

Original article

## For a bioethics of complexity

*Por una bioética de la complejidad*

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### Abstract

The *bioethics of complexity* is aimed at overcoming a simple and rough meaning of bioethics and its regulatory ambitions, which risks to flatten humans' peculiarities at the same level of what is typical of the natural and biological world, and proposes a new *complex thinking*, able to merge what seems separated and to distinguish interdependences and feedbacks between events, recognizing the interrelations between forms and aspects of life, the relations between phenomena and their backgrounds and between backgrounds and Earth and eventually to accept uncertainty, that is composed by some elements like unpredictability, innovation and mutation. Thanks to this new approach it is possible to understand new forms of relationships between patients and physicians and to propose a different vision of disease and therapy (*medicine of complexity*), it is possible to re-think about our relationship with nature, which is impossible to understand in a reducing and separate way (*environmental bioethics* and *ecology*), proposing a new humanism open to the ecological dimension, which has not the limits of the strong anthropocentric approach. Finally, the *bioethics of complexity* could teach us to re-think in a non antagonistic way the couple humanity/animality, leading to a new way of *animal bioethics* and a new way to think about pity, aware of the dangers of the anthropomorphization of our travel companions in the voyage of Life on Earth.

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**Keywords:** Bioethics; Complexity; Anthropocentrism; Medicine; Ecology

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## Resumen

La *bioética de la complejidad* tiene como objetivo superar un significado simple y burdo de la bioética y sus ambiciones regulatorias, que corren el riesgo de uniformar las peculiaridades humanas al mismo nivel de lo típico en el mundo natural y biológico, y propone un nuevo *pensamiento complejo*, capaz de englobar lo que parece separado y de distinguir las interdependencias y retroalimentaciones entre los eventos, reconociendo así las interrelaciones entre distintas formas y aspectos de la vida, las relaciones entre fenómenos y sus contextos, y entre los mismos contextos y la Tierra, para eventualmente aceptar la incertidumbre, que está conformada por algunos elementos como la impredecibilidad, la innovación y la mutación. Gracias a esta nueva óptica, es posible comprender nuevas formas de relaciones entre pacientes y médicos y proponer una visión distinta de la enfermedad y la terapia (la *medicina de la complejidad*); es posible replantear nuestra relación con la naturaleza, que resulta imposible de entender desde una visión reducida y por separado (la *bioética ambiental y ecología*), para finalmente esbozar un nuevo humanismo abierto a la dimensión ecológica, libre de las limitaciones que impone una visión meramente antropocéntrica. Por último, la *bioética de la complejidad* podría enseñarnos a pensar desde una perspectiva no antagonista sobre el par humanidad/animalidad, que conduce a una nueva forma de *bioética animal* y una nueva manera de pensar sobre la compasión, la conciencia de los peligros que surgen con la antropomorfización de nuestros compañeros de vida en nuestra travesía por la Vida en la Tierra.

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## Introduction

“Science of human survival in the ecosystem”: that was the definition used by Potter in his famous 1971 book *Bioethics: bridge to the future* to explain what bioethics was. Bioethics was intended as a new discipline able to borrow concepts and ideas from biology, medicine, ecology, in order to realize and promote life values (Potter, 1971). Philosophically speaking, this meaning of bioethics was indeed simple and rough, due to its evident regulatory ambition – “saying to people what to do in order to have a good health and saying to society what to do in order to preserve people health” – just as if the idea of health were objective and did not change depending on different systems of values and points of view worldwide. However it was a forerunner of the idea of connecting indissolubly human destiny with the destiny of nature.

The serious limit of Potter’s approach – who was prisoner of the holistic vision and influenced by an old-positivistic framework which thought Bioethics as a *scien-*

*tific ethics* – was his reductionism, which risked to flatten humans' peculiarities at the same level of what is typical of the natural and biological world.

Researchers are currently working on a research concerning the *complex thinking*, which is able to merge what seems separated and to distinguish interdependences and feedbacks between events.

Complexity is a positive figure because it proposes again – without antagonism – some couples of key concepts related to our cognitive approach to the world (order/disorder, nature/mind, soul/body). Opposed to the paradigm of simplification (corresponding to the Cartesian method aimed at dividing difficulties into different parts in order to resolve each problem separately) we find a method which is not interested in understanding the parts without understanding the whole problem, which is worth studying in itself.

This method is able to recognize the interrelations between forms and aspects of life, it is aware of the relations between phenomena and their backgrounds, and between backgrounds and Earth (*ecology of actions*). Finally, this method is able to accept uncertainty, that is entailed by some elements like unpredictability, innovation and mutation (fallibility) (Morin, 2008).

The fallibility thinking offers a correlation between specific questions related to the different dimensions of bioethics: medical, environmental, animal.

With regard to medical bioethics, a new point of view on corporeality is fundamental. From the mechanistic point of view, based on the division between mind and body, the body is thought as a mechanical entity composed by decomposable and manipulable parts: this is why mental problems are considered different from the physical ones and therefore cured in a separate way.

On the contrary, in the systemic approach, the body is considered as a complex system composed by different interactive parts, so the idea of separating the body from the soul does not work. This represents a big progress from the point of view of epistemology – because it permits to overcome not only the Cartesian dualism but also two other kinds of *reductionisms*, biological and mental. Moreover, it also represents an important acquisition from an ethical point of view: the totality of the human being is retrieved, because the patient is considered as a person, with his/her different interrelated dimensions. This is the beginning of a new anthropology able to consider the human being as an integrated totality of parts and

to consider many different aspects of the illness: body, soul, history, society. Human health problems are put in an ecological perspective, in their interrelation with the environmental health: from these reflections follows a wider idea of the *quality of life*.

The growth of Bioethics in the seventies called the attention of medical practitioners on the crisis of contemporary Western medicine, which is closer to technology, to diagnosis perfection, but which is less focused on the doctor-patient relationship. This crisis seems caused by the fact that doctors are monopolized by bureaucracy and organizational demands aimed at increasing their performances, in terms of economic efficiency.

We live in a health system which does not assign anymore a positive significance to the time spent with the patient, time which – on the contrary – has been associated with the idea of loss rather than investment, and so it is not evaluated as an important part of the therapy. In order to study this phenomenon, and the entire health-care organizational system, it is necessary to start from a brief reflection on the nature of medicine in itself, whose aim is the preservation and recovering of the patient's health and which is a practical and a theoretical knowledge.

Medicine is not only a systems of knowledge, it is also – and above all – a *relationship* between two persons: the one who cures and the one who is being cured. At its very beginning medicine is a *dialogue*, a reciprocity, which we can only have thanks to the *singular* conversation between two subjects. George Canguilhem, who was a doctor and a philosopher, stresses in his works the importance of this “singularity” (Canguilhem, 1968): The dialogue is singular – he writes – because it is personalized, in fact it starts again each time and so it is not classifiable because it represents a relationship between two different and unique persons.

This idea has some difficulties. How is the construction of medical knowledge possible? In this kind of knowledge comparison, repetition and classification are needed. Medicine requires a semiotics, a nosology. In order to cure we need a classification of symptoms and diseases. A generalization of observations and descriptions is needed. In other words: an universalization is necessary.

How can we realize the universalization of medical knowledge?

Obviously, the singular dialogue between doctor and patient is the prologue, the opening of the relationship of cure, the beginning of the therapeutic relationship.

This relationship is unique, necessary but not sufficient: in order to establish the genealogy of the disease and to reveal its itinerary, we need also objective data, that have to be interpreted and so generalized. It is necessary to rely on a very well codified language, able to transcend particular traits but, once again, the classification has to be interpreted, related to a person, to two singularities who will express themselves and will understand each other throughout the dialogue. In that way, medicine seems to be characterized by a dialectics, by a tension between singular and universal which represents, at the same time, its strength and its weakness: it represents its strength when the singular does not vanish in the relationship between singular and plural due to big numbers; it represents its weakness when dialectics risks a fracture and the super-individuality wants to prevail over the singular. Scientific medicine has made extraordinary improvements: more sophisticated techniques permit a tridimensional vision of the patient, a doctor can take care of his/her patient from a distance using the telemedicine tools, surgeons can operate without even touching directly the patient. These improvements are undeniable but they hide something dangerous, that is, the possibility to see the person bypassed by super-individuality, ignored in his/her singularity in the name of classifying requirement.

What about the original relationship, what about the dialogue described in ancient times by Hippocrates and his disciples from Kos Island? Is the patient only a “case”? Will he/she be cured following the norms obtained through the summary of comparable cases? Conferences represent a way of universalization of medical knowledge in order to have more efficient cures. A very important challenge, but is it compatible with the Hippocratic medicine’s ideal, focused on supporting the patient and the individual, within a relationship defined as a singular dialogue?

It is again Canguilhem who reminds us that the definition of disease requires, as starting point, the idea of individual being. Is this statement still true? What is the place of the patient in the disease, in a medicine which tends to universalization and to transform itself in a science of the human *object*? In “*The Birth of the Clinic: An Archaeology of Medical Perception*”, Michael Foucault skillfully outlined the distance covered by modern medicine from the second part of the 18th century on, focusing on the moment (the French revolution) when medicine started separating itself from metaphysic, and starting the development of the “clinical eye”. From that date on, the hospital was transformed into the “fortress of health”, and the pathological facts could be placed in a series, permitting a classification (Foucault, 1973). According to Foucault the perfect clinical eye, which appears as an effort aimed at rationalizing an intuition, corresponds to the dream of a medical language based on an arithmetical structure, which is connected to the myth of objective knowledge

freed from the subjectivity related with the singular dialogue between two human beings, which is considered harmful to knowledge. This is why the direct study of the human body was considered necessary, so it became the object of the medical knowledge.

In that way the attention can be focused on the epistemological foundation of modern medicine, that is the representation of truth as adaptation (to see is to know) which will be the basis of the “biological paradigm”. This kind of representation is aimed at founding an objective knowledge of the body for a medicine intended as exact science: this point of view is still old-positivistic, because it states that there cannot be a medical knowledge without the objectification of the illness and of the patient. What is important is the mathematical accuracy of the data collected in laboratories rather than the intuition and the interpretation of clinical signs because intuition and interpretation are typical of the field of aleatory and unreliable information. This point of view risks to “uproot” the subject, to forget clinical, diagnostic and therapeutic difficulties, only because it looks for an unbalanced medicine too close to natural sciences, unable to integrate humanistic knowledge.

We should so ask ourselves: are new kinds of paradigms possible?

Let us talk about the epochal revolution represented by the introduction of the subject in medicine due to the philosopher and physician Viktor Von Weizsaecker, who sees the ill person as an active subject, interpreter of his/her own disease, which is always an event of his/her personal life. Since medicine is divided into knowledge and power, that is into assistance (*Hilfe*) and education (*Bildung*), Weizsaecker identifies the two sources of the medical spirit in Hippocrates (who longs for the model of natural perfection and tries to reproduce elements’ harmony and balance in human beings) and Paracelsus (who gives mankind several tools, like alchemy, to defeat diseases which are negative things generated by nature itself) (Weizsaecker, 1987).

Thinking of medicine as a mix of power (Paracelsus) and knowledge (Hippocrates), Von Weizsaecker looks at life and biological behavior (both healthy and pathological) as a dialectic movement of polarities where the physical and the psychic are connected indissolubly: this is why he is sure that medicine has to be based on an anthropology whose starting point is the “bi-unity”. It is so possible to achieve a different vision of disease and therapy, starting from the fact that each anatomical description, each physiological analysis is wrong if it does not take into account human subject’s suffering and actions. Opposed to the narrowness of specialist sci-

ences typical of the modern division of medical jobs, we have the intersection of different fields of knowledge and so an appeal to a new humanism in medicine.

Weizsaecker has a firm critical attitude toward every kind of reductionism which we can find in contemporary culture. Nowadays we speak of a “medicine of complexity” in order to underline the several different aspects of a single health issue, an issue which cannot be reduced to the smallest levels of biological organization. Since health concerns the human being in his totality, if we follow the anthropological medicine’s advice, it is possible – and desirable – to adopt a bio-psychic-social approach able to look at the ill person as a whole and so as both a biological and psychological and social entity.

The problem of the relationship between disease and cure is similar to the interconnection between two moments who are mutually involved. Following James Hillman’s directions, we could say that the cure of a disease lies inside the disease itself, which has to be embedded in everyday life, problematically explored in its aspects, outside the causalistic models which insist on explaining *how* some events happen without looking for the  *motive* (Hillman, 1975).

In that way lost weaves, complex textures belonging to everyday life – sentimental difficulties, individual tragedies, expectations and delusions that we have “lost” throughout the way of deterministic explanations and strategies aimed at a world full of safety and well-being – will reach their new centrality. Hillman’s invitation is aimed at defeating the comforting normalization which explains the causes of our diseases, and gives us drugs to restore our health: we need to retrieve diversity, distinctions, variety, recognizing that a disease is a constant and substantial presence of our life, a signal of its precariousness, in the extreme variety of its sentimental, emotional and cultural components. In other words, there is a “dark side” even in body diseases which represents their psychological side, which is elusive and belongs to the patient so peculiarly that we can claim that “the disease is the patient him/herself”. Once again, rather than following general reference points in order to understand a disease, it is necessary to identify the differences between a model and a single patient.

The etymological reconstruction of some key words is very useful. For example, Hillman reminds us that the word  *medicus* comes from the latin verb  *mederi* which means “taking care” and that the greek word  *therapeia* has the same meaning: “its root  *Ther* means bringing, supporting [...]. The therapist is somebody who brings and takes care of someone else like a servant” (Hillman, 1976).

This is why the physician who walks “towards the white halls of the hospital, with his/her delicate concepts of suffering, causality, disease and death”, should find the way through the ancient and more interconnected vision of his/her vocation, particularly in difficult situations of modern medicine – super-specialization of medicine, fares, hospital management – which “show how the human aspect of medicine has been forgotten”.

If the physician favors the scientific pathology he/she removes the comprehension of human suffering and takes in account only the explanation of the disease: his/her attention is focused on the object and not on the subject, on the problem and its causes and not on the one who suffers. Above all, the physician risks to forget his/her own vulnerability. As Hillman says, “physicians are not good patients maybe because they have lost the ability of being vulnerable”. Nowadays, thanks to the “liberal revolution” introduced by Bioethics, there is a new subject in the relationship of cure, that is the patient, who changes the rules of impersonal science and obliges models and norms to become personal, that is, to take into account the singularity, the individuality and the peculiarity. Is the medical culture – which is also the place where ethical reflections happen – ready for this political and cultural renewal, which cannot be reduced to a mere deontological issue?

Unfortunately, signals are not very encouraging: let us think about present tests to be enrolled in medicine faculties which favor science, chemistry, biology and do not take into account philosophical, epistemological, methodological, ethical issues – which are instead fundamental for the humanistic knowledge of the physician. This is why the definition of medicine as “ a form of inter-personal relationship aimed at the cure” (Cosmacini & Mordacci, 2002, p. 148) seems suitable for a bioethics which is in dialogue with philosophy and anthropological medicine (following the itinerary we have sketched from Canguilhem’s identification of the dialogic character of the relationship between the one who cures and the one who is being cured, to the re-introduction of the subject in medicine thanks to Von Weizsaecker, to the biological-psychic-social model typical of the “medicine of complexity”).

### *Environmental bioethics*

The view of the planet as a system, as a physical – biological – anthropological complex unity, where life is something emerging from the history of Earth and Mankind, can be viewed as an emergence of the history of terrestrial life. This makes impossible to think our relationship with nature in a reducing and separating way. Ecology is the science that has restored the communication between mankind



and nature, letting us discover the fragility of Nature and making us feeling our responsibility as custodians of life in the immense universe. Copernicus' revolution has shaped our consciences producing a dual feeling: disorientation (we live on a secondary planet, in a marginal galaxy) and belonging (this is our planet, our home). The awareness of the community of a shared terrestrial destiny has become, as noted by Edgar Morin, the key event of the end of this millennium: we have to be sympathetic with Earth because our lives depend on its life (Morin, 1993).

In a world characterized by a scientific progress which seems not to have limits and which arises deep ethical dilemmas, based on the lack of norms and values able to give sense to individual and social actions, Hans Jonas has been the philosopher who strongly tried to think again on ethical principles. In his reflections, the relationship between mankind and nature – our responsibility towards life – is showed as the problem of our time. Thanks to Jonas, in contemporary philosophy the “environmental issue” has the same relevance that the “social issue” has had before in the 19<sup>th</sup> and 20<sup>th</sup> centuries philosophy thanks to Marx.

Jonas' ethics is based on the awareness of the radical change of human actions' nature, which is underlined in his work by a constant connection to the world that has come before us. As we can read in the chorus of Sophocles' *Antigone*, mankind has always looked at its relationship with nature as violent and outrageous, even though men's actions were only superficial incursions. Nature, though, was considered as immutable, invulnerable, slightly scraped by human actions.

This is why human actions were not considered as a meaningful issue from an ethical point of view. Ethics was anthropocentric because everything was about the relationships between rational and sentient individuals, and duties were related only to these individuals. The traditional ethics, as Jonas reminds us, did not have any motives to recognize the moral relevance of extra-human field, because its attention was addressed only to human actions and did not require special knowledge or wisdom. Ethics was limited in time and space: its key points were proximity in time and space, reciprocity was one of its fundamental rules. Since then science and technology have radically changed the field of moral: nature is no more seen as the immutable background of human actions, and its survival is linked to our choices. Nature as a human responsibility – as said by Jonas – is the new concept Ethics has to reflect on (Jonas, 1985). If we would sum up Jonas' reflections in few words, we should say that it consists in the passage from the ethics of conviction (Kant) to the ethics of responsibility (Weber) whose concerns are not only the others (humans) but also the whole universe, which is life house. This is why there is now a wider

idea of moral community: the threatened biosphere and the totality made of living beings who are next to us are now part of the ethics field. In our contemporary social ethics we can see some signals that seem to witness a gradual transition from the ancient culture of control to a new culture of respect and care of the environment, as witnessed by the recent Encyclical letter *Laudato si* (Praise be to you) by Pope Francis. This transition can be articulated through a sequence of three different models of the relationship between humans and nature, which represent different ways and cultures related to the way we live on our planet:

1. the *exploitation and unlimited expansionism* model, whose corresponding culture is the *culture of control*;
2. the *conservation of resources* model, whose corresponding culture is the *culture of management*;
3. the *preservation of resources* model, whose corresponding culture is the *culture of protection*.

These three models correspond to three different ethical paradigms: 1) *frontier ethics*; 2) *ethics of limits*; 3) *ethics of respect*.

Which are the peculiarities of these different models? The *exploitation* model (based on the Baconian tradition and on the Hegelian-Marxist tradition) is characterized by:

- a deep focus on the value of physical transformation of the natural world (mankind is truly himself when manipulating nature, as showed by the classical imagine of the *homo faber*);
- the myth of abundance, that is, the belief in the existence of unlimited natural resources;
- a representation of the environment in terms of its “use-value” for human beings;
- short-term plans for the future (interests of next generations are not taken into account);
- technological optimism, that is, the firm trust in the ability of technology to resolve each problem as soon as it appears.

It is a model inspired by a *strong anthropocentrism* or, as said by John Passmore, a model inspired by the culture of despotism which has its paradigm in *frontier ethics*. It is characterized by the idea of nature as a dangerous and hostile environment, which has to be defeated and transformed. This attitude is expressed by the Puritan

ethics, typical of American colonists, which gives a religious dimension to the fight against nature, which is the symbol of evil, disorder and anarchy that has to be avoided. Frontier men looked at themselves as civilizers of savage nature, which has an unclear and sinister meaning. On the contrary, if nature is transformed, it could be a new “Garden of Eden”. The *conservation of resources* model is characterized by:

- the acknowledgment of the necessity to limit the growth (even if the transformation/development/exploitation model is accepted);
- the capability of taking into account long-term consequences of human actions and different species (next generations’ interests and animal interests are taken into account);
- the search for the maximum sustainable yield, which is the eco-friendly development.

This approach is possible due to its dual culture: conservation/development. The attention on the natural resources maximum yield corresponds to the idea of development, while the attention to sustainability and to the eco-friendly aspects correspond to the idea of conservation. The idea of well-intended human interests is introduced in order to limit and contrast the anthropocentrism. This model, called *weak anthropocentrism*, corresponds to the paradigm of the *ethics of limits*, where normative limits are imposed to human behavior when relating to the environment, and a prudent management of natural resources for the prosperity and well-being of mankind is advocated. The *preservation of resources* model is characterized by:

- deep roots in the Western philosophical tradition of logic and reason, and by the consequent application of several theories (utilitarianism, neo-aristotelianism, kantianism) to the environmental issue;
- an openness to significant implications on the legal side where new rights (*to environment and of environment*) appears, following a perspective which wants to combine humanistic interests and environmental values;
- the refusal of every fundamentalism typical of the “deep ecology” and the consequent affirmation of the compatibility between ethics of respect for nature and humanistic tradition.

Thanks to its relation with environmental ethics, humanism can be open to the ecological dimension. This model has its corresponding paradigm in the ethics of respect which insists on benefits that mankind can obtain if it preserves natural resources, preserving their peculiarities and integrity and letting the members of the non-human world live as they need.

The difference between this model and the other two models is big, because also the second of them stresses the value of the physical transformation of non-human world in favor of mankind (the first in a more absolute sense while the second introduces some limits).

Which are the grounds for the duty to preserve different aspects of natural world? We could distinguish several different general kinds of reasoning in favor of this thesis, depending on what we prefer: a fact-finding-informative value; a recreational-playful value; a symbolic-didactic value; a psychological-existential value. To sum up: we should preserve natural resources for their scientific value (and so for the biological, ecological, ethological, etc. progress), for their importance as a resource of biodiversity with medical, cultural, agricultural, etc. implications, for their recreational meaning, as source of aesthetic enjoyment and spiritual inspiration, or, eventually, for their ability to give essential experiences for the harmonic development of human personality. The effects of this model on the crucial issue of good life are very important, with all the richness of the supporting theories. I think about the *buen vivir* - as said by Serge Latouche – as a new paradigm of civilization based on a life in harmony with the nature to which a community belongs (Latouche, 2005).

In Europe we can refer to the movement of “transitional cities”, communities which choose to convert productive and consumption activities into new ways of living independent from fossil fuels, promoting new energy plannings and designing new models of production and consumption of food and energy, tourism organization, health management. They are all local experiments which strategically anticipate global transformations and invite us to think about all the dimensions of a city: the public space, where we act following an implicit but real agreement of mutual support which represents the basis of a city; the ecological dimension, which represents the preservation of common goods (air, water, landscape) which are intended as fundamental rights threatened by the mere logic of the market; the health dimension, which concerns the most precious good and directly affects political and economics choices and social justice issues. They are all very big challenges that have to be managed by politics but actually concern all of us: this is why bioethics, which is involved in the discussions about good life issues, has the duty to discuss these problems.

Today we are more and more aware of the intersection of common goods and rights and citizens’ responsibilities, and so we need to plan our future in terms of economic, political, social and environmental sustainability. This corresponds to the

awareness that now – for the first time in history – we are an “urban race” and so what we do and do not has a decisive impact on people’s life. Overcoming the PIL to open a bridge to good life means understanding that there are very important goods for the quality of life like culture, the ability of understanding the world we live in, interpersonal relationships, harmony with the environment, participation into social life, safety and solidarity, which are considered as immaterial goods because they need less energy and materials to be produced and re-produced, and whose diffusion permits to diminish the consumption of material goods. In conclusion, I think that there are some elements in the model of preservation of resources that – even if it considers the value of the environment only in terms of human prosperity and well-being – could lead to wider perspectives, overcoming the anthropocentric dimension. The psychic-genetic theory that underlines the human beings emerging from the interaction with non-human entities, seems to be a sign of a further development towards the consideration of the environment and its relational value, which is inalienable for human beings.

### *Animal bioethics*

The philosophy of complexity teaches us to re-think in a non-antagonistic way the couple humanity/animality. We come from a culture which is deeply anthropocentric and who has looked at animality as disorder, chaos, evil and – on the contrary – has looked at the humanity as order, reason and good. The possibility to slowly and gradually overcome this demonization of animality – thanks to the help of ethology – has had significant effects in the ethics field. We are becoming more and more aware of the fact that mankind cannot be the only aim of the moral reasoning; we have to overcome the ethics focused only on human beings, as said by Schopenhauer: “the immense pity for all living beings represents the strongest guarantee of a right moral behavior and does not need case records. Who is part of this will not hurt anybody, offend anybody, but will be kind to everybody, will forgive, will help, if possible, and all his actions will have the sign of justice and philanthropy”. With these words Schopenhauer detached himself from the traditional “theory of cruelty” derived from Aquinas’s philosophy and Kantian philosophy, which says that “we should have pity on animals only for training ourselves [...] they are so the pathological phantoms we need to learn how to have pity on humans” (Schopenhauer, 1970, p. 87).

Pity on animals is invoked by the philosopher Piero Martinetti, who thinks that innocent’s suffering reveals the tragical aspect of reality. “They enjoy and suffer and express with more evocative means what they feel: the pain of beasts who are per-

secuted to death, the pain of wounded mothers who beg for their children, is something close to humanity” (Martinetti, 1972, pp. 228-229). In Martinetti’s philosophical perspective the animal is intelligent and conscious: not only its actions, but also its attitudes, gestures, appearance can reveal its inner life, that even if they are very far from our inner life, cannot be reduced to a mere physiological mechanism. The claim for the animals’ consciousness does not want to be a simple way to anthropomorphize animals, because Martinetti often underlines the “unknown and mysterious” side of their soul.

Others’ physical and moral sufferings – and who is more different (other) from us than an animal? – risk to be too far from our view and attention even if they are evident. The moral choice is primarily a question of view: the physical carelessness is similar to the moral carelessness. Finding out which are the causes of a living being’s suffering requires a preliminary practice of attention in the deep sense as expressed by Simone Weil: “paying attention means being ready for a revelation”. The action of paying attention lets us be aware not only of the other but also of the existence of an asymmetry between force and power and so forces us to consider responsibilities and duties that we were not able to see before but now that we can see we have to face, without the help of the role and the institutions which are depersonalized patterns. In that way a typical element of the ethics of *care* appears: the asymmetry, that is, my ability to be responsible for the other, for his/her well-being, without hoping to be rewarded. The other exposes myself and obliges me to be responsible in an irrefutable and asymmetric way – the highest form of ethics – because there cannot be reciprocity.

Taking the reciprocity as a central theme of the ethical reflection and overcoming the human sphere, we could recognize a proximity in the silent gaze which directly appeals to our moral conscience (and we should not care about its species): that leads us to verify our pity on the other without the need of being rewarded.

We now have to face another idea of bioethics. How can we have a relationship with something which is not human (the other), inside the philosophy of complexity? First of all, the other is someone that is able to return the mirror image of myself, of my categories and my certainties. The other produces a confusing and disturbing element, and exposes me, reminding me my limitedness, my incompleteness, my situation of being a single point of view, but the other is not only outside me because it lives inside of me. A theory of complexity should help us to become aware of this dialectics of similarities and diversities which marks the relationship between humans/animals and of the value of diversity represented by the animal which has to

be preserved against all kinds of arbitrary anthropomorphization. When Albert Schweitzer claimed that “an ethics that is all about human is actually inhuman” (Schweitzer, 1985) he wanted to remind us that without neglecting peculiar human characteristics – and particularly social, cognitive, psychological, moral, aesthetic aspects which are part of our lives and our vision of the world – we can identify, on scientific and logical grounds, some fundamental elements which make us belonging to the Earth community, so that we can recognize that biological conditions necessary for the realization of human values are inextricably interconnected with the whole natural system.

In this framework, the possibility to share with other species a common relationship with the Earth is an essential aspect of the human condition itself. We should not only remember that there are some differences between us and the animals – as observed by K. Lorenz when talking about the peculiarities which characterize human beings as cultural beings: “the openness to the world” and “the non-specialization” – but also that, considering the whole ecosystem, we are just a species among other species, born during the evolution process, determined by genetic rules, natural selection and adaptation, which has to face environmental challenges like other species.

In an ecological perspective, humans and non-humans are considered as interacting parts of a unique system where living beings are functionally interconnected. Once that we have reached this awareness, as said by the environmentalist philosopher Paul Taylor, we can look at each living beings and thinking about the fact that we all are *teleological centers of life*, and we all try to realize our well-being in a peculiar way. Our ethical role in the natural world acquires so a new meaning: “Let’s start to look at the other species in the same way we look at ourselves, so that we could look at them as living beings which have to realize their well-being, just like us. Let’s develop in that way the propensity to look at the world thinking about both other species’ point of view and our point of you, because both of us try to realize our well-being” (Taylor, 1986, p. 121).

Being able to acquire this attitude implies the ability to radically overcome both the anthropocentrism and every kind of anthropomorphization. Looking at the living beings as teleological centers of life, as proposed by Taylor, does not mean conferring them specifically human features or faculties (self-awareness, independence, rationality). On the contrary it means looking at them as unified systems of activities oriented to a goal, aimed at realizing their preservation and well-being. From the ethical point of view – as said by Taylor who recalls some Leibniz’s

themes – a teleological center of life is “an entity whose ‘world’ can be seen from *its* point of view on life”. We should add therefore that it is up to us conferring to these entities their rights or ascribe a moral responsibility toward them to ourselves, keeping in mind that this operation is a projection of our restored humanistic conception.

Let us go back to the essential point: animality is rarely considered in itself. Quite often what we say, see and feel is connected to a symbolic framework which acquires a paradigmatic value for human beings, sometimes in a positive way, often in a negative way. How can we relate to animal “diversity”? Is it possible to recognize and respect it in itself?

What is different has to be protected and not reduced to ourselves. We should be able to acquire and respect its diversity. It is this *diversity* – which offers us many different chances of meeting, growth, creation, enrichment – that has to be claimed. Let us try to look at the animal as an educational referent, as a source of messages aimed at recognizing the diversities, as an incentive for communicating, playing, studying, as a center of interests for cross-disciplinary itineraries.

Let us think about the philosophical and historical study of the human-animal relationship, the artistic representation, the pedagogical reflection, the anthropological study, the ethological research: they all represent chances of learning and growth offered by bioethics.

Which are, eventually, the effects of a vision inspired by the philosophy of complexity on the idea of *quality of life*? We have to think globally about politics, economics, demography, regional biological, ecological and cultural treasures preservation. The notion of *quality of life* in itself has to be re-defined when related to wider criteria corresponding to the interests both of contemporary humans and next generations, environment and other species.

The authors we have considered here, even if their approaches are different, try to “challenge” the removal of nature from the ethics, the classical distinction between *entia moralia* (moral entities) and *entia naturalia* (natural entities) which consider mankind as separated from the other physical entities due to an immense abyss and so the only living being able to be the moral subject of the whole creation. We are looking for a new ethics able to face two challenges: let the human phenomenon take roots into the natural universe – and so underlining the interconnections which show the organisms in natural systems and the connections in these systems – and



explain the extreme complexity that, inside this universe, distinguishes it from other natural known phenomena.

It is a dual movement intended to insert once again human beings in the natural beings' world but at the same time to *distinguish* it, not to flatten it.

I think that reductionism could be the biggest danger for all ecological ethics which – following the model of the “Ethics of Earth” by Aldo Leopold – try to insert again mankind in the natural world but lose its cultural and symbolic peculiarity, risking to reduce it to its ecological role.

It is necessary to remove the possibility of misunderstanding: overcoming the anthropocentrism does not mean becoming anti-humanistic. Someone fears ecological-holistic ethics – which sometimes is accused of “environmental fascisms”, risks to neglect or minimize the role of culture and the value traditionally attributed to human beings; the care for the environment, the respect for non-human beings could risk to sacrifice the traditional goals of humanistic ethics, like freedom, well-being, knowledge progress.

The fact that we have a deep impact on the environment does not mean that we have to limit the range of ethical interests only to the environmental issue. We should instead be able to recognize and connect multiple levels of moral obligations – from personal and familiar responsibilities to social and common responsibilities to the responsibilities towards next generations, non-human subjects, biosphere.

Actually, if we think in terms of complexity and so we recognize the common destiny of mankind and nature, we should try to connect issues related to the environment with the other issues related to freedom and justice. In this sense, the effort aimed at elaborating an ecological ethics which is not anthropocentric, could become an essential moment for a new humanism, characterized by a potentiality of development which is extended beyond mankind and at the same time is able to find again its roots in the so-called *humus*. A new humanism which is not arrogant and, without denying nature, is able to see in nature the ground where it can design its existence.

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