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## BIOETHICS AND ECOPELAGOGY: A CHALLENGE FOR OUR TIME

### ABSTRACT

In the wake of ecology, man's image of himself and his relationship with the environment is changing. The question arises: what are the implications of the so-called 'ecological revolution' in terms of values? One of the most profound changes is the rejection of the anthropocentrism of that ideology of uncontested dominion over nature which justifies the idea that it exists only for man, for his utility and pleasure. In this context, the environmental issue is also a problem of ethical and educational interest, extending the boundaries to the universe and all living forms.

This paper presents an overview of the most discussed themes of environmental pedagogy, also in relation to technology. In particular, the relationship between bioethics and ecology is considered, which, in the light of a reinterpretation of the environmental problems of our time, tends towards a vision of man as a benevolent and ethically responsible administrator, thus giving strength to an ecopedagogical education that focuses on man's respect for nature as a whole.

**KEYWORDS:** *bioethics, environment, person, ecopedagogy, education*

## FROM NATURE TO TECHNIQUE

The dichotomy between nature and culture, or better between nature and technology is one of the favourite themes and most intriguing of Western thought, and it is also one of the most remote. The metaphor of machinism, for example, does not rely on the recent dictum of Enlightenment, but has a much older dating. Already Vitruvius, in his *De architectura*, assimilated the world to a great machine and exhorted to read the cosmos according to this interpretative grammar «... it is nature itself that contains the principles of mechanics and teaches them to men with the example of the rotation of the stars »<sup>1</sup>. To know the natural reality meant, therefore, to understand its “engine”, to engage in the reproduction of its parts, to imitate its mechanisms, we can say that the technical environment was born with the figure of the homo faber. The technique can be understood as a kind of enveloping film that accompanies and has always accompanied every human practice (Cantoni, 1967)<sup>2</sup>. In this sense, the technique has become the mirror of man’s vulnerability and the unmistakable sign of his producer’s fragile and perishable material: an increasingly precarious, slow, natural Prometheus, incapable of synchronizing with the universe of artifacts he produces; unable to relate in an adult, critical, responsible manner with the machinist proposals; incapable, above all, of elaborating the project of an ethics that knows how to solidarize with Nature (Jonas, 1994). With the beginning of the modern era, the foundations were built for an arrogant and often senseless anthropocentrism. It cannot be overlooked that contemporary technology, in many of its segments, it impacts and violates the environment, secularizes the natural world, voraciously acquires energy, devours the ecological future, induces «planetary variations in such a short time to accelerate the geological clock» (Tiezzi, 1992, p.36). In a very short space of time, therefore, technology has shortened our ties with the physical environment, accelerated the rotation of things, injected into our daily existence an irrepressible dynamism, reversed the relationship between man and resources, sharpened the feeling of precarious social structures. Thus the acceleration of change, following the technological means, has compromised millennial equilibriums (Ivi, p. 37)<sup>3</sup> and introduced new problems for contemporary man, increasingly close between

transience and temporality, discontinuity and hyper-stimulation, novelty and complexity, presentism and loss of the past. The shift towards transience has as its immediate effect the cancellation of the information that is at the base of the accumulation of knowledge. And here, for knowledge, we also mean the aesthetic and moral sense, as well as the relationship with nature. It is no coincidence that Konrad Lorenz wondered how an individual in development «learns to respect something» (Lorenz, 1974, p.38). The technological universe of post-modernity has therefore contributed to changing the old value tables and also compromising all the integrative mechanisms of the past. In this new reality, each one is induced to trace his own trajectory of behavior through a world of styles that are often on a collision course. The technique, which has become technocracy, does not show a friendly and human face. However, if we think that together with its twin, progress, has been the fulcrum of all the great modern philosophies that have changed the destiny of man, although marking it with ghosts, anxieties, upsets, we cannot abandon ourselves to the decadent fascination of nihilistic visions that demonize both. We should rather think that «progress is only a precious possibility, entrusted to our reasoned and conscious efforts, it is not a providential destiny that will be fulfilled despite our mistakes» (Cantoni, 1967, p.170). The change linked to eco-technology, if aggressive, unbridled, accelerated, can in fact become hostile to life; but guided and controlled it can become a positive hero. Therefore, the *conditio sine qua non* for this to happen is that man does not enter into the most complex revolution in his history. On the contrary, he will have to know how to take conscious control of his future, perhaps leaning without fear on the words of that frank philosophical ethos that is not afraid to alert on the dangerous infection of prejudices, especially of what presents a story without adjectives on the leash of technological fanaticism. The native capacity of man, thanks to his intelligence, rises above nature, while he marks his specific dignity on the ontological plan, constantly exposing him to the risk of disregarding the logic of the totality underlying the world of being. Man, unlike simple animals, has the possibility of transforming nature, making it better serve his needs, but it also has the difficult task of framing this transformative activity in the context of the rational equilibrium underlying the constitutionally real. St. Thomas Aquinas, hinting at this very particular causality which characterizes man,

as being endowed with reason, speaks significantly of a «universal prudence, in which lies the criterion of every possible action» (Aquinas, II-II. Q. 66, a.1).

The progress of science and technology has changed our lives, but it has also led man to reflect from an educational point of view on what are and could be the consequences of an absolute techno-scientific progress separated from education with all the negative effects on the liveability of the environment and of the planet earth.

Hence the importance of pedagogical care understood as an action aimed at and for the relationship and, in these terms, «taking care of the I-world relationship directly implies that education-training-education is taken care of for the ways of *inhabiting* the Earth» (Annacontini, 2016, p.59).

The techno-sciences must constitute not an end, but remain an instrument in the hands of man to an exclusive condition of good towards the individual, the human community and all the surrounding environment. And on this new, rapidly expanding field of ecology, I think it's important to pause. Studying ecology also means coming across and engaging in safeguarding nature as a whole, namely: the landscape in its components of waterways, rocks, mountains, as well as plant, animal and human life, this to be considered in its identity and ethno-cultural dignity, in its diversity and intercommunicability, and on the other hand in its specific relationship with the non-human components of nature (Malavasi, 2008).

## BIOETHICS AND ECOPEDAGOGY

The emergence of ecological problems of living beings implies the development of boundless problems in bioethics. We come into contact with a moral, at the same time theoretical, design and behavioral dimension, a morality to be applied to sentient species capable of suffering (Lanternari, 2005, pp.78-79; Battaglia, 1999). Bioethics invests all fields of knowledge, from medicine, biology, philosophy, theology, law, to the economy up to pedagogy. Pedagogy also questions bioethics issues euthanasia, care of the dying, preservation of the ecosystem (Mariani, 2006, pp.50-51). We speak of pedagogical ethics, that is the ethical one that leads to a recovery

of pedagogical “knowledge” and of that “doing” education in the direction of a perspective of promotion of the person (*ibidem*).

The concept of bioethics used for the first time in 1971 by the American oncologist Potter who published a book *Bioethics: Bridge to the future* (Potter, 1971) in which he clarifies his need to create a bridge between scientific and humanistic culture and intends for Bioethics “the science of survival”. The same author indicated with the root *bios* the biological knowledge that is the science of living systems and the *ethos* the representations of the knowledge of the system of human values. Bioethics is not only interested in medical ethics in the field of life science and health care, but also in environmental ethics, in particular the relationship between man and nature. It has dealt with environmental and naturalistic studies, biotechnologies (plant and animal modifications through genetic engineering). Potter jointly used the terms of bioethics and ecology to consider the ecological change in the biosphere induced by modern civilization that has altered the relationship between the human organism and the natural environment and that has been at the origin of the appearance of degenerative pathologies in the organism of man and the extinction of other living species. The definition of the environment, dictated by the World Health Organization, as «the set of physical, chemical, biological, and social factors that exert an appreciable influence on the health and mental and physical well-being of the community» (OMS, 2004, pp. 7-8), it no longer responds to complex demands of the post-modern age, where the protection of the human being cannot be configured exclusively in the context of protection of the habitat. Today, the community tends to acquire a more complex and heuristic concept of health (Wholeness), which is inserted into an environmental policy free from the excessive power of technocracy, for a responsible defense of the common ecosphere heritage. A shared *Quality life* project, a sustainable development that does not turn into meta-ecology, or relies on utopian proposals, needs to be historicized (Cass Sustein, 2004) <sup>4</sup>.

A health that demands a safe environment is a health that returns to being an integral and constitutive part of being a person (Indelicato, 2014, pp. 509-523). Emerging data in recent years reveal an unsustainable breakdown of the balance in the ecosphere system. The pollution produced by man in this last century has upset, in some cases, the normal relationship between the

components of the environment system. In this sense, the climatic repercussions, the progressive increase in cardio-respiratory diseases in children and the elderly, the indirect incidence of lung cancer due to the accumulation of toxic particles in the atmosphere, the accumulation of lead and other heavy metals such as mercury in the food chain, plastic pollution, war materials in the seas and oceans (Tursi, 2014, pp. 35-42), are just the emblem of a much more complex situation. Our bodies are continuously exposed to the action of polluting agents, present in the food we eat, in the water we drink, in the air we breathe. The human system has evolved by developing metabolic processes that can effectively assimilate periodically ingested toxins. These harmful effects for the populations do not hinder national development interests, even creating international controversies that damage the right to an unpolluted ecosystem.

The marine environment, in recent decades, has undergone transformations and constant pollution with repercussions on the balance of marine fauna and flora with different ecosystem changes and a further aggravation of global pollution and the health of the planet. No less relevant to health are the effects of noise and electromagnetic pollution, with distance damage in future generations, especially due to the higher incidence of leukemia and malformations. To overcome this situation, in addition to the recommendations of the International Conferences, agencies have been set up in different states to monitor the environment and propose minimum levels of pollutants that are not harmful to health. The analysis of these elements would lead to a lack of confidence with the common assertion that, despite the legal efforts or international Conventions from Rio in 1992 to Kyoto in the Agenda 2030<sup>5</sup>, the situation will not change substantially, in the belief that the sustainable development of humanity must necessarily disrupt and alter the balance of the ecosystem, with repercussions on the health of the planet Earth. Apocalyptic forecasts follow us in this investigation. Can these difficulties be traced back to controllable systems? Are there any implementation tools, rather than legislative ones, for their harmonious realization and to achieve an environmental health, global rather than environmental? The means to initiate a change resolution are known and are beginning to make their effects felt. The nodal point is to design energy policies that have clear, graduable goals, a shared step-by-step path to reach a balance of

the ecosystem. Changing the different life habits with models that eliminate polluting factors, from smoking, to controlled feeding to a circular economy system, it represents the *golden rule* of a transformation that can no longer be avoided. The season of the cost-benefit ratio must be extended, for an evolution that funds development in a correct ethical evaluation of progress. It means re-reading and rethinking the growth not in terms of man's domination of man, or nature, but in an ethical-educational perspective and therefore in the right conviction of possible intercultural and social exchanges. It is necessary to bring out a vision of human life that places efficiency at the service of the common good. The benefit of health will be to build a "friendly environment", in which the right of simple equality of species will be replaced by the duty of respecting the biodiversity of others (Lomborg, 2001, p. 303).

In the varied relationship between man and the environment, an ethical-educational value is proposed by the idea of "polluter pays" (Beccegato, 2018, pp. 27-35; Guolo, 1993), within this principle the possibility is envisaged that a State, by reducing its own level of contamination of the habitat, to a pre-defined standard, can sell to others its rights to pollute. It is necessary to think and work together, in the world, for a healthy ecosystem, which can become a crossroads, a meeting between physical and metaphysical places, so that the world system finds its *raison d'être*, in that movement of human awareness that engages nature with itself and this is the mouthpiece. It is a question of changing the idea of ourselves: no longer ravenous and untamed rulers, but subjects aware of the limits connected to the boundaries of the cosmos.

When the will to dominate yields, definitively, the step to the "care of the environment", in our mind to pure rationality will follow the fabulous pleasure of narration (Goleman, 2011). And here, probably, we will be close to a form of wisdom understood as understanding and not just knowledge (Piazza, 2004, p. 17). We need to educate an environmental health that requires ethical-educational action useful for the defense of life, of every life form, of every possible trace of it and of an open trust in intergenerational needs (Luhmann, 2002, p. 95). At present the safeguarding of the health of the entire community is entrusted to international, national, regional and local regulations, which demonstrate, in their integration, protective intentions in defense of global health. To prevent contemporary society from entering

into crisis, with the idea of being a victim on one side and executioner on the other, a subject that produces and suffers pollutants and that democracies cannot come out of a logic of progress-consumption-pollution. They should not resort to the techno-scientific solution, that is, technocratic. If it is legitimate to build progress, it is of fundamental importance to maximize the advantages with an active trust in the collaboration of the populations in the environmental policy. The challenge of the future will be of an environment not built on a human scale, but of an ecosphere that, as Potter pointed out, is a common home, a path of synchronous development and not a prevarication of one species over the other (Malavasi, Zoboli, 2012). We need institutions that reaffirm their adherence to the value of human life, to the defense of all life, to any stability present on the planet Earth.

## **FOR AN ENVIRONMENTAL EDUCATION: FROM BIOCENTRISM TO ECOCENTRISM**

The evaluation systems for environmental ethics are: biocentrism, anthropocentrism, ecocentrism, all three evaluation systems have in common the protection, the man in the natural world. From here it is important that an ecological conscience (Papa Francesco, 2015, pp. 179-205) is formed in the person, an ethics of the environment that leads to reflecting on actions, but above all to establishing an equilibrium of the ecosystem, to a harmony of the ecosystem in which one lives, to build a *paideia* of the person, aimed at promoting critical reflections on the environment. In this context it is advisable to adopt a logic that is no longer anthropocentric but biocentric, so that something should be considered just and achievable when it tends to preserve the integrity and beauty of the biotic community as a whole (Leopold, 1990). A *lifelong learning* pathway for environmental education is needed, from nursery school, in a growth perspective, to protect and protect the environmental system, and to reintroduce a *bioeconomy* system with waste recycling and policies into the biological cycle non-polluting recycling facilities (Golser, 1990, p.85; Semeraro, 1998). Right now it is important to talk about a “global education” that must be shared in the fundamental objectives with reference

to sustainable development. Mariani writes: «The particular interest of sustainable development is based on values linked to a development that respects human dignity and is based on social justice, as a condition for the survival of humanity, also considering the role that altruism plays in preserving human dignity itself» (Mariani, 2006, p. 34).

In this context, pedagogy is fundamental for changing values. When we talk about sustainable development we call into question a fundamental concept of humanity's *cultivation* (Nussbaum, 2006) to use an expression dear to Martha C. Nussbaum, a sort of "ecopedagogy" in which man is not the ruler of the Earth, but where he is the main guardian of its resources, its beauties, its different forms of. In educational activity we find this need for the naturalization of man, the humanization of nature, care for the present and for the future (Mariani, 2006, p. 34).

"Global education" identifies itself with Morin, a supporter of a "pedagogical trilogy" (Morin, 2016; Morin 2016), as an education in the planetary era, a reform that revolutionizes our way of thinking, knowing and teaching: three interdependent "reforms" (Cacciari, 2016). In other words, it is useful to re-learn to learn our planetary condition. A warning to activate a planetary citizenship by laying new foundations for individual and collective identities that are multiple, flexible, complex and open. It is necessary to educate the new generations to responsible citizenship and to sustainable development towards a humanism that knows how to govern and manage the impetuous technological developments and economic trends of our age (Mariani, 2006).

The historical-cultural evolution of our time can be defined in three great systems, which have led man to change.

In the biocentric system, man is a member of the Earth community, all species are integral elements in a system of mutual dependence. The biocentric principle proposes the strengthening of life and the expression of its evolutionary powers. The fundamental idea of the good is that this consists in preserving life, favoring it and leading it to its highest value. This principle focuses its attention on a universe conceived as a living system.

The anthropocentric system, a system anchored to Western thought on the superiority of the human species in the order of the living, allows any form of exploitation towards nature and animals (Accarino, 2015). Man becomes

the ruler of nature and considers the surrounding environment as a source of resources to be used and exploited for the benefit of humanity, ecosystems simply have an instrumental value; in this phase man has considered it possible to take on the reins of his own destiny to conquer a worldly salvation to be accomplished through the emancipation of nature and material, social and moral progress (Florenzano, Franzoni, Natoli, 1999).

In the ecocentric system there is an expansion of the biocentric system according to which what concerns the environment takes precedence over any human need or right. In recent years the so-called *biocentric ethics* and *ecocentric ethics* have spread, the *biocentric ethics* concern an undifferentiated protection towards all life forms, according to a hierarchical order of species based on an intrinsic value (sensitivity, possibility of suffering). The ecocentric ethics deal with the love for nature saving the ecosystems and the living species on our planet. We must emphasize the importance of animal rights ethics, the so-called *animal welfare ethics* that some scholars such as Tom Regan (1987), Paul Taylor (2003, pp. 164-195), Peter Singer and Kennet Goodpaster (Sayre, 1979, pp. 36-59) have dealt with.

*Ecocentric ethics* underline the intrinsic value of all living and non-living species, of which Aldo Leopold, John Baird Callicott, Arne Næss dealt. According to Næss, every being, whether human, animal or vegetable, has an equal right to live and to fulfill itself of all other living beings. Næss points out that human fulfillment occurs within an ecospheric complex. And it is in this ecosystem that our true ecological self can be realized. Practically self-realization for Næss means that if you don't know how the results of your actions will affect other beings, you don't have to act.

Although anthropocentrism is the hegemonic model in Western society, its implantation has begun to crumble due to a series of events, we can say that we are in a transitory and opening phase towards new visions, even if anthropocentrism is not completely gone and a new paradigm has not fully established itself.

In the last few years, the concept called voluntary or prospect is gaining ground, in line with the times that require pre-crisis programs and projected over time. It is necessary to protect biodiversity, which requires an ever greater commitment from the human community: man should not be left out of

responsibility, but should be given more responsibility: it is indeed undeniable that no other being has the possibility of influencing the earth as much as the man and that, based on his capacity for understanding and his freedom, man is the only one who can and must make himself responsible for the planet (Jonas, 2009). Responsibility cannot be only individual, but also social for a more efficient environmental education and for optimal sustainable development (Iavarone, Malavasi, Orefice, Pinto Minerva, 2017).

The evolution and change that have taken place over time lead us to reflect on a key concept for the environmental education, that is respect, attention to others and to everything that surrounds man. Going beyond the concept of anthropocentrism, assuming respect as an ethical component at the base of a training and educational path, is a categorical imperative that can no longer be postponed. In this perspective, protection and respect for the environment take shape not only as a choice of civilization, but in their very usefulness, which also protects oneself and others. The era of anthropocentrism or anthropocene, as Paul Crutzen called it, is increasingly dominating and human impact on the environment is causing damage to our planet (Crutzen, 2005).

The problem of the environmental crisis is attested among other things by the theme proposed in 2005 by the report of the *Worldwatch Institute*<sup>6</sup>, one of the most authoritative observatories on the planet's environmental *trends*.

Hans Jonas invites us to an ethics of responsibility as a common reference principle both to medicine and to economic life and the use of the most recent biotechnologies. The responsibility of man with respect to the consequences, even remote of his actions, is aimed, first of all, at guaranteeing to future generations the best living conditions on planet Earth. This need leads us to the idea of duty, as the foundation of morality, of an ethics oriented towards the future, in the name of safeguarding being and humanity in the universe threatened by technology, with destructive consequences on a planetary level. The imperative of the ethics of responsibility is thus formulated: "Act in such a way that the effects of your action are compatible with the continuation of an authentically human life".

To do all this we need a cultural conversion of mentality through ecological thinking to put it in the words of Bronfenbrenner (1986), to support a *Deep Ecology* mentioned by Næss that brings out in every human behavior those

ecocentric values that, in relation to the environment and other living and terrestrial species, can constitute a respectable alternative for the formation of a conscience ecological that our time needs so much (Næss, 1994; Battaglia, 2011).

## CONCLUSION

In summary we can say that the debate between bioethics and ecology is still open, the dispute between anthropocentrists and ecocentrists is also open, as it is the dispute between those who call for more freedom and those who, instead, require more protection. The society wants to access freely, but with information and discernment, the opportunities offered by biotechnology and biomedical, but society must be able to live in an ecologically healthy territory, even in the presence of economic activities with a strong environmental impact. One of the needs of the near future will be to give more space to negotiation and to local mediations on the basis of an ecopedagogy, of a culture for life that knows how to combine *ethos*, *bios* and *logos*, especially encouraging an effective and a productive training course for future generations (Bruni, 2012, pp. 55-69). As many philosophers affirm (think of Heidegger, Severino, Gehlen, Jünger and many others), the technique is the destiny of our time, and it is a technique that very often has nourished itself of the error confusing the Being with the entity and taking action on the intentionality of the domain. From the myth of Prometheus the idea of domination, progress, autonomy of the human has become more and more absolute, becoming our destiny. From the industrialization on, the frontiers of Nature have been crossed, we live an experience, although exciting, but also worrying for the pervasive effects of the technique that negatively affect the human. The problems posed are many, but certainly they demand a vigilance on the technique, the human figure is undergoing a decline, starting from the same industrialization where more machines are required than men to move to a future in which decisions will be completely delegated to IT tools. Pedagogy and, in particular, the philosophy of education in this regard must constantly think of the technique in an increasingly tensional and critical manner, but even the technique without pedagogy

risks missing its problems of which it cannot fail to take responsibility to access that reflexivity of which it is itself characterized. Between pedagogy and ecology runs a relationship, precisely through the notion of *anthropos* because it refers to a world for man, the human being, the living being to be safeguarded and respected. It is to be hoped that pedagogy can illuminate and control the “desert” of the technique (Cambi, 2001, pp. 184-188).

Looking at bioethics in the horizon of complexity, as Edgar Morin put it, means proposing an interdisciplinary link in its various dimensions: In particular, for the present work, with biomedicine, which concerns the birth of man, his health, his death in the face of the possibilities offered by biotechnology<sup>7</sup>; with the environment, which is concerned with questions of value linked to the practical consequences of the relationship between man and nature<sup>8</sup>; with ethics, law and anthropology, which deals with the moral, social and legal aspects of man’s relations with the world around him.

Pedagogical reflection is therefore called upon to engage in a close critical dialogue with the various life sciences, from biology to medicine, from ecology to neuroscience, in order to provide concrete answers that can foster a humanism that is capable of going beyond the walls of the city of man and thus affirm, in a dialectical perspective, the recognition of the new subjects that also belong to the community of life on Earth.

Ecological awareness is the result of a unified scientific and ethical-pedagogical process aimed at thinking of man’s future as inseparable from that of nature. The knowledge provided by ecology raises issues of great ethical and educational relevance, raising important questions about the boundaries of the universe to which our moral discourse refers. More and more often, the question arises as to whether morality and education should be confined only to inter-human relations, or whether humans have duties of care and respect towards the environment and the planet-Earth in which we live. These questions call for a review of traditional judgments and criteria regarding good and evil, just and unjust, and affect the very scope of the main ethical and eco-pedagogical categories, such as “neighbour”, “environment”, “sustainable development”, “justice” and “responsibility”.

The climate in which man’s constructive work in creation takes place must be marked by the need for love and the awareness of being first and foremost

a part, before being the centre and summit, of nature. This affirms, as Pope Francis argues in *Laudato si* and *Fratres omnes*, an ethics of participation and a pedagogy of care that considers creation as a gift to be safeguarded, rather than as a resource to be exploited, and that sees man as the shepherd of living nature, committed to collaborating in the redemption of the universe.

Therefore, the interconnection between bioethics and ecopedagogy can constitute a significant alliance for a change of course in our time with positive educational and training effects for our children, as it can strengthen in them a virtuous habitus, which should be developed, as Aristotle recalls, as Aristotle points out, from an early age, and which can lead them to love life and nature in all their different expressions, and thus to an education that can counteract the necrophilic tendency which, as Fromm argues, is 'the quintessence of evil', the «most acute pathology and the root of the worst destructiveness and inhumanity» (Fromm, 1973, p.49). This necrophilic tendency can often be found in individual and social behaviour that denies life and prefers death solutions.

Pedabioethics and ecopedagogy must become increasingly educational and formative for all ages of man, taking root and building up in the hearts of men. The most important concept for developing love of life (one's own, that of others and of the world) is that the person being educated should be, as Fromm suggests, «with people who love life. Love of life is contagious, like love of death. It is communicated without words and without explanations: it is certain that one should love life without the need for sermons» (Fromm, 1965, pp. 52-53).

In my opinion, today more than ever ecopedagogy must develop moral reasoning in students and above all educate them in reasonableness<sup>9</sup>, respect for life and the environment through the learning of correct behaviour that leads to the creation of virtues<sup>10</sup> and therefore to a constructive and certainly formative relational ontology<sup>11</sup>. I think that today, in order to find a possible solution to the environmental issue, which is of such concern to scientists, philosophers, pedagogues, economists, physicists and climatologists, an important problem is moral education for the formation of good habits, a subject that is unfortunately neglected in contemporary educational practice, both at home and at school. A habit is not simply a response to a certain type of stimulus, nor is it a passive repetition of attitudes that generates rigidity and

conformism; rather, as Dewey taught us, habits are dispositions that make the individual capable of using his intelligence to mediate a problematic situation.

In ethics, Aristotle reminds us, “one swallow doesn’t make a summer”. It is in the circumstance of virtuous actions and good practices that young people build and implement fundamental options. In his actions and in daily practice, man manifests his heart and his deepest convictions. Action is the test of virtue. Virtue taught us Socrates, as Bloch also points out, «is the only true human being» (Bloch, 1994, p. 1006).

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## ENDNOTES

- [1] Cfr. Vitruvio, *De Architectura*, libro X.
- [2] It is "in the houses and in the streets, in our travels and in our work, in the means of transport and communication, in all the acts of our daily life. No other phenomenon concerns us more closely and urgently engages our present and future existence".
- [3] Enzo Tiezzi, with regard to the concept of technological time as antithetical to the biological one, makes it clear that «an organism that consumes more quickly than the environment produces for its subsistence (...) has chosen a dry branch in the tree of evolution, has chose the path traveled by dinosaurs. Time money, the time of the clock are not the times that count to establish a correct relationship with nature. Paradoxically, the clock, symbol of order, marks the hours of disorder, the frenzy of consumerism and the growth of production approaches the times of global disorder».

- [4] On this topic, Cass Sunstein expressed himself as follows: «The request for revision and regulation of the issue of environmental pollution is affected by heuristic tools that produce predictable errors, such as to influence both private behavior and state regulation itself» (R. Cass Sunstein, *Quanto rischiamo. La sicurezza ambientale*, tr.it., ed. Ambiente, Milano 2004, p.80). The reversal of direction, to achieve sustainable progress, depends on the transformation of perception and modification of living systems.
- [5] The Agenda 2030, very important for sustainable development, was launched by world leaders in September 2015 precisely to indicate the goals to be achieved on a global scale by 2030. (See Agenda 2030 in <https://www.unric.org/it/agenda-2030>).
- [6] Worldwatch Institute is a global environmental research organization based in Washington, D.C. Worldwatch has been named as one of the top ten research centers for sustainable development of the Globescan Survey of Sustainability Experts. The Institute's main goals are universal access to renewable energy and nutritious food, expansion of jobs compatible with the environment and development, transformation of cultures from consumerism to sustainability. The Worldwatch Institute aims to inform policy makers and the public about the links between the world economy and its environmental support systems. Cfr. Worldwatch Institute, *La ricchezza naturale delle nazioni. Come orientare il mercato a favore dell'ambiente*, tr.it., Edizioni ambiente, Milano, 1998; Id., *Ambiente e globalizzazione. Le contraddizioni tra neoliberalismo e sostenibilità*, tr.it., Edizioni Ambiente, Milano 2000; Id., *Idrogeno. Verso la sostenibilità dei consumi energetici*, tr.it., Edizioni Ambiente, Milano 2002.
- [7] Precisely in view of the threats to the whole of humanity and the planet-Earth (think, for example, of the nuclear holocaust or the environmental holocaust) also due to the unbridled rush of technoscience, Morin invites us to prepare the era of "meta-technology", in which technology ceases to be "the blind guide of our becoming" and is integrated "into human aims" (E. Morin-A. B. Kern, *Terra – Patria*, tr.it., Cortina, Milano 1994, p. 156).
- [8] For a more in-depth study of this relationship I refer to R. Indelicato, *Rapporto uomo-natura in Romano Guardini*, in *Annali 2014 del Dipartimento Ionico*, published at [www.annalidipartimentoionico.org](http://www.annalidipartimentoionico.org).
- [9] The reasonable person, Jean Guitton notes, is the one who submits reason to experience, and in particular «does not seek a system to justify himself but rather to find the measure of truth proportionate to the human condition» (Guitton, 1970, pp. 91-92).

- [10] On this subject, compare the following contributions: J. Piaget, *Il giudizio morale nel fanciullo*, tr.it., Giunti-Barbera, Firenze 1980; L. Kohlberg, *Il fanciullo filosofo morale*, in R. Titone (ed.), *Il fanciullo filosofo morale*, in Giunti-Barbera, Firenze 1980. R. Titone (ed.), *Il fanciullo filosofo morale. Studi psicopedagogici*, Armando, Roma 1977. The above-mentioned studies have tried to demonstrate that moral reasoning develops in stages and that moral development is an integral part of the overall educational experience.
- [11] Aldo Leopold, a pioneer of environmental ethics, defines what is right and what is wrong in terms of ecosystem survival and protection precisely in the light of a relational ontology: «A thing is right when it tends to preserve and protect the integrity, the stability, the beauty of the biotic community. It is wrong when it tends otherwise» (Leopold, 1949, p. 224).