportions between all goods which it cares for. Most of all it ought to refer to ethical norms, as primary principles organizing this process.

CONCLUSION

An observation of the world and analysis of that which is happening in it leads to the conclusion that it is a complicated reality, but also very organized. Various relationships can be distinguished in it which link its particular elements. An analysis of these ties is dealt with by ecology – speaking somewhat in general. In observing a selected individual, which is treated as a primary subject, it analyzes its relationships with the natural environment. Being thus (in its primary – “classical” understanding) a natural science, it concentrates on empirical issues. The desire to make the main subject of ecology the human person (while taking into account all levels of its existence), it showed the need for a new understanding of ecological issues; an understanding which does not just end on perceiving the dependencies on nature, but one that observes the life of the person in all their aspects. The response to this field became human ecology, which is a new and original scientific concept. It comprised the con-

tents of the above publication. It appears that the immediacy of the topic and need for its undertaking are undoubtable.

The concept of human ecology comprises a full and integral, scientific view of the human person and their natural environment. Its main subject is the human person as the spiritualmaterial being comprising the center of the cosmos and giving it sense. It is a theory which – referring to various sciences and opinions – protects the person from various reductionisms. On the other hand however, it allows perceiving the dangers which result from these incomplete views. They clearly name these threats and point out how to prevent or, in case they exist, counteract them. It also allows noticing the natural dependencies which link people to their environment. Besides noticing these it also points to the way to care for and develop these natural ties. The essential thesis of this concept is to value society as an important element of the natural human environment. This comprises a unique *novum* in the description of this environment.

Such a grasp not only points to the social nature of the human person, but also in an unequivocal way shows the need to maintain appropriate relationships with other people as a condition for obtaining integrated development, meaning the fulfillment of man as a person. Another important possibility is stressing the fact that the bond of people to nature does not enter in only on the biological level, but also has significance for the development of the spiritual life of a person. Of great value for the discussed concept is referring to various fields of knowledge: from biology

to theology. Such a view causes that none of the essential elements of the integral vision of the human-person and world are overlooked.

The human being and their environment comprise such a very complex reality that an attempt to grasp them by just one field of knowledge can not end in success. An interdisciplinary view allows for getting to all the main spheres of human existence: from the biological to the internal life while taking into account the so-called transcendental thread in the life of the human being. Even though – as mentioned – the whole of studies was written into the theological-moral quest, however the need to refer to the rich literature belonging to other fields caused that scientific achievements of certain and common conclusions of research somewhat demanded applying a specific method which – speaking quite generally – relied on organizing theses worked out by ecology (biology) and theology first on the epistemological level, in order to later perform certain generalities and syntheses on the metaphysical and theological-moral levels.

In this place it is worth drawing attention to the bibliographical table, which comprises the last part of the book. It is not difficult to notice that not all publications are found in it which were referred to while carrying out research on the topic of human ecology. Secondary literature as well as documents (including Church documents) were removed from it whose titles can be found in the table of abbreviations. The bibliography was limited only to the most important works (as well as a few Papal speeches which directly concern the undertaken topic). It is not difficult to notice

that in the majority they are works published in Polish, meaning the language in which this work was originally written. The list of literature acquires by this a somewhat double character. First, it is a list of important publications referring to the topic comprising the contents of the book. Second it is a chance to draw the attention of foreign scholars rich in the heritage of Polish scientists – whose works – mainly due to language reasons – are not often known and used. In order to make it easier to understand the titles of Polish texts, these were translated into English in the Notes.

Everyone who seriously considers their existence and tries to carefully observe the world in which they live must perceive that in living in the world they are entangled in numerous relationships with diverse elements of reality, creating its natural environment. The human being in wanting to properly experience their lives and obtain their fulfillment must not only know something about their origins, know the meaning and goal of their existence. They must also know how to appropriately function in the above-mentioned relationships. Assistance in this can be the concept of human ecology. It not only points to these dependencies, but also explains how to make it possible for each of these elements to obtain their natural goal.

NOTES

Notes to Chapter 1

1. Cf. C.A. Ville. *Biologia* [Biology]. Translation T. Bilewicz-Pawińska et al. Warszawa 1990 p. 21.
2. Cf. E. Solomon, L. Berg, D. Martin, C.A. Ville. *Biologia* [Biology]. Trans. A. Borowska et al. Warszawa 1996 p. 1121.
3. Cf. Ch.J. Krebs. *Ekologia. Eksperymentalna analiza rozmieszczenia i liczebności* [Ecology. An Experimental Analysis of Distribution and Population]. Trans. A. Kozakiewicz, M. Kozakiewicz, J. Szacki. Warszawa 1996 p. 3-8.
4. Cf. Ville p. 832.
5. Cf. Solomon, Berg, Martin, Ville p. 1120.
6. Cf. A. Beeby, A.-M. Brennan. *First Ecology*. Oxford 2004 p. XX. Cf. J. Strzałko. *Ekologia człowieka* [Ecology of Man]. In: *Kompendium wiedzy o ekologii* [Compendium of Knowledge on Ecology]. Ed. J. Strzałko, T. Mossor-Pietraszewska. Warszawa-Poznań 2001 p. 201; T. Umiński. *Ekologia – środowisko – przyroda. Podręcznik dla szkół średnich* [Ecology – Environment – Nature. Handbook for Middle Schools]. Warszawa 1995 p. 12.

7. Cf. S. Więckowski. Ekologia ogólna [General Ecology]. Bydgoszcz 1998 p. 40.
8. Cf. A. Malinowski. Wstęp do ekologii człowieka [Introduction to Human Ecology]. In: Ekologia. Jej związki z różnymi dziedzinami wiedzy [Ecology. It's Ties with Various Fields of Knowledge]. Ed. A. Kurantowska. Warszawa-Lódź 1997 p. 171.
9. Cf. A. Mackenzie, A.S. Ball, S.R. Virdee. Ekologia [Ecology]. Trans. M. Kozakiewicz, A. Kozakiewicz, K. Dmowski. Warszawa 2000 p. 1; K. Stępczak. Ekologia stosowana [Applied Ecology]. In: Kompendium wiedzy o ekologii [Compendium of Knowledge on Ecology] p. 360.
10. Cf. Ville p. 21.
11. Cf. Mackenzie, Ball, Virdee p. 1-8.
12. Cf. Solomon, Berg, Martin, Ville p. 1120-1121.
13. Cf. Ibidem p. 1121.
14. Cf. Mackenzie, Ball, Virdee p. 2; Ville p. 832.
15. Cf. Solomon, Berg, Martin, Ville p. 1122-1131; Mackenzie, Ball, Virdee p. 267-297.
16. Cf. Solomon, Berg, Martin, Ville p. 1121.
17. Cf. Mackenzie, Ball, Virdee p. 229-265; Solomon, Berg, Martin, Ville p. 1139-1173.
18. Cf. A. Nason, R.L. Dehaan. Świat biologii [The World of Biology]. Trans. H. Gutowska et al. Warszawa 1987 p. 625.
19. Cf. C.R. Townsend, M. Begon, J.L. Harper. Essentials of Ecology. Oxford 2003 p. 366-396; N.W. Skinder. Chemia a ochrona środowiska [Chemistry and Environmental Protection]. Warszawa 1995 p. 12-24; Mackenzie, Ball, Virdee p. 214-228; Nason, Dehaan p. 627-640; Solomon, Berg, Martin, Ville p. 1174-1194; Ville p. 843-846.
20. Cf. Ville p. 832. "In this case, everything that deter-

- mines the distribution and numbers of the polar bear, from what they eat to their position in the global traffic of wind and water. Their anatomy and physiology reflect the polar conditions where they live, the waters in which they have to survive without food. Continually subject to natural selection, the bears are adapted to their habitat and the prey they chase” (Beeby, Brennan p. XX).
- 21 Cf. Ville p. 21; Umiński p. 15-16.
 - 22 Cf. Mackenzie, Ball, Virdee p. 5-6; Townsend, Begon, Harper p. 70; Umiński p. 16. In this context it is worth noticing that from the scientific point of view evolutionism itself is understood in various ways and brings forth many controversies. Cf. M. Heller, J. Życiński. Dylematy ewolucji [Evolutionary Dilemmas]. Tarnów 1996.
 - 23 Cf. Mackenzie, Ball, Virdee p. 5.
 - 24 Cf. Ibidem p. 10.
 - 25 Differentiation among natural systems and anthropological systems is not fully precise. It suggests that systems whose creator is man are not natural. Here this does not concern however such differentiation but showing opposition between that which is created only based on the laws of nature and its forces (which is called natural) and that which arises as a result of work in using the intellect. This rather concerns pointing to the unique opposition between nature and culture.
 - 26 Cf. Mackenzie, Ball, Virdee p. 2; Solomon, Berg, Martin, Ville p. 1197-1212.
 - 27 Cf. Townsend, Begon, Harper p. 347-396; Mackenzie, Ball, Virdee p. 347-372; Nason, Dehaan p. 655-665; Ville p. 881-886.
 - 28 Cf. H. Lisiecka. Ochrona środowiska, czy ekologia [Environmental Protection or Ecology]. In: Ochrona środowiska w filozofii i teologii [Environmental Protection in Philosophy and Theology]. Ed. J.M. Dołęga, J.W. Czarotaszewski. Warszawa 1999 p. 260-261.

- 29 Cf. Mackenzie, Ball, Virdee p. 327-339.
- 30 Cf. Nason, Dehaan p. 665-666.
- 31 Cf. Umiński p. 12-13.
- 32 Cf. M. Wyrostkiewicz. Od ekologii do ekologii ludzkiej [From Ecology to Human Ecology]. In: Ekologia. Przesłanie moralne Kościoła [Ecology. The Moral Message of the Church]. Ed. J. Nagórny, J. Gocko. Lublin 2002 p. 90.
- 33 Cf. Mackenzie, Ball, Virdee p. 5. It ought to be noted, that not all authors agree with this statement. Cf. A. Papuziński. Życie – nauka – ekologia. Prolegomena do kulturalistycznej filozofii ekologii [Life – Science – Ecology. Prologue to Culturalistic Philosophy of Ecology]. Bydgoszcz 1998.
- 34 Cf. Solomon, Berg, Martin, Ville p. 1120.
- 35 Cf. Umiński p. 16.
- 36 Cf. Mackenzie, Ball, Virdee p. 10-11.
- 37 Cf. Umiński p. 16; Mackenzie, Ball, Virdee p. 11.
- 38 Cf. S. Zięba. Ku ekologii humanistycznej [Towards Humanistic Ecology]. „Człowiek i przyroda” 1:1994 no 1 p. 12.
- 39 Cf. Ibidem.
- 40 Cf. John Paul II. Encyclical Letter “Fides et Ratio” (14 September 1998), 69; M. Heller. Sens życia i sens wszechświata. Studia z teologii współczesnej [The Meaning of Life and the Meaning of the Universe]. Tarnów 2002 p. 13-15; M. Wyrostkiewicz. Ekologia i teologia: w poszukiwaniu płaszczyzny porozumienia [Ecology and Theology: In Search of a Level of Understanding]. „Wiadomości Archidiecezji Lubelskiej. Memoranda” 78:2004 no 1 p. 299-309.
- 41 Cf. G.V. Coyne, A. Omizzolo. Podróż przez Wszechświat. Poszukiwanie sensu przez człowieka [Journey through the Universe. Searching for Sense by Man]. Trans. K. Włodarczyk. Kraków 2003 p. 8.

- 42 Cf. C.S. Bartnik. Dogmatyka katolicka [Catholic Dogmatics]. Vol. 1. Lublin 1999 p. 9.
- 43 Cf. M. Heller. Teologia a nauki przyrodnicze [Theology and Natural Sciences]. In: M. Heller, J. Życiński. Drogi myślących [The Way of Thinkers]. Kraków 1985 p. 11.
- 44 Cf. Jak uprawiać teologię? [How to Do Theology?] Wrocław 1991 p. 15.
- 45 Cf. Ibidem p. 51-56.
- 46 Cf. Dogmatyka [Catholic Dogmatics] p. 17.
- 47 Cf. John Paul II. Encyclical Letter „Veritatis Splendor” (6 August 1993) 109.
- 48 Cf. Bartnik. Dogmatyka [Catholic Dogmatics] p. 8.
- 49 Cf. Teologia moralna a inne nauki teologiczne [Moral Theology and Other Theological Sciences]. In: Tożsamość i metodyka nauczania teologii moralnej [The Identity and Methods of Teaching Moral Theology]. Ed. J. Nagórny, A. Derdziuk. Lublin 1997 p. 17-21.
- 50 Cf. W. Gietrych. Przedmiot teologii moralnej [The Subject of Moral Theology]. In: Tożsamość i metodyka nauczania teologii moralnej [The Identity and Methods of Teaching Moral Theology] p. 139-144.
- 51 Cf. John Paul II. Encyclical Letter „Veritatis Splendor” 1-8.
- 52 Cf. Napiórkowski p. 37-49; F. Greniuk. Katolicka teologia moralna w poszukiwaniu własnej tożsamości [Catholic Moral Theology in Search of its Identity]. Lublin 1993 p. 171-179; J. Gocko. Znaki czasu jako „locus theologicus” w posoborowej teologii moralnej [The Signs of the Times as the “Locus Theologicus” in Post-Conciliar Moral Theology]. 46:1999 fasc. 3 p. 81-106.
- 53 Cf. Wyrostkiewicz. Ekologia i teologia [Ecology and Theology] p. 307-309.
- 54 Cf. C.S. Bartnik. Poznanie teologiczne [Theological Cognition]. Lublin 1998 p. 347-348.

- 55 John Paul II. Encyclical Letter “Fides et Ratio” 69.
- 56 Cf. Heller. Sens życia i sens wszechświata [The Meaning of Life and the Meaning of the Universe] p. 23. Cf. *Ibidem* p. 19-20.
- 57 Cf. Poznanie Teologiczne [Theological Cognition] p. 353.
- 58 Cf. John Paul II. Encyclical Letter “Fides et Ratio” n. 69; Heller. Sens życia i sens wszechświata [The Meaning of Life and the Meaning of the Universe] p. 19-48.
- 59 Cf. S. Kamiński. Jak filozofować? Studia z metodologii filozofii klasycznej [How to Philosophize? Studies and Methodology of Classical Philosophy] Lublin 1989 p. 13-32.
- 60 Cf. *Ibidem* p. 284. Particular issues concerning this issue are presented based on ecology and bioethics is discussed by M. Wyrostkiewicz. Cf. Argumentacja ekologiczna w dyskusji dotyczącej moralnych aspektów działań genetycznych [Ecological Argumentation in Discussion Concerning Moral Aspects of Genetic Activities]. In: Geny – wolność zapisana? Meandry współczesnej genetyki. Przesłanie moralne Kościoła [Genes – Recorded Freedom? Meanders of Contemporary Genetics. The Moral Message of the Church]. Ed. J. Nagórny, P.H. Kieniewicz. Lublin 2005 p. 163-172.
- 61 Cf. John Paul II. Encyclical Letter “Fides et Ratio” 69. An attempt to build Christian ethics of the natural environment can not ignore essential data from particular sciences (natural), but ought to interpret them in the spirit of such a philosophical system which allows for their inclusion in reflection, which has its source in Revelation. Cf. J. Nagórny. Teologia ekologii. O prawdziwe chrześcijańskie spojrzenie na kwestie ekologiczne [Theology of Ecology. On the Truth of the Christian View on Ecological Issues]. In: Ekologia. Przesłanie moralne Kościoła – Ecology. The Moral Message of the Church] p. 190.
- 62 Cf. Sens życia i sens wszechświata [The Meaning of Life and the Meaning of the Universe] p. 44.

- 63 Cf. Ibidem p. 44-46. Today no one can doubt in the methodological autonomy of natural sciences. They comprise an independent way to study the world, completely independent of "external authorities" which use cognitive tools worked out by themselves and for their own use. The empirical version of self-criticism relies on – speaking very generally – placing all one's assumptions under the tribunal of experience. The negative verdict of the tribunal sentences the given assumption to exile from the scientific field. The unusual effectiveness of this version of self-criticism guarantees empirical sciences their methodological independence. Cf. Heller. *Teologia a nauki przyrodnicze* [Theology and Empirical Sciences] p. 13.
- 64 Cf. Kamiński p. 280-288; Heller. *Sens życia i sens wszechświata* [The Meaning of Life and the Meaning of the World] p. 20-21.
- 65 Cf. *Sens życia i sens wszechświata wszechświata* [The Meaning of Life and the Meaning of the World] p. 45.
- 66 Cf. Ibidem p. 20.
- 67 Cf. J. Wróbel. *Nauki empiryczne a etyka: dwa światy?* [Empirical Sciences and Ethics: Two Worlds?]. In: *Ósmy dzień stworzenia? Etyka wobec możliwości inżynierii genetycznej* [The Eighth Day of Creation? Ethics Towards the Possibility of Genetic Engineering]. Ed. M. Machinek. Olsztyn 2001 p. 70-71.
- 68 John Paul II. Encyclical Letter „Fides et Ratio” 69.
- 69 Cf. M.A. Krąpiec. *Metafizyka. Zarys teorii bytu* [Metaphysics. An Outline of the Theory of Being]. Lublin 1988 p. 27-66; A. Maryniarczyk. *Metafizyka w ekologii* [Metaphysics in Ecology]. Lublin 1999 p. 23-26.
- 70 Cf. Maryniarczyk p. 20.
- 71 Cf. Kamiński p. 286-287.
- 72 Cf. Ibidem p. 284-288; Maryniarczyk p. 174-177.
- 73 Cf. Z.J. Zdybicka. *Drogi afirmacji Boga* [Ways to Affirming God]. In: *Wprowadzenie do filozofii* [Introduction

- to Philosophy]. Ed. M.A. Krąpiec, S. Kamiński, Z.J. Zdyicka, P. Jaroszyński. Lublin 1992 p. 269-332.
- 74 Cf. Ibidem p. 338-339.
- 75 John Paul II. Encyclical Letter „Fides et Ratio” Introduction. Cf. Ibidem 106; Heller. *Teologia a nauki przyrodnicze* [Theology and the Natural Sciences] p. 13.
- 76 Cf. J. Wadowski. *Wzlot człowieka ku Bogu na skrzydłach wiary i rozumu* [The Flight of Man Towards God on the Wings of Faith and Reason]. In: *Na skrzydłach wiary i rozumu ku prawdzie* [On the Wings of Faith and Reason Towards Truth]. Ed. I. Dec. Wrocław 1999 p. 225-226.
- 77 Cf. *Nauki empiryczne a etyka* [Empirical Science and Ethics] p. 72.
- 78 Cf. Ibidem.
- 79 One can accept the theses (most often implicite in assumption) which as a consequence directly confront knowledge stemming from Revelation. Strictly speaking, there is no logical contradiction here, since the languages are formulated in different ways, but for certain psychological confrontation enters in. Cf. Kamiński p. 289.
- 80 John Paul II. Encyclical Letter “Fides et Ratio” 33.
- 81 Second Vatican Ecumenical Council. Dogmatic Constitution “Lumen Gentium” 15. Cf. Catechism of the Catholic Church 31.
- 82 Cf. John Paul II. Encyclical Letter “Fides et Ratio” Introduction and 107.
- 83 Cf. Ibidem n. 42, Introductino and 48; Second Vatican Ecumenical Council. Pastoral Constitution “Gaudium et Spes” 57. Cf. M. Zięba. *Realność przyrodnicza na granicy poznania naukowego i religijnego* [The Reality of Nature on the Threshold of Scientific and Religious Understanding]. In: *Wiara i rozum. Refleksje nad encykliką Jana Pawła II “Fides et Ratio”* [Faith and Reason. Reflections on John Paul II’s Encyclical “Fides et ratio”]. Ed. G. Witaszek. Lublin 1999 p. 135-161;

M. Rusecki. Czy istnieje konflikt między nauką a religią [Does a Conflict Exist between Science and Religion]. In: *Problemy współczesnego Kościoła* [Problems of the Contemporary Church] p. 383-395. The problem of incoherency between religious truths and scientific truths is very important. Religious convictions differ from all other convictions in that they introduce man to the realm of Mystery. This is a consequence of God's Transcendence. He Transcends human cognitive possibilities, meaning that He trespasses them. Man, who believes in this and wants to be rational finds himself in a difficult logical situation. On the one hand he is equipped in the entire outfit of logical principles, on the other hand he is aware that sooner or later he has to yield to something which he will not be in a state to understand. Can one speak of not being consequent here? Rather, they are limits to human cognition. From the formal point of view there is no contradiction, because it arises when we are dealing with a statement and its negation, and here a meeting takes place (or stronger: a confrontation) with something, which we think, which we are convinced about, and something which we are not in the state to understand. It seems that precisely rationality demands accepting the possibility of the existence of something which can not be understood. Of course, this does not prove the existence of Transcendence, since cognitive limitations of particular people are something other than cognitive limitations in general, but expanding the attitude of being open to Transcendence does not seem to have irrational characteristics. What is more, for a person with religious convictions, faith in Transcendence can be directly the basis of rationality. If we accept that God is the highest Rationality, then rationality which is our contribution is somewhat submerged in God's Rationalism, it has a somewhat ontological basis in it. Sooner or later we have to meet the boundaries of our possibilities to understand... because God is Transcendence. Faith in God does not introduce incompatibility into our convictions, but trespasses beyond our categories of thinking. It seems that the highest inconsistency, par excellence inconsistency, would be that if we were able to completely

understand God. This would therefore be contradicting Transcendence. Cf. Heller. Sens życia i sens wszechświata [The Meaning of Life and the Meaning of the Universe] p. 107-109; John Paul II. Encyclical Letter "Fides et Ratio" n. 13-15.

- 84 Cf. Bartnik. Poznanie teologiczne [Theological Cognition] p. 347-353.
- 85 Cf. Heller. Sens życia i sens wszechświata wszechświata [The Meaning of Life and the Meaning of the World] p. 86-110.
- 86 Cf. John Paul II. Encyclical Letter "Fides et Ratio" Introduction.
- 87 Cf. Ibidem 27.
- 88 Cf. Ibidem 34.

Notes to Chapter 2

1. Cf. M. Wyrostkiewicz. Spór o człowieka w ekologii [The Dispute about Man in Ecology]. In: Spór o człowieka – spór o przyszłość świata. Od bł. Jana XXIII do Jana Pawła II [The Dispute about Man – the Dispute about the Future of the World. From Bl. John XXIII to John Paul II. Ed. J. Nagórny, J. Gocko. Lublin 2004 p. 217-222.
2. In the biological classification, man is described in the following way: species – reasoning man, genus – man, family – hominidae, superfamily – subhuman, sub-order – higher primates, order – primates, sub-species – placentalia, group – mammalia, subtype – vertebrata, type – chordata, sub-kingdom – metazoan, kingdom – animalia. Cf. Solomon, Berg, Martin, Ville p. 473-498. "This is one of the attempts to write the species Homo sapiens into biological systematics. Presently there is no accord between biologists concerning this division. The

lack of equivalence results in that the classical system is based primarily on the external appearance and characteristic life processes. Now all the more often there is a search for genetic and evolutionistic studies to explain the origin and relationship of particular species". Beeby, Brennan p. 30-33.

3. Cf. A. Rajski. Zoologia [Zoology]. Vol. 2: Część systematyczna [Systematic Part]. Warszawa 1984 p. 496.
4. Cf. Strzałko p. 215.
5. Cf. Rajski p. 496.
6. Cf. Nason, Dehaan p. 580-589.
7. Cf. Rajski p. 496. F. Błażejowski. Zarys zoologii systematycznej [An Outline of Systematic Zoology]. Bydgoszcz 2001 p. 157.
8. Cf. Błażejowski p. 157; Nason, Dehaan p. 589.
9. Cf. Rajski p. 496; Solomon, Berg, Martin, Ville p. 1196.
10. Cf. Rajski p. 496.
11. Cf. Strzałko p. 213-214.
12. "Humans go much, much further. Not only do we use language to extract the principles, we play with the ideas. We revel in our lingual skills, toying with the word and enjoying the clash of symbols. [...] Not only can we manipulate concepts, and occasionally come up with on other key advantage over other animals. We can pass these concepts on to our offspring. Certainly other animals learn from their parents, but they do not deal in concepts and they do not learn to manipulate them. We famously stand on the shoulders of the great thinkers who have gone before us. Mercifully, we do not have to invent the wheel or the word-processor anew, with each generation". Beeby, Brennan p. 8.
13. Cf. Solomon, Berg, Martin, Ville p. 1196; S. Zięba. Idea natury w problematyce ekologicznej [The Idea of Nature in Ecological Problematics]. „Człowiek i Przyroda” 1:1994 no 1 p. 95-97.

14. Cf. L. Agapow, A. Kłodna, J. Kruk, R. Feruszewski. *Ekologia człowieka [Ecology of Man]*. Szczecin 1998 p. 11.
15. Cf. *Ibidem*.
16. Man most clearly has liberated himself from the flutters of evolution. This is most clearly seen in the example of our struggles with the HIV virus. Please notice what has happened with the leading attacks by the monkey cousin of HIV. Millions of monkeys have died from it, and those have survived which are equipped with genetic resistance to the virus. Meanwhile man will win with HIV not thanks to Darwinian evolution, but thanks to his reasoning. No other creature is able to do this. And that man is capable of this is not a direct result of our genes. In addition, even though we have not escaped entire from evolution, to some extent we stand beyond it. The fuel of natural selection is also used up and as a result the motors of Darwinian machinery in relation to our species have stopped in their place. It is known that evolution is fed by mutation – sudden changes in genes. At the same time the number of these changes in our DNA has clearly diminished. Is modern medicine concerned with anything else other than cancelling natural selection? If therefore, there is no selective pressure, no selection, that means that there is no evolution. Cf. *Mój brat banan* z prof. Steve'em Jonesem, wybitnym brytyjskim genetykiem i ewolucjonistą rozmawia Sławomir Zagórski – [My Brother Banana. Sławomir Zagórski speaks with Prof. Steven Jones, an outstanding British geneticist and evolutionist]. „Duży Format. Magazyn Gazety Wyborczej” 2003 no 49 p. 26-27.
17. Cf. M. Heller. *Zasada antropiczna [Anthropological Principle]*. In: M. Heller, J. Życiński. *Dylematy ewolucji [Evolutionary Dilemmas]* p. 201-211.
18. Cf. A. Horst. *Ekologia człowieka [Ecology of Man]*. Warszawa 1976 p. 26-29. Some contemporary evolutionists speak of meme, which are equivalents of genes, replicators transferring information concerning culture and civilization. The whole process of the existence and changes of these realities is analogous to biological evo-

- lution. Cf. S. Blackmore. *The Meme Machine*. Oxford 1999; R. Dawkins. *The Selfish Gene*. Oxford 1990 p. 189-201.
19. Cf. *Mój brat banan* [My Brother Banana] p. 27. As a rule I do not agree with the Pope, however in certain issues I think he is right. Ten years ago, in speaking of the theory of evolution, the Pope said that once, in the past, some primate was through God's intervention was given a soul, and this caused that we became people. I am an unbelieving man, however this thought seems to me exceptionally accurate. What therefore do we mean by 'soul'? Whatever is hidden under this term is nothing tangible. If we even study in detail, point by point, the whole of our DNA, we will not discover in it soul genes.
 20. In this sense the expression 'man' and 'person' are not identical. This however does not mean that in common language they can not be used interchangeably. However, in scientific works it is worth clearly point to somewhat different meanings of these words.
 21. Cf. M. Kowalczyk. *Osoba ludzka* [The Human Person]. In: Cz. S. Bartnik. *Misterium człowieka* [The Mystery of Man]. Lublin 2004 p. 107. The above discussed issue is quite difficult and can seem to be controversial. To avoid misunderstanding it is worth noting that it does not concern an attempt to prove that the word man is inappropriate for describing the human being. It means clearly pointing out that it can not be locked into natural science terminology, where man is one of many species. If one becomes acquainted with various sciences, one must be quite precise and unequivocal. Besides, the difference between the meanings of the expressions man and person result from the differences existing between ecology of man and human ecology.
 22. Cf. John Paul II. Encyclical Letter „Fides et Ratio” 5.
 23. Cf. *Metafizyka. Zarys teorii bytu* [Metaphysics. An Outline of Theory of Being] p. 325-329.
 24. Cf. *Element konstytutywny osoby* [The Constitutive

- Element of the Person]. In: *Misterium człowieka* [The Mystery of Man] p. 126.
25. Cf. Wyrostkiewicz. *Ekologia i teologia* [Ecology and Theology] p. 306-309.
 26. Cf. Apostolic Letter "Mulieris Dignitatem" (15 August 1988) 6.
 27. Cf. John Paul II. Encyclical Letter "Redemptor Hominis" (4 March 1979) 10; A. Szostek. *Wokół godności, prawdy i miłości. Rozważania etyczne* [Concerning Dignity, Truth and Love. Ethical Reflections]. Lublin 1998 p. 323-326.
 28. John Paul II. Apostolic Exhortation "Familiaris Consortio" (22 November 1982) 8.
 29. Cf. S. Nowosad. *Teologia moralna ogólna* [General Moral Theology]. Lublin 1994 p. 103-106.
 30. Cf. Rajski p. 496; Solomon, Berg, Martin, Ville p. 1196.
 31. Cf. M. Rusecki. *Istota i geneza religii* [The Essence and Genesis of Religion]. Warszawa 1989 p. 179-224.
 32. Cf. Kowalczyk. *Osoba ludzka* [The Human Being] p. 107.
 33. Cf. *Człowiek potrzebuje zbawienia* [Man needs Salvation]. In: *Misterium człowieka* [The Mystery of Man] p. 217.
 34. Cf. *Ibidem*.
 35. Cf. M. Nawalany. *Środowisko* [Environment]. In: *Encyklopedia PWN* [PWN Encyclopedia] (on-line). In: <http://encyklopedia.pwn.pl>.
 36. Cf. Strzałko p. 215.
 37. Cf. Ville p. 21.
 38. Cf. K. Stępczak. *Ekologia stosowana* [Applied Ecology]. In: *Kompendium wiedzy o ekologii* [The Compendium on Knowledge of Ecology] p. 36; Mackenzie, Ball, Virdee p. 1.

Notes to Chapter 3

1. Cf. Heller. Sens życia i sens wszechświata [The Meaning of Life and the Meaning of the Universe] p. 32-48.
2. Cf. John Paul II. Encyclical Letter „Centesimus Annus” (1 May 1991) n. 38.
3. Cf. Wyrostkiewicz. Od ekologii do ekologii ludzkiej [From Ecology to Human Ecology] p. 100-104; K. Jeżyna. Ekologia ludzka [Human Ecology]. In: Ekologia. Przesłanie moralne Kościoła [Ecology. The Moral Message of the Church] p. 107-108. J. M. Dołęga. Etyczna ambiwalencja współczesnej ekologii [Ethical Ambivalence in Contemporary Ecology]. In: Moralne aspekty przemian cywilizacyjnych [Moral Aspects of Civilizational Transformations]. Ed. J. Nagórny, A. Derdziuk. Lublin 2001 p. 129-141.
4. Cf. Wyrostkiewicz. Od ekologii do ekologii ludzkiej [From Ecology to Human Ecology] p. 101.
5. Cf. Ibidem p. 101-103.
6. Cf. Ibidem p. 103-104; Wyrostkiewicz. Spór o człowieka [The Debate about Man] p. 217-222.

Notes to Chapter 4

1. Cf. Wyrostkiewicz. Argumentacja ekologiczna w dyskusji dotyczącej moralnych aspektów działań genetycznych [Ecological Argumentation in the Discussion Concerning Moral Aspects of Genetic Activities] p. 163-172.
2. Cf. Stepczak p. 361-362.
3. Cf. Ch.H. Nilon, A.R. Berkowitz, K.S. Hollweg. Ecosystem Understanding is a Key to Understanding Cities.

- IN: Understanding Urban Ecosystems. A New Frontier for Science and Education. Ed. A.R. Berkowitz, Ch.H. Nilon, K.S. Hollweg. New York: Springer 2003 p. 1-13.
4. Cf. J. Markowski. Specyfika synurbijnych populacji zwierząt [The Specifics of Synurbian Animal Populations]. In: Ekologia. Jej związki z różnymi dziedzinami wiedzy [Ecology. It's Relationships with Various Fields of Knowledge] p. 144.
 5. Ibidem.
 6. Cf. Ibidem p. 143-170.
 7. Cf. Posłannictwo chrześcijan w świecie [The Mission of Christians in the World]. Vol. 1: Świat i wspólnota [The World and the Fellowship]. Lublin 1997 p. 55.

Notes to Chapter 5

1. Cf. Rozwój [Development. In: Encyklopedia PWN [PWN Encyclopedia] (on-line). In: <http://encyklopedia.pwn.pl>; T. Sikorski. Rozwój [Development]. In: Słownik Teologiczny [Theological Dictionary]. Ed. A. Zuberbier. Katowice 19982 p. 511.
2. Cf. Paul VI. Encyclical Letter "Populorum Progressio" (26 March 1967) n. 14-15; John Paul II. Encyclical Letter "Sollicitudo Rei Socialis" (30 December 1987) 9.
3. Cf. Paul VI. Encyclical Letter "Populorum Progressio" n. 20; John Paul II. Message to the UN (2 October 1979) n. 6; J. Kowalski. Jan Paweł II o osobie ludzkiej jako kryterium rozwoju [John Paul II on the Human Being as a Criterium of Development]. In: Vivere in Christo. Chrześcijański horyzont moralności. Księga pamiątkowa ku czci Księdza Profesora Seweryna Rosika w 65. rocznicę urodzin [Vivere in Christo. The Christian Horizon of Morality. Commemorative Book in Honor of Fr. Professor Seweryn Rosik on his 65th Birthday]. Ed.

- J. Nagórny, A. Derdziuk. Lublin 1996 p. 130-132; Cz. Strzeszewski. Integralny rozwój gospodarczy [Integral Economic Development]. Warszawa 1976.
4. Cf. J. Alfaro. Teologia postępu ludzkiego [Theology of Human Development]. Trans. S. Głowa. Warszawa 1971 p. 57; Nagórny. Posłannictwo chrześcijan w świecie [Mission of Christians in the World] p. 62; C. Strzeszewski. Integralny rozwój człowieka według wskazań encykliki Pawła VI Populorum progressio [The Integral Development of Man according to the Indications in Paul VI's Encyclical Populorum progressio]. "Zeszyty Naukowe KUL" 12:1969 no 2 p. 20.
 5. Cf. M. Pokrywka. Prymat osoby ludzkiej w życiu społecznym [The Primacy of the Human Being in the Life of Society]. RT 47:2000 fasc. 3 p. 209-227.
 6. Cf. John Paul II. Apostolic Exhortation "Christifideles Laici" (30 December 1988) 37.
 7. Cf. Kowalski. Jan Paweł II o osobie ludzkiej [John Paul II on the Human Person] p. 123-139. Man can not be a tool for achieving some good by anyone else, who would treat him as a means to an end, but is himself the goal which the world of things must serve. St. Thomas writes that 'intellectual natures are set by Divine Providence to exist for themselves, and other things for them' and that 'man is by nature free and made for their own sake (propter seipsum) to exist'. I. Kant put the thesis that 'every reasoning being exists as a goal in themselves'; 'Reasoning things are called people, since their nature makes them different as goals in themselves. John XXIII ties the dignity of man with his reasoning nature, as the Declaration of Human Rights given out the UN also justifies. Autoteleology of the Christian person has an even deeper and higher motivation for dignity; man is the chosen child of God, and can be God's friend and participate in the life of His Person, and since He is the goal in himself, then man participating in Him has their human autoteleology Cf. W. Granat. Personalizm chrześcijański. Teologia osoby ludzkiej [Christian Personalism. Theology of the Human Person]. Poznań 1985 p. 570.

8. Cf. Prawa człowieka w nauczaniu społecznym Kościoła (od papieża Leona XIII do papieża Jana Pawła II) [The Human Rights in the Social Doctrine of the Church (from Pope Leo XIII to Pope John Paul II)]. Lublin 1991 p. 165.
9. Cf. K. Wojtyła. Osoba i czyn [The Person and Act]. In: Osoba i czyn oraz inne studia antropologiczne [The Person and Act with other Anthropological Studies]. Ed. T. Styczeń et al. Lublin 1994 p. 51-149.
10. Cf. R. Rogowski. Antropologiczne podstawy postępu [Anthropological Bases of Progress]. "Ateneum Kapłańskie" 66:1974 vol. 82 p. 426.
11. On account of the fact that man is the goal of progress and development, these processes fulfill their role towards man to the extent that they serve him in reaching perfection. Therefore the ultimate criterium in analysing and evaluation progress and development is the integral development of the person. Progress and development in their market dimension serve man through incorporating produced goods in creating the helpful atmosphere for the development of man. This concerns mastering the forces of nature, but also supplying sources for healing social structures. Cf. I. Stolarczyk. Postęp i rozwój w nauczaniu społecznym Kościoła [Progress and Development in the Social Doctrine of the Church]. Tarnów 1998 p. 152-153.
12. Cf. Paul VI. Encyclical Letter "Populorum Progressio" 21.
13. Second Vatican Ecumenical Council. Dogmatic Constitution „Lumen Gentium” 35.
14. Cf. Nagórny. Posłannictwo chrześcijan w świecie [Mission of Christians in the World] p. 45-47.
15. Cf. Teologia postępu ludzkiego [Theology of Human Progress] p. 55.
16. Cf. Granat. Personalizm chrześcijański [Christian Personalism] p. 447.
17. Cf. Ibidem p. 431-449.

18. Cf. I. Stolarczyk. Pojęcie rozwoju w społecznym nauczaniu Kościoła [The Concepts of Development in the Social Doctrine of the Church]. „Roczniki Nauk Społecznych” 24:1996 fasc. 1 p. 102.
19. Cf. J. Majka. Filozofia społeczna [Social Philosophy]. Wrocław 1982 p. 127-130.
20. John Paul II. Encyclical Letter “Sollicitudo Rei Socialis” 30.
21. Cf. Integralny [Integral]. In: Słownik Języka Polskiego [Dictionary of the Polish Language] (on-line). [Http://sjp.pwn.pl/haslo.php?id=20278](http://sjp.pwn.pl/haslo.php?id=20278).
22. Cf. Strzeszewski. Integralny rozwój człowieka [The Integral Development of Man] p. 17.
23. Cf. K. Wojtyła. Osoba i czyn [The Person and Act] p. 144-145. Cf. Ibidem p. 109-149.
24. Cf. L. Wolpert et al. Principles of Development. Oxford 2003 p. 1-25; 493-519.
25. Cf. C. Strzeszewski. Katolicka nauka społeczna [Catholic Social Doctrine]. Lublin 1994 p. 696.
26. Cf. Strzeszewski. Integralny rozwój gospodarczy [The Integral Development of the Market] p. 164.
27. Cf. Prawa człowieka [The Rights of Man] p. 163.
28. Cf. Kościół i prawa człowieka [The Church and the Human Rights] (10.12.1974) nr 39. „Chrześcijanin w świecie” 9:1977 no 2 p. 22.
29. Cf. John XXIII. Encyclical Letter „Pacem in Terris” (11 April 1963) 28.
30. Cf. Second Vatican Ecumenical Council. Decree on Priestly Formation “Optatam Totius” 16.
31. Cf. John Paul II. Encyclical Letter „Evangelium Vitae” (25 March 1995) n. 42-43; Stolarczyk. Pojęcie rozwoju [The Concept of Development] p. 79; Strzeszewski. Katolicka nauka społeczna [Catholic Social Doctrine] p. 696-697.

32. Second Vatican Ecumenical Council. Dogmatic Constitution „Lumen Gentium” 24.
33. Creation points to an absolute beginning: the original introduction of some being into development. Development however implies something which is already and describes it as a temporal being. Cf. Rozwój [Development]. In: K. Rahner, H. Vorgrimler. Mały Słownik Teologiczny [A Small Theological Dictionary]. Trans. T. Mieszkowski, P. Pachciarek. Warszawa 1996 p. 467.
34. Paul VI. Encyclical Letter “Populorum Progressio” 27. Cf. John Paul II. Encyclical Letter „Sollicitudo Rei Socialis” 29; John Paul II. Encyclical Letter „Laborem Exercens” (14 September 1981) 4; S. Olejnik. Dar. Wezwanie. Odpowiedź. Teologia moralna [Gift. Calling. Response. Moral Theology]. Vol. 5: Służba Bogu i otwarcie się na świat [Service to God and Openness to the World]. Warszawa 1991 p. 203-207. Man is similar to God [...] is the representative of God on Earth, since he transforms and perfects the world created by God. Man, king of creation will rule over the world. cf. S. Wypych. Księga Rodzaju [The Book of Genesis]. In: Wstęp do Starego Testamentu [Introduction to the Old Testament]. Ed. L. Stachowiak. Poznań 1990 p. 94-95. Cf. X. Leon-Dufour. Człowiek [Man]. In: Słownik Teologii Biblijnej [Dictionary of Biblical Theology]. Ed. X. Leon-Dufour. Trans. K. Romaniuk. Poznań 1994 p. 182-184.
35. Second Vatican Ecumenical Council. Dogmatic Constitution „Lumen Gentium” 57.
36. Cf. H. Skorowski. Pojęcie: zaangażowanie społeczne [Concept: Social Involvement]. In: Zaangażowanie chrześcijan w życiu społecznym [The Involvement of Christians in the Life of Society]. Ed. A. Marcol. Opole 1994 p. 171-174.
37. Cf. Stolarczyk. Pojęcie rozwoju [The Concept of Development] p. 102-104.
38. Cf. Ibidem p. 104.
39. Second Vatican Ecumenical Council. Dogmatic Constitution „Lumen Gentium” 2; cf. Nagórny. Posłannictwo

- chrześcijan w świecie [Mission of Christians in the World] p. 53-56; Gocko. Znaki czasu jako locus theologicus [The Signs of the Times as a locus theologicus] p. 94-97; Olejnik. Dar. Wezwanie. Odpowiedź. Teologia moralna [Gift. Calling. Response. Moral Theology]. Vol. 5 p. 214-218.
40. Cf. Nagórny. Posłannictwo chrześcijan w świecie [Mission of Christians in the World] p. 62; Stolarczyk. Postęp i rozwój w nauczaniu społecznym Kościoła [Progress and Development in the Social Doctrine of the Church] p. 124.
 41. Cf. Alfaro p. 55.
 42. Cf. Ibidem p. 55-56.
 43. Cf. Catechism of the Catholic Church 362-368; I. Stolarczyk. Postęp i rozwój w nauczaniu społecznym Kościoła [Progress and Development in the Social Doctrine of the Church] p. 123-124; I. Mroczkowski. Niepokój i wielkość człowieka [Unrest and the Greatness of Man]. In: Katechizm Kościoła Katolickiego. Przesłanie moralne Kościoła [Catechism of the Catholic Church. The Moral Message of the Church]. Ed. J. Nagórny, A. Derdziuk. Lublin 1995 p. 51-54.
 44. Cf. Teologia postępu ludzkiego [Theology of Human Progress] p. 54.
 45. Cf. S. Rosik. Wezwania i wybory moralne. Refleksje teologicznomoralne [Moral Challenges and Choices. Moral Theological Reflections]. Lublin 1992 p. 53-54.
 46. Cf. John Paul II. Encyclical Letter "Sollicitudo Rei Socialis" 30.
 47. Ibidem.
 48. Cf. John Paul II. Encyclical Letter "Sollicitudo Rei Socialis" 31; Stolarczyk. Pojęcie rozwoju [The Concept of Development] p. 98-99.
 49. Second Vatican Ecumenical Council. Dogmatic Constitution „Lumen Gentium” 38.
 50. Cf. John Paul II. Encyclical Letter "Sollicitudo Rei So-

cialis” 30; Paul VI. Encyclical Letter “Populorum Progressio” 22.

Notes to Chapter 6

1. Cf. Sustainable Development resources in the United Nations system (on-line). [Http://www.un.org/issues/m-susdev.asp](http://www.un.org/issues/m-susdev.asp).
2. WEHAB (water, energy, health, agriculture, biodiversity).
3. Cf. Stepczak p. 364; United Nations: Johannesburg Summit 2002 (on-line). [Http://www.johannesburg-summit.org](http://www.johannesburg-summit.org).

BOOKS AND PAPERS CITED OR RECOMMENDED

- Agapow L., Kłodna A., Kruk J., Feruszewski R.: *Ekologia człowieka*. Szczecin 1998.
- Alfaro J.: *Teologia postępu ludzkiego*. Trans. S. Głowa. Warszawa 1971.
- Artigas W.: *The Mind of the Universe*. Philadelphia-London 2000.
- Bartnik C.S.: *Misterium człowieka*. Lublin 2004.
- Bartnik C.S.: *Dogmatyka katolicka*. Vol. 1-2. Lublin 1999-2003.
- Bartnik C.S.: *Kultura i świat osoby*. Lublin 1999.
- Becker W.H.: *Ecological Sin*. "Theology Today" 49: 1992 nr 2 s. 152-164.
- Beeby A., Brennan A.-M.: *First Ecology*. Oxford 2004.
- Błażejowski F.: *Zarys zoologii systematycznej*. Bydgoszcz 2001.
- Chomik W.S., Rosiński F.M.: *Kościół a świadomość ekologiczna*. „Ethos” 7:1994 no 1-2 p. 65-80.

- Coyne G.V., Omizzolo A.: *Podróż przez Wszechświat. Poszukiwanie sensu przez człowieka*. Trans. K. Włodarczyk. Kraków 2003.
- Człowiek – Miłość – Rodzina. „Humanae vitae” po 30 latach*. Ed. J. Nagórny, K. Jeżyna. Lublin 1999.
- Człowiek w poszukiwaniu zagubionej tożsamości. „Adamie gdzie jesteś”*. Ed. T. Styczeń. Lublin 1987.
- Deep Ecology and World Religions. New Essays on Sacred Ground*. Red. D.L. Barnhill, R.S. Gottlieb. New York 2001.
- Dyk W.: *Bioetyka między jakością i świętością życia*. „*Studia Ecologiae et Bioethicae*” 1:2003 p. 177-188.
- Dziuba A.F.: *Pytania o moralne zachowania i postawy*. „*Roczniki Teologiczne*” 51:2004 fasc. 3 p. 43-61.
- Ekologia. Jej związki z różnymi dziedzinami wiedzy*. Ed. A. Kurantowska. Warszawa-Łódź 1997.
- Ekologia. Przesłanie moralne Kościoła*. Ed. J. Nagórny, J. Gocko. Lublin 2002.
- Etycznie znaczące techniki biologów*. Ed. A. Laun, A. Marcol. Opole 2003.
- Geny – wolność zapisana? Meandry współczesnej genetyki. Przesłanie moralne Kościoła*. Ed. J. Nagórny, P.H. Kieniewicz. Lublin 2005.
- Globalizacja – życie i zdrowie – medycyna. Chryścijanin wobec niektórych problemów moralnych*. Ed. B. Mielec. Kraków 2002.
- Gocko J.: *Kościół obecny w świecie – posłany do świata. Teologiczno-społeczne aspekty posłannictwa Kościoła w świecie po Soborze Watykańskim II*. Lublin 2003.

- Gocko J.: *Ekonomia a moralność. Poszukiwania teologicznomoralne*. Lublin 1996.
- Gocko J.: *Znaki czasu jako „locus theologicus” w posoborowej teologii moralnej*. „Roczniki Teologiczne” 46:1999 fasc. 3 p. 81-106.
- Granat W.: *Personalizm chrześcijański. Teologia osoby ludzkiej*. Poznań 1985.
- Greniku F.: *Studia z teologii moralnej*. Sandomierz 2006.
- Greniuk F.: *Człowiek ośrodkiem życia społeczno-gospodarczego*. „Roczniki Teologiczne” 38-39: 1991-1992 fasc. 3 p. 45-60.
- Grisez G.: *The Way of the Lord Jesus*. Vol. 2: *Living a Christian Life*. Quincy 1993.
- Groń R.: *Chrześcijańskie traktowanie zwierząt*. „Ate-neum Kapłańskie” 138:2002 fasc. 3 p. 497-514.
- Grzesica J.: *Ochrona środowiska naturalnego człowieka*. Katowice 1993.
- Heller M.: *Sens życia i sens wszechświata. Studia z teologii współczesnej*. Tarnów 2002.
- Heller M., Życiński J.: *Dylematy ewolucji*. Tarnów 1996.
- Heller M., Życiński J.: *Drogi myślących*. Kraków 1985.
- Horst A.: *Ekologia człowieka*. Warszawa 1976.
- Jan Paweł II: *Centesimus annus. Tekst i komentarze*. Ed. F. Kampka, C. Ritter. Lublin 1998.
- Jan Paweł II: *Dives in misericordia. Tekst i komentarze*. Ed. S. Nagy. Lublin 1983.
- Jan Paweł II: *Evangelium vitae. Tekst i komentarze*. Ed. T. Styczeń, J. Nagórny. Lublin 1997.

- Jan Paweł II: *Familiaris consortio. Tekst i komentarze*. Ed. T. Styczeń. Lublin 1987.
- Jan Paweł II: *Fides et ratio. Tekst i komentarze*. Ed. T. Styczeń, W. Chudy. Lublin 2003.
- Jan Paweł II: *Redemptor hominis. Tekst i komentarze*. Ed. Z. Zdybicka. Lublin 1982.
- Jan Paweł II: *Veritatis splendor. Tekst i komentarze*. Ed. A. Szostek. Lublin 1995.
- Jeżyna K.: *Moralne przesłanie nowej ewangelizacji. Wezwanie do odnowy Kościoła i świata*. Lublin 2002.
- Jurczyk B.: *Ekologia – człowiek – Kościół. Antropologiczny wymiar kryzysu ekologicznego w ocenie Kościoła*. Opole 2002.
- Katechizm Kościoła Katolickiego. Przesłanie moralne Kościoła*. Ed. J. Nagórny, A. Derdziuk. Lublin 1995.
- Katechizm Kościoła Katolickiego. Wprowadzenie*. Ed. M. Rusecki, E. Pudełko. Lublin 1995.
- Kompendium wiedzy o ekologii*. Ed. J. Strzałko, T. Mossor-Pietraszewska. Warszawa-Poznań 2001.
- Łukomski J.: *Solidarność człowieka z przyrodą*. Radom 1994.
- Mackenzie A., Ball A.S., Virdee S.R.: *Ekologia*. Trans. M. Kozakiewicz, A. Kozakiewicz, K. Dmowski. Warszawa 2000.
- Majka J.: *Filozofia społeczna*. Wrocław 1982.
- Majka J.: *Teologia rozwoju społecznego*. „Chrześcija- nin w świecie” 7:1975 no 3 p. 27-45.
- Mariański J.: *„Struktury grzechu” w ocenie społecz- nego nauczania Kościoła*. Płock 1998.

- Mariański J.: *Mieć czy być? Konsumizm jako styl życia – wyzwaniem dla Kościoła*. Kraków 1997.
- Maryniarczyk A.: *Metafizyka w ekologii*. Lublin 1999.
- Mazurek F.J.: *Prawa człowieka w nauczaniu społecznym Kościoła (od papieża Leona XIII do papieża Jana Pawła II)*. Lublin 1991.
- Miśkiewicz W.: *Spoleczny charakter troski o zdrowie zwierząt i ludzi*. W: *Omnia transeunt – Caritas manet*. Ed. H. Słotwińska, L. Pintał, M. Wyrostkiewicz. Lublin 2012, s. 843-852.
- Moltmann J.: *Bóg w stworzeniu*. Trans. Z. Danielewicz. Kraków 1995.
- Moralne aspekty przemian cywilizacyjnych*. Ed. J. Nagórny, A. Derdziuk. Lublin 2001.
- Morciniec P.: *Podstawy etycznej refleksji nad tożsamością osobową. Perspektywa analitycznej filozofii umysłu*. „Roczniki Teologiczne” 48:2000 fasc. 3 p. 139-158.
- Mroczkowski I.: *Osoba i cielesność. Moralne aspekty teologii ciała*. Płock 1994.
- Na skrzydłach wiary i rozumu ku prawdzie*. Ed. I. Dec. Wrocław 1999.
- Nadzieja chrześcijańska i nadzieje ludzkie*. Ed. J. Nagórny, M. Pokrywka. Lublin 2003.
- Nagórny J.: *Posłannictwo chrześcijan w świecie*. Vol. 1: *Świat i wspólnota*. Lublin 1997.
- Nagórny J.: *Ekologiczna płaszczyzna troski o życie i zdrowie*. „Roczniki Teologiczne” 47:2000 fasc. 3 p. 120-138.
- Nagórny J.: *Solidarność i sprzeciw u podstaw uczestnictwa w życiu społecznym. Refleksja nad spo-*

- łecznym nauczaniem Jana Pawła II ze szczególnym uwzględnieniem adhortacji „Christifideles laici”.* „Roczniki Teologiczno-Kanoniczne” 38-39: 1991-1992 fasc. 3 p. 7-23.
- Napiórkowski S.C.: *Jak uprawiać teologię.* Wrocław 1991.
- Nowosad S.: *Teologia moralna ogólna.* Lublin 1994.
- Nowosad S.: *Współczesne zagadnienia demograficzne i moralna ocena proponowanych rozwiązań.* „Roczniki Teologiczne” 42:1995 fasc. 3 p. 87-104.
- Ocalić obraz człowieka. Antropologiczne podstawy moralności.* Ed. P. Morciniec. Opole 2003.
- Ochrona środowiska w filozofii i teologii.* Red. J. M. Dołęga, J. W. Czartoszewski. Warszawa 1999.
- Ósmy dzień stworzenia? Etyka wobec możliwości inżynierii genetycznej.* Ed. M. Machinek. Olsztyn 2001.
- Papuziński A.: *Życie – nauka – ekologia. Prolegomena do kulturalistycznej filozofii ekologii.* Bydgoszcz 1998.
- Polska teologia moralna – czterdzieści lat po Soborze Watykańskim II.* Ed. J. Nagórny, J. Gocko. Lublin 2006.
- Pokrywka M.: *Osoba – uczestnictwo – wspólnota. Refleksje nad nauczaniem społecznym Jana Pawła II.* Lublin 2000.
- Pokrywka M.: *Prymat osoby w życiu społecznym.* „Roczniki Teologiczne” 47:2000 fasc. 3 p. 209-227.
- Problemy współczesnego Kościoła.* Ed. M. Rusecki. Lublin 1997.

- Rogowski R.: *Antropologiczne podstawy postępu*. „Ateneum Kapłańskie” 66:1974 vol. 82 p. 420-435.
- Rychlicki Cz.: *Chrześcijańskie rozumienie stworzenia a ekologia*. „Studia Płockie” 27:1999 p. 49-59.
- Sierotowicz T.: *Nauka a wiara – Przestrzeń dialogu*. Tarnów-Kraków 1997.
- Smoleń J.: *Homo Communicans*. „Vox Patrum”, 52: 2008 no 2 p. 965-973
- Spór o człowieka – spór o przyszłość świata*. Ed. J. Nagórny, J. Gockö. Lublin 2004.
- Stolarczyk I.: *Postęp i rozwój w nauczaniu społecznym Kościoła*. Tarnów 1998.
- Strzeszewski C.: *Integralny rozwój człowieka według wskazań encykliki Pawła VI „Populorum progressio”*. „Zeszyty Naukowe KUL” 12:1969 no 2 p. 17-22.
- Strzeszewski C.: *Integralny rozwój gospodarczy*. Warszawa 1976.
- Strzeszewski C.: *Katolicka nauka społeczna*. Lublin 1994.
- Szostek A.: *Wokół godności, prawdy i miłości. Rozważania etyczne*. Lublin 1998.
- Teologia moralna u kresu II tysiąclecia*. Ed. J. Nagórny, K. Jeżyna. Lublin 1998 s. 201-217.
- Teologia moralna wobec współczesnych zagrożeń*. Ed. J. Nagórny, A. Derdziuk. Lublin 1999.
- Townsend C.R., Begon M., Harper J.L.: *Essentials of ecology*. Oxford 20032.
- Tożsamość i metodyka nauczania teologii moralnej*. Ed. J. Nagórny, A. Derdziuk. Lublin 1997.

- Umiński T.: *Ekologia – środowisko – przyroda. Podręcznik dla szkół średnich*. Warszawa 1995.
- Veritatem facientes. Księga pamiątkowa ku czci Księdza Profesora Franciszka Greniuka*. Ed. J. Nagórny, J. Wróbel. Lublin 1997.
- Vivere in Christo. Chrześcijański horyzont moralności. Księga pamiątkowa ku czci Księdza Profesora Seweryna Rosika w 65. rocznicę urodzin*. Ed. J. Nagórny, A. Derdziuk. Lublin 1996.
- Wiara i rozum. Refleksje nad encykliką Jana Pawła II „Fides et ratio”*. Ed. G. Witaszek. Lublin 1999.
- Więckowski S.: *Ekologia ogólna*. Bydgoszcz 1998.
- Wróbel J.: *Człowiek i medycyna. Teologicznomoralne podstawy ingerencji medycznych*. Kraków 1999.
- Wyrostkiewicz M.: *Dialog ewolucjonizmu z kreacjonizmem – możliwości, potrzeby, konsekwencje*. „Forum Teologiczne” 9:2008 p. 101-115.
- Wyrostkiewicz M.: *Kwiaty i komputery. O przyrodzie i Internecie jako składnikach naturalnego środowiska ludzkiego*. W: *Znaki czasu – czas znaków* [Tydzień Eklezjologiczny 2007]. Ed. K. Mielcarek. Lublin 2008 s. 111-123
- Wyrostkiewicz M.: *Ekologia ludzka. Osoba i jej środowisko z perspektywy teologicznomoralnej*. Lublin 2007.
- Wyrostkiewicz M.: *Ekologiczny wymiar Eucharystii. Czy Eucharystia jest ekologiczna?* W: *Siedem sakramentów świętych w nauczaniu katechetycznym*. Ed. H. Słotwińska. Lublin 2007 s. 259-306.

- Wyrostkiewicz M.: *Status zwierząt we współczesnych koncepcjach ekologicznych*. „Forum Teologiczne” 6:2005 p. 51-64.
- Wyrostkiewicz M.: *Ekologia i teologia: w poszukiwaniu płaszczyzny porozumienia*. „Wiadomości Archidiecezji Lubelskiej. Memoranda” 78:2004 no 1 p. 299-309.
- Wyzwania moralne przełomu tysiącleci*. Ed. J. Nagórny, A. Derdziuk. Lublin 1999.
- Zaangażowanie chrześcijan w życiu społecznym*. Ed. A. Marcol. Opole 1994.
- Zięba S.: *Ku ekologii humanistycznej*. „Człowiek i Przyroda” 1:1994 no 1 p. 7-12.
- Życie społeczne w Biblii*. Ed. G. Witaszek. Lublin 1997.

