ECOLOGICAL KNOWLEDGE AND ECOLOGICAL-ETHICAL AWARENESS – ROUTE TO HARMONY OF MAN AND EARTH

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Abstract
The study at hand deals with the moral-philosophical foundations of undergraduate teacher training and education. Focusing on ethical education teachers, it aims to introduce the benefits as well aspracticable methods of pursuing environmental education and pro-natural approach cultivation in schools. It outlines the pilot ecological-ethical educational program 'More than the human world', an innovative didactic tool aimed at moral education teachers by discussing its epistemological and methodological foundations along with explaining its relevance. I have designed it in response to the empirical and moral reality of environmental and ethical education in primary and secondary schools of Slovakia.

Key words: *ecological knowledge, ecological-ethical awareness, environmental education, moral education, pro-natural approach, pro-natural attitude, educational program, Land Ethic, ecological self*

1. INTRODUCTORY REMARKS

I am working with the concept of a pro-natural approach, an approach towards nature that can be defined asan attitude that combines within itself cognitive, affective (value-driven, volitional) and behavioral components. Pro-natural attitude is a synthesis of a triad of virtues: respect toward life, the sense of obligation toward non-human entities, and the feeling of responsibility for preserving nature for the generations to come (H. Jonas); joined by other concepts such as modesty, the idea of universal justice and eco-justice (Skolimowski); creativity and initiative, as expressed by citizen participation and advocacy in environmental issues. What it introduces is a novel ecological paradigmadvocating the idea ofa synergic relationshipbetween the “cultural and natural world”,one that is able tomake space for a new normative coordination that is not confined to the usual ethical horizon but instead anchored in ecological knowledge – that is, a knowledgebased on ecology itself. Developing a pro-natural approach is an issue that should be addressed in ethical and environmental education across all levels of school instruction. Environmental education is an interdisciplinary topic concerningboth the theory of education and its practice,touching upon matters of philosophy and philosophy of education along with various scientific disciplines: ecology and environmental science, ethics, axiology, psychology, sociology and law.

The studyis a discursive one. Recognizing that rational, empirical, pedagogic and moral dimensions are all at play it strives to give each the share of attention they deserve when speaking of environmental education. The work combines various methodological approaches: a socio-critical analysis, contextualism, coherentismand narration, employing – when necessary – an individually tailored, case-specific approach. My interpretation of the concept of pro-natural approach is mirrored by that of L. Stekauerova, who perceives it as “broadening the idea of prosocial approach and applying it to nature” (Stekauerova, 1999, pp. 86 - 87).

Teachers as well as those of us who observe the current models of education often reflect that what our planet needs might just not be more “successful people” (more people who are indifferent towards others, with lack of regard, sensitivity or responsibility), but instead a generation who developed respect towards life, a caring, righteous, responsible generation motivated to spread good ideas – ideas of peaceful (co)existence.

Ecological and ecoethical knowledge – the basis of ecologic and environmental education – are thus featured in the synergic project as they are both capable of guiding the way towards a better relationship of man and Earth. In Slovakia, environmental education is part of the curriculum across all degrees of education and its issues touch upon all subjects offered throughout primary or secondary school education. The empirically and morally relevant center point, however, appears to be its natural science focus. It remains centered on cognitive aims and the cognitive part of attitude forming, and thus isolated from its affective and behavioral components. Despite its „trans-subject" character – as well as an awareness that environmental education ought to be a part of each subject – there are a number of risks. The primary ones lie in its limited coordination, its natural science focusand the lack of inclusion of environmental education in ethical education classes. Ethical education aims to explain and promote values, yet it dedicates little space to promote pro-natural attitudes.

The Slovak model of moral education continues to be focused on prosocial behavior. The issues of environment, of interaction with nature and its values remain a sidelined topic without a clearly defined instructional framework or a comprehensive model to be used as an inspiration and a guide on the way to teaching pro-natural approaches. We are left asking ourselves whether the current model of education even allows us to introduce and campaign for pro-natural behavior and environmental literacy.

According to a number of surveys and reports from school institutions across the Slovak republic, steps towards environmental education are often spontaneous and uncoordinated, marked by an inadequate theoretical support or overall formality. While some issues are discussed at length, others can remained neglected.

A number of schools are missing a coordinator of environmental education – a teacher (an expert) capable of answering the *who, what, where, why* and *how*'s of the subject. Without these answers, how are we to cultivate pro-natural approaches and awareness in children and youth?How do we act, given the current environment and levels of ecoethical and environmental awareness? It is not only the lack of a competent guiding force on the way to proper environmental education. Facing today's issues – an ecological crisis, a mediocracy, the "often propagated idea of the virtual eudaimonia of modern technology" (Vladykova, 2010, pp. 407) – we also identify a missing link without which we cannot connect the principles of ecological and environmental ethics, ecological responsibility and animal ethics. It is no longer possible to keep prioritizing human needs regardless of the toll they claim on nature, the welfare of animals or the state of biodiversity. Taking a pro-natural stand thus means taking the path towards harmony of man and Earth – it is an effort to approach two worlds, the natural and the cultural, from a holistic point of view.

It is clear that professionals, environmental ethicists and competent moral education teachers alike, need to be trained and educated in a wholesome and rounded way. Today's age of ecologymakes it necessary to include ecological education in their professional preparation. My project introduces an educational strategy – a pilot ecoethical program called ***More than the human world***. It is intended to be held at the Faculty of Philosophy of P. J. Safarik University in Kosice as part of undergraduate preparation of ethical education teachers. It aims to become one of the ways of guiding educators – and by extension students – to take steps toward the harmony of man and Earth.

The concept of being ecoethical involves a meta-cognitive and meta-ethical framework, conceptualization, theoretical background and a case for the unity of the ecological and the ethical – the cognitive (content-focused) and the competence-focused (processual, behavioral) dimensions of ecoethical awareness.

2. ENVIRONMENTAL EDUCATION AND MORAL EDUCATION (CONNECTIONS, LINKAGES AND CONTEXT)

The basic idea that is credited with inspiring the educational ecoethical program is outlinedin the following questions: (1.) what is the current state of ecological morality and ecological and environmental literacy – and what does it say about our attitudes toward nature and the non-human

world?; (2.) Why is it desirable to reflect on this state and its indicators – and whyset norms of ecological morality and environmental literacy or even employ prophylactic measures? ; (3.) in what ways are environmental education and moral education interconnected?

In my study as well as during the development of the educational program I was making use of the following ideas:

- environmental education can be the target of study and assessment like ethical education, the latter one being taught in primary and secondary schools across Slovakia in the form of a compulsory elective subject;
- environmental education in itself *is* moral and ethical education (as it concerns values such as respect toward life, eco-justice, responsibility – each a moral and ethical entity);
- analyzing the ecological morality of children and youth as an ethical-philosophical problem in the context of ethical education could prove productive first and foremost in exploring *how* those two interconnect, supported by the contemporary view of the human being as a bio-eco-psycho-social unit;
- to be pro-natural is, inAristotelian terms, an ecological virtue. It is the manifestation of the *ethical attitude of a man aware of his ecological self, his ecological identity, his earthly origin;*
- what ethical education teachers need is not merely to develop their competences in terms of how environmental education can be taught along with ethical education – they require tools to help them along;
- the environmental education-focused ecoethical educational program **More than the human world** is (should be) epistemologically and ethically based on a synergic project that concentrates on ecological ethics and ecological knowledge, both being the cognitive as well as emotional fundaments of our own morality and literacy;
- ecoethical educational program for the realization of environmental education **More than the human world** is (should be) methodically anchored in experience-centered pedagogy, as there is almost an overlap between teaching about Earth and learning through play; experience and living being the implications of a new kind of education, a new literacy, a pro-natural reality.

A number of theoreticians and practitionerscontend that the current state of the Earth and the life quality of humans and the biosphere in general could directly reflect the levels of ecological morality and ecological awareness. The attitudes we take towards nature and the relationships we form with it have been the target of study of social scientists, philosophers, ethicists and psychologists alike for several decades, resulting in the creation of various tools to aid in assessing the nature of such attitudes. This research had succeeded to discover useful ways of measurement. The NEP scale – New environmental paradigm – developed by Dunlap and Van Liere(Dunlap – Van Liere, 1978) remains the most frequently used one. As the subject of methodological assessment it uses so-called primite beliefs. Primite (or primal) beliefs concerning Earth and nature as an existential habitat shape the core of man's own belief system, making up the core truths one has formed about the reality of the physical world, social reality, media reality of the world, about the fundaments of one's self (Franek, 2005; 2013). We know the cognitive dimension of our attitudes is considerably developed; however, things are less adequate in the affective and behavioral regards. This carries with itself possible weighty consequences coupled with didactical implications and a need to seek answers.

What about Slovakia's secondary school students? The pilot research (Klimkova, 2007) explored the opinions of high school students, striving to get to know their attitudes towards select environmental issues and the levels of interest in the topic as well as to assess the effectiveness of environmental education. By becoming familiar with the students' opinions, attitudes, activities and levels of participation it could be concluded that the representative sample (students) is generally informed and knowledgeable about nature, which, however, was in contrast to the actual affective and practical (behavioral) side. The role of environmental education in schools is marginal, appearing almost exclusively in natural science subjects. The contemporary young online generation, being driven

further and further away from nature, still remains connected to it, though by what seems to be a thinning, weakening cord.

If we are to answer the question of what environmental education is really like in today's schools and today's conditions, we have to explore the ways in which it is being taught, however, we also should attach importance to what lies beyond: to the epistemological, axiological and ethical bases of what is – or what ought to be – taught. Such a multidimensional, multidisciplinary project would have an ecological, an economical, a social and a moral component and thus necessitate a whole new approach – a new view and understanding of nature. The acknowledgement of nature as our existential habitat and an acceptance of the inherent value of nature could become a mediator that, hand in hand with an education that teaches what is useful and relevant, would motivate to explore, experiment, restructure and rebuild ideas and ideals. Worded differently, what we need is a new concept of nature, new values and a different worldview. This form of environmental education would not only retain its trans-subject character, but would become a continuous process, aiming towards raising environmentally responsible pupils as well as a youth respectful toward all (human *and*non-human) life, a youth capable of forming an emotional relationship to the environment, of actively creating and protecting our environment – a youth defined by an awareness of the Earth and a pro-natural way of thinking.

Education, especially moral education is a process that should cultivate people and leave them able and motivated to actively apply moral requirements in various situations that include their relationship to the world as well as nature and all that is not human. Therefore moral and ethical education has to teach that which is relevant for our life and our existence as part of society – now and in the future, whatever it might be like. Mirroring what is called aprosocial approach and giving it a pro-natural design is an effort to co-construct a new environmentally ethical orientation.

Ethical education, as taught today, is largely understood as a process aimed at cultivating and motivating prosocial behavior reflected in moral stances and a general prosocial behavior. It encouragesthe development of social skills (the ability to communicate openly, a positive self-image and image of others, empathy, self-control as a way of guiding one's own behavior, mental hygiene and others). Additionally, a considerable number of new approaches have been proposed in the recent decades. Among those is*creative-humanist education* (Zelina);Lickon's *character education* dealing with three aspects (consciousness, feeling, behavior); Kosova's *personal and social education*. Pro-natural approach, however, remains an overlooked virtue and stands largely neglected. Ethical education includes it as one of its applied themes, a theme neither precisely formulated nor conceptualized.

That being said, why seekthe common points of environmental and ethical education?

Put down simply, we experience the world through the medium of emotions and we think about it using the brain. Our acts are therefore conditioned by rational and emotional forces alike. Our ecological awareness is a matter of the whole, not merely one of intellect.

The rise of relevance of ecological issues had brought with itself a new phase. Moral philosophers started to focus on how our relationships with the natural world work, what links connect us to it, what makes up our *ecologicalselves* and how to articulate such a relationship in terms of morality. There is an existential interdependence, the fact that we as human individuals, our ecological selves are living in a context of relationships that we form (via our intentional actions) and that, in turn, form us. We agree with R. Eckersley's notion that from the viewpoint of an "ontological primacy of an internal relatedness of all phenomena (…) we can take an existentialattitude of mutuality in the recognitionand "positive affirmation of the fact of our embeddedness in ecological relationships" (Eckersley 1992, pp. 53).

If we are to be ourselves, to express ourselves, we cannot neglect our nature and earthly origin – we have to accept it as a given, as our natural characteristic. Nature, after all, makes itself known in a human. In this context, discussing earthly origin meansstriving to answerthe question of what it means to be human. There is, naturally, a deeper background to this notion. Especially at a time when the image of good life and of good in general (crucial as it is for moral thinking and acting) is confronted, molded and at times distorted by the media, by media communication and communication itself.

Why am I looking for the intersecting points of environmental and ethical education? Even though we could argue that the fundaments of environmental ethics have already been created just as its strategies have been thought out – and relevant and rational they are – the new trends that ecological science faces have the power to inspire and guide us to create a synergic connection of the naturalistic and the personal paradigm.*Land Ethic*describes a "diachronic connection between humans and non-human nature" (Vladykova 2009, pp. 56), which is not without consequence: to know ecologically – to act ecoethically – to live morally, live well, live responsibly. The role of ecological knowledge cannot be neglected and environmental ethics constitutes a fundamental stepping stone on the way to accepting a new ecological morality: the moral relevance of the biotic community itself along with the moral relevance of each its member.

Why am I in search of what unites environmental and ethical education? Time and time again I was confronted by the need to prepare and educate future teachersin the subject of epistemes of nature and to introduce them to ideas of ecological synergy. The processual aspects of learning are tied to skills and competences, whereas its attitudinal aspects testify about interest, acknowledgement, respect as well as responsible decision making and behavior toward nature, toward all that is non-human. Taking into account the epistemological level of our reasoning, we ought to be looking at nature – our existential habitat – from a comprehensive, inter- and trans-disciplinary perspectiverooted in theoretical knowledge: if we are to recognize, know, understand and act, we have to employ both the ecologicaland the philosophical, and only then will we be able to epistemologically, axiologically, creatively and ethically perceive nature.

Again and again we are faced with the necessity of making emotionality a valid approach and a call for a new pro-natural, biophilic face of ethical and moral education. We do not need to reform, re-conceptualize on a grand level. Designs that would require to overhaul the entire educational system would at this phase do little more than slow down the whole process. We need to take steps now and come forward with new educational projects, to introduce new elements into pre-graduate preparation of teachers and to ensure lifelong education to teachers of ethical education and other subjects alike. „The variety of applied themes of ethical education offers the competent teacher a wealth of space to pursue issues of environmental ethics and animal ethics and use these to cultivate moral behavior and broaden the moral imagination of children and youth (Klimkova, 2014, pp. 174)

3. *MORE THAN THE HUMAN WORLD*: AN ECOETHICAL EDUCATIONAL PROGRAM

Both throughout several years of experience with volunteer work, designing and conducting free time activities and campsfor children and youth thatdeal with environmental education matters, just as during years of study of environmental ethics and environmental educationI became inspired to design an innovative ecoethical educational program. In Slovakia, educational frameworks specifically dedicated to the socio-moral development of children and youth are few and there is an absence of pro-natural education programs (particularly in comparison to the Czech republic); this caused me to seek inspiration in various other ethical studies. Among those are the works of R.R. Olivar (1992) and D. Goleman (1997); environmental ethics works such as those of L. Stekauerova or A. Leopold – particularly his *Land Ethic* (2000) – as well as works of P. W. Taylor (1986) and Marc Bekoff (2007).

Working together with student teachers of moral education and alongside a number of ecological activists and volunteer friends was, to me, an impulse– an impulse to pursue my idea. After tens or hundreds of hours spent working with children and designing outdoor games and activities I began to develop it further. Gradually it began to take on more definite outlines. I could clearly see its relevance in the undergraduate preparation of ethical education teachers and free time educators. The ecological-ethical education program – a guide to pro-natural education, striving to prevent anthropocentrism, speciesism and the consumer lifestyle – is still in the early phases of its development. The next step to be taken is to attempta "test run" of the projectinchosen schools. It will undergo socio-critical assessments and methodological analysis by experts.

The program itself is built on making experiences, being creative, solving moral dilemmas.

Itsbodyis conceived and constructed in such a way that would assure that ethical education classes offer adequate space for the teacher to pursue issues of environmental education and promote pro-natural approaches to an age-appropriate group of students of a certain level of moral development. The instructional design features a variety of modules. Each contains a characteristic of the module, itstheoretical basis, its aim(s) and the skills it helps develop, a description of the content and forms and methods of realization. There is a choice of games and activities which enables teachers to design creative workshops, making the activities attractive for students and educators alike. Teachers are invited to employ untraditional as well as ordinary games. The program's modules feature: **Earth – my planet; My world – my story; Inhabitants of the Earth; Following the white wolf's footsteps; Media around us and nature through the media**. As of now, it is conceived and created as an undergraduate course in the preparation of future ethical education teachers, developed to target pupils enrolled in the seventh to ninth (7. – 9.) year of primary school education. It boasts a colorful range of activities and is able to motivate, engage and keep teachers' and students' attention. It will be accompanied by a website that is currently still being designed and an e-learning interface to serve as amethodical and didactical guide for teachers and a helpful tool for students.

4. METHODOLOGICAL NOTES AND BACKGROUND

Ecological-ethical concepts on the one hand, and ecological problem and crisis on the order indicates that we need new education, new values, new strategies in education, new approaches in the development of attitudes. We believe that understanding the relations between science and ethics conceptualizes the interrelations between the cultural, ethical, and natural sphere, and becomes a productive component in establishing new paradigms (cultural, scientific, ethical).

The program's main thesis is the interconnectedness and synergy of two lines of reasoning: (1.) the personalist socio-constructivist theories that deal with the development of the inner potential of a child as an autonomous moral conscience; and (2.) ecoethical theories that help us in developing and cultivating moral awareness and environmentally ethical behavior.

In developing of the educational program I was making use of the following idea: environmental education in itself *is* moral and ethical education (as it concerns values such as respect toward life, eco-justice, responsibility – each a moral and ethical entity). A. Leopold was the first theoretician who in his Land Ethic developed Darwinian motives into a paradigmatic principles of ecological ethics. The relations between evolutionary thought, land ethics, and ecological ethics illustrate the interrelations between the sciences and ethics. This provides implications for education. Leopold´s theory as well as Darwin´s theory before him, instigated subsequent research and, simultaneously triggered the process of ethical re-evaluation of the relation between human beings, on the one hand, and non-human beings, the world of nature, on the order. It seems to have contributed to the development of mutual relations between ecological sciences and ethics for two reasons: the theory of evolution was the fundamental basis of ecology and ethics (heuristically satured with ecological motives) and stimulated contradictory ecological-ethical values and attitudes - it promoted respectful approach to natural world by weakening anthropocentrism.

As I mentioned in the preceding paragraph, the program's modules feature: **Earth – my planet; My world – my story; Inhabitants of the Earth; Following the white wolf's footsteps; Media around us and nature through the media**.Because it is an educational program designed for teachers of ethics, in developing I based on theoretical concepts and cognitive bases of ecology, the concept of environmental literacy, environmental ethics, animal ethics.

Why we need ecological ethics in environmental education?

The world, extending considerably beyond what we refer to as the world of humans, is an arena, a field of competition and activity. Seen from the man's point of view, the world is an environment where he finds himself in the role of the primary, crucial producer, having taken on the role with the help of science, through power and manipulation. On a daily basis man faces and is expected to solve

issues of power and economy, environmental, energy and resource matters, ethnical issues as well as those of military nature. At the same time, the world for us is simply a place to live.

Ecological and environmental policies and generally upheld social values are vessels not merely joint, but bound by a complicated and interferential relationship. This is what is being demonstrated on the background of our culture: that all codes, be it the past, present or future ones, are instruments of society (laws, treaties, institutions, norms, values and principles) and all of them are reflected in the way humans act towards nature – natural world. Thus what is needed is a political willingness along with the pressure of the scientific community and civil society, of individuals that are struggling to change, to re-code the society's values. Ecological ethics, being an established branch of bioethics and ecology as science (a subversive science) bring forth a fresh understanding together with new interpretation methods that point toward an ontological interdependence by revealing new relationships, unexplored areas of morality and the sheer depth of the examined area. As the new paradigm arises and the old one becomes less sufficient, less adequate, we find ourselves in the role of potential witnesses and active participants in the process of re-codification of moral and legal norms, the standards of our behavior, through a new way of thinking, feeling, interpretation and action.

The institute of citizen advocacy is powerful and deep-rooted in civil society, however, and is fueled by citizens, activists whose interests towards nature are guided by an inner perception of what is right, not merely motivated by a desire for power, prestige or economic interests. Citizen participation in the decision making process is dependent upon their ecological and general awareness and literacy – with a large body of research suggesting that the development in Europe nowadays is one of declining interest, declining participation. Ecological literacy and the general public's perception of right and wrong and the active support of individual activists who in turn are the doers of citizen agenda actually enjoy a complementary relationship because of citizen advocacy. This realization reveals the outlying implications this may have in connection with raising awareness among the members of the general public.**Ecological ethics in environmental education is important and justified in this context.**

We are, among all else, aided by science – science that has set itself an objective of not changing the world, but rather changing the perception of it. In this area of argumentation lie the challenges that the field of animal ethics is facing: we need a new world perception, one that includes environmental awareness and one where the scientific and ethical outlooks merge. In this world of plurality that we ought to strive towards, instead of reaching one agreement that would stem from one perception of nature and her role, instead of one line of argumentation and one rule – we should work to facilitate an effective dialogue of all including the most different of groups. This will let us comprehend better the status of nature and animals and respective multicultural projects of various life forms and ways of life.

Why we need Animal ethics in environmental education?

The human understanding of the human - nature relationship clearly demonstrates our need to reexamine thought and language stereotypes and the stories of nature and non-human beings who up to now had been speaking limitedly, partially (if at all) about the philosophy of the human relationship with the animal – the unseen animal.

The issue of the unseen animal concerns all members of human society. I am using the term **unseen animal** to express several meanings. **Firstly**, it can be applied to any animal that is either figuratively unseen by man, that is to say overlooked by people unwilling to see the suffering brought upon it by their own doing. I am referring to animals in the food industry, cosmetics and chemical industry, in research and education, in the entertainment industry, animals in captivity and others.

Secondly, anthropocentrism, speciesism and the instrumental value of animals as a premise of the traditional social paradigm constitute the background to our opinions, attitudes and actions. Therefore the moral attitude we assume towards non-human beings in nature is dependent upon how we see them, what value we assign to them, what we see them as, how we deal with our mutual relationship.

Thirdly, the governing principle of today's world is growth, growth that begets consumption along with new compulsive needs. These compel us to constantly seek out brand new things; to keep and conserve the old but be in relentless pursuit of the new. Our strategies assign animals a participative role, but an instrumental value

By reflecting on our relationship towards animals, by posing ourselves ethical questions, we discover that we can indeed widen the scale of approach to animals and replace the approaches in place by ones that involve respect and an acknowledgement of rights in regard to their welfare, wellbeing or life satisfaction. The opportunity to use animals and to examine them should be considered a privilege – one not to be abused and one to be taken seriously. We cannot let animals suffer because of our inability to cope with societal roles (Bekoff, 2007) or because we do not – as of yet – have final answers.**Animal ethics in environmental education is important and justified in this context.**

It seems that the cleavage between anthropocentrism and non-anthropocentrism that dominates the debate about value perception nature and worth of non-human beings could be appeased by an opinions which mentions a mutual rapprochement of the anthropocentric and biocentric lines of thought. All proponents of anthropocentrism, distancing themselves from the purely egotistical anthropocentrism, acknowledge, accept and adopt the fact that protecting the variety in nature and assuring its stability is in the interest of all mankind.

Many theorists consider and argue that biocentrists are coming near to the anthropocentric standpoint by emphasizing that the care about the upkeep of natural variety and the acknowledgement of its inner value independent of the presence of usefulness of any sort can be considered a display of the unique nature of the human. Only he is capable of feeling and accepting the interests of animals and plants as his own, he can rejoice seeing the richness and variety of nature, he can pay genuine respect to it.

CONCLUSION

I suggest that the problem in environmental education is not in the education itself but in the way it is implemented. If teachers used only facts, knowledge, information as a starting point without imagination, the emphasis on perception this is not right way.

Offered educational program is would be a chance for experience students' and give them space for activity and optimism. Alternatively, the program might be used in the middle of a long-term educational program as one of various information sources.

Verification of pilot and experimental program **More than human world** in practice of school education will take place next year.His realization will be focuses on the following questions: How do the teachers of ethics in Slovakia reflect on their experience with implementation of the program? What was the satisfaction of teachers and pupils with the program? What effects did the program have on ecological knowledge and attitudes of pupils?

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