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NATURE'S PLACE IN MAN

IL POSTO DELLA NATURA NELL'UOMO

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Abstract. The concept of Nature changes according to different philosophical and scientific positions, nourishing a not yet concluded debate that involves such reflections as the existence of soul in animals and the man's role in world. In one hand there is the concept of Guardian Man that, as God's supreme creature, takes care of world and uses natural resources, animals included, for his own needs. In the other hand there is the vision of Man as a Guest of an ecosystem, under the same conditions of animals. The settlement of the relationship between Man and Nature has not only philosophical but also economic and politic consequences, proving itself as a key reading of the human behaviour.

Riassunto. *Il concetto di Natura muta secondo diverse posizioni filosofiche e scientifiche, alimentando un dibattito non ancora concluso che implica considerazioni come l'esistenza di un'anima negli animali e il ruolo dell'uomo nel mondo. Da una parte c'è la concezione dell'Uomo Custode che, in quanto creatura prediletta da Dio, si prende cura del mondo e utilizza le risorse naturali, animali compresi, secondo le proprie necessità. Dall'altra c'è invece la visione dell'Uomo come di un Ospite di un ecosistema, al pari degli altri animali. La definizione del rapporto fra Uomo e Natura ha conseguenze non solo filosofiche, ma anche economiche e politiche, dimostrandosi come chiave di lettura dell'agire umano.*

ONE WORD: NATURE

In the history of Western civilization, the word "Nature" has been an instrument not only to explain the subject, but also to justify or denigrate it, placing it in different contexts within the semantic and gnoseologic universe.

The first philosophical works, later handed down with the title *"About Nature"*, were composed in ancient Greek colonies around the Mediterranean during the Sixth and the Fifth century BC, by the so-called "Ionic physicists": Thales, Anaximander and Anaximenes. Notwithstanding their different theoretic deductions, the works by these Greek philosophers focused on Nature (*fùsis*) as the main theme of their philosophy, considering it as an infinite universe regulated by a necessary order. This is the origin of the first meaning of the word "Nature", as "World", whole-containing universe. Man is also an integral part of this order, thus implying a close relationship with animals and other natural beings. Anaximander, the first Greek author of philosophical works, was also the first one to locate the archetype (*archè*) in which the matter is born and dissolves within the cosmological theory.

Anaximander, a fellow-citizen and associate of Thales, said that the material cause and first element of things was the Infinite, he being the first to introduce this name for the material cause. He says it is neither water nor any other of the so-called elements, but a substance different from them, which is infinite, from which arise all the heavens and the worlds within them. Moreover, he explained that extinction, and the origin much more before, would been indefinite perpetuity, as they all would recurred cyclically (THEOPHRASTUS, quoted in DIELS: LAMI 1993).

For Ionic physicists, Nature is the subject of cosmology, but at the same time it is its spatial and temporal condition. The first steps of Western philosophical thought start from the *whole* to reach the *part*, through a remarkable scientific approach, even with some imaginative deductions. Such deductions were influenced by Zoroaster's mysticism, who identified science as a way to understand life. Thus, intuitions originated from a thorough observation of nature take turns with mystical and religious suggestions, driving philosophy towards an association with religion: an often ambiguous relation, that makes philosophers mediate between clear reality and the reality transformed by Man through ruling culture.

To escape this ambiguity and maintain the idea of Nature as reality, Democritus distinguishes natural research, perceived by the senses, from philosophical research, carried out by the human mind.

Even though [intellectual knowledge] *is subject to the physical conditions of human organism, it is superior to sensitivity, because it makes it possible to understand, beyond appearances, the World Being: Void, the Atoms and their motion. Where sensitive knowledge ends, when Reality diminishes and dissolves in its last elements, there begins rational knowledge* (DEMOCRITUS, quoted in DIELS: ABBAGNANO 1993).

From the numerous works by Democritus it

emerges a great interest in Nature, so that it is possible to regard him as the greatest naturalist of his time. The passage quoted above shows the seed of separation between natural reality and intellectual reality, that becomes clearer with the philosophers of the Fifth century BC. As a result of Greek Sophistry, the concept of *"nòmos"* appears: an ethical-political law that diverges from the natural one. For the first time, "Nature" is not enough to determine the Universe: the term "Culture", originated from the world created by human rationality, contrasts with it.

This concept is drawn on and studied in depth by Plato, who, in the Dialogue *"Timeus"*, defines the knowledge of Nature as a *probable tale*, and he ascribes the creation of natural things to the *Demiurge* (the creative power).

Thus, a tortuous route starts, along which the word "Nature" becomes synonym of "evident and debatable things", at a lower level than the order of intellectual and divine matter.

Nevertheless, in spite of the clear downgrading in comparison with the concept of "Nature" in ionic philosophers, ancient Greek philosophy does not diminish its interest in physical phenomena.

In Aristotle's works, "Nature" becomes a word used to identify the whole of living beings, including Man's body (except the soul), the inanimate things and the physical phenomena.

In other words, everything except God and the "artificial" world created by Man through the *techné*, that is to say art, technique.

Lower substances are more studied and analysed in the scientific world as they are more easily understood; [...] *the principal object of natural philosophy is the totality of the form, not its material elements, as they have no existence* (ARISTOTLE 350 BC).

Therefore, on the one hand there is "Nature", the world of physical phenomena and living beings, that corresponds to principle of *teleology*, according to which everything is inclined to reproduce a certain order.

On the other hand, in a no more physical but semantic world, there is the "Artificial", where *theology* finds its place. This ideological trend persists throughout classical Greek and Roman philosophy, but especially with the supremacy of Christian doctrine, that banishes "Nature" to the lower world, ruled by Man as the most important of God's creatures.

By separating the *natural* from the *artificial*, Man divides himself in two, impoverishing not only the meaning of the word "Nature", but also his own identity, trapped in a body that is no more the reflection of natural order, but a burden from which the soul has to free itself to aspire to eternal life.

This separation is reflected in the dichotomy Nature-Soul, that in the Middle Ages becomes the issue at stake between Philosophy and Faith. If Faith founds itself on the *acceptance* of Revealed Truth, Christian Philosophy dwells on the necessity of the *research* of the journey that leads Man towards God, and the *inquiry* into the physical dynamics that permeate the Creation as well. This is not an easy choice for Christian Philosophers, so they look for a written confirmation in Greek philosophy, particularly in Plato and Aristotle, borrowing from the former the theory of *World's Soul*, from the latter the theory of *World's Teleology*.

An emblematic figure of this period is undoubtedly Pierre Abélard, for whom the *act of faith* is not a blind commitment, but an *act of life* supported by the rational research that leads from doubt to truth, through an unremitting and persevering research. Within this *logic*, a term that Abélard identifies as the action of human reason in the execution of free will, Nature acquires back the place assigned to it by Plato: the *World's Soul*, created by God (the Platonic *Demiurge*).

Thus, the fact that the French philosopher makes the World's Soul coincide with the Holy Spirit, is part of a rational operation, a last attempt to combine Christian doctrine with pagan philosophy. Paradoxically, pagan thought, or rather Greek knowledge and part of the Arabian one, resurfaces just at the height of Christian hegemony: the scribe monks, in the quiet casket of their writing desks in abbeys and monasteries, bring to light the wisdom of Hippocrates, Pythagoras and Ionic and Athenian philosophers. And through them, all the vast heritage of knowledge released from powers and ideology, faithful to research and knowledge only, is brought to light. Nature appears from Medieval illuminations with its vital force and its mysteries, medieval codes reveal monstrous beasts and marvels of nature. It hovers between magic and science, compressed by ideological interpretations and widened by the infinity of the experimental.

The Renaissance is the repository of all these intellectual and spiritual drives, and it is a fruitful period with regard to the research and interpretation of "Nature".

In Courts and Universities some concepts of Nature mature, even disparate ones but they all agree to place the close bond between Man and Nature at the core of the survey.

Archimedes, Pythagoras and the theories by such physicists as Anaximander and Anaximenes, influence the thought of Renaissance philosophers, such as Bernardino Telesio. In his nine-volume work, "*De rerum natura iuxta propria principia*", the Italian philosopher shows an exclusive interest in nature, a world cut off from metaphysics and regulated by its own principles: the definition of the natural phenomena by the dynamic action of hot and cold; the *sensitivity*, as the quality of all natural things and as necessary condition to their interaction within the matter; nature as a measurable objectivity. Telesio's work could be considered more scientific than philosophical, except the wide part about man and his role in nature. As a natural subject, man is able to

understand nature through sensitivity, the principle mentioned above. But the real subject is Nature, that reveals itself through a part of itself: Man. There is no anthropocentrism that marks the Renaissance, but a methodological approach that anticipates modern science, by means of the method of naturalistic reduction, far from metaphysical speculation and dictate of doctrine.

This point of view is further developed by Leonardo and Galileo, who both have a direct approach to the study of Nature that reveals itself to Man through *experience*.

Experience does not make mistakes, but only our judgment make mistakes. [...] *Men wrongly complain about innocent experience, accusing it of wrong and deceitful demonstrations* (LEONARDO DA VINCI 1480-1518).

At the core of his numerous essays, Leonardo places intuitions and experiments, Nature as the subject to study, research on and make the most of it for Man. Painting and science aim, the former to represent Nature, the latter to reveal its principles. Renaissance Painting, as in Leonardo and in other European artists, portrays landscape and naturalistic elements with details arranged in accordance with perspective harmony: "Nature" once again imposes itself as a cosmic order ruled by beauty and harmony. Landscapes are no more the elements to fill a scene, arranged in the hierarchical order of the depiction as in Thirteenth and Fourteenth century painting, but they become the subject of the depiction: thus, Man is placed in a spatial and temporal context. An case in point is the presence of the natural elements that feature in Leonardo, Piero della Francesca and Flemish painters. The latter are the masters of representation of nature through the beauty and objectivity of its details. In order to know and demonstrate the objectivity of Nature, Man also makes use of experience and mathematics, the latter revealing the eternal sorting and measurement relations of natural laws.

As in Leonardo, in Galileo's work *"The Assayer"*, mathematics is a science able to provide Man with a key to the interpretation of the book "Nature":

Philosophy is written in this huge book, which stands continually open to our gaze. But the book cannot be understood unless one first learns to understand the language and read the letters in which it is composed. It is written in the language of mathematics, and its characters are triangles, circles, and other geometric figures without which it is humanly impossible to understand a single word of it; without them, one wanders about in a dark labyrinth (GALILEO 1623).

There is another Renaissance naturalism, not linked to science but to magic, expressed with passion in Giordano Bruno's works, a visionary and revolutionary passion so much feared by the Church that he was burned at the stake in Rome. This philosopher accuses the Catholic church of stirring up disagreement among people, and of producing a whole of superstitions that hinder the path of the knowledge of Nature, that is not God's creature but God itself:

Nature is either God itself or the virtue that shows itself in the things themselves (BRUNO 1591).

Drawing on Pythagorean and ancient Middle-East doctrines, "Nature" becomes synonymous with "cause" and "principle of things":

In every place nature is all in whole; its goodness is as great as its wisdom, its potency, its act, its love, its rule, its speech, its power (BRUNO 1591).

From Renaissance naturalism to the birth of a scientific doctrine that matures in lecture halls in ancient European Universities and Courts in England, Denmark, France and Prussia, the term "Nature" assumes an essential importance for balancing Man and the world in which he lives.

Religion begins to be resolutely separate from the study of natural phenomena, and science becomes the only tool to research and understand the world.

In this context, Francis Bacon's philosophy makes its way. The English philosopher adds to *experience*, so declaimed by Leonardo, Galileo and Sixteenth century scientists, *reason*, a tool through which man can carry out his rule over nature.

This is a fundamental logical and philosophical shift, that anticipates Enlightenment and turns the term "Nature" from subject into object, from world into a tool at the service of Man. In his work *"Novum organum"*, written in 1620, Bacon explains the scientific method to observe nature and rule it, worming out its principles through experiments and the interpretation of their results.

"Nature" has neither the charm of mystery, as in Bruno's works, nor holds the harmony of beauty, as in Leonardo's: from Bacon onwards, thanks to the enthusiasm for the huge steps of science, Nature is a fortress to conquer, a beast to subdue, a world to rule and bend to Tyrannical Man's caprices. Nevertheless, scientific man's certainties in Seventeenth and Eighteen centuries find some contradictions and uncertainties in the nuances of thought. The matter at issue is the definition of Nature's role and, therefore, the role of Man and God: three subjects interconnected by a double thread of philosophy and science. In the period that covers the seventeenth and eighteenth centuries, there are various standpoints regarding the problem of Nature, Man and God.

As for Descartes, the experiment is an useful method for the knowledge of nature, but it is also a limit, given the large number of natural phenomena, so that man is not able to experiment them all during his lifetime. Thus, to complete the knowledge of the world there is *intuition*, that gathers the evidence

of phenomena beyond sensitive perception, and *deduction*, that leads to certitude. Only Man, God's supreme creature, is in possession of reason and, therefore, he is able to understand the world and be aware of his own existence.

In Hobbes's theory, reason (that also belongs to animals, although to a lesser degree) proves human actions *a priori*, whereas it proves natural actions *a posteriori*, through science.

If, on the one hand, there is Seventeenth century man's delusion of omnipotence, on the other hand, there is a cautious thought, insinuating that scientific certitudes could be limited and arbitrary:

[...] *nature has no particular goal in view, and that final causes are mere human figments* [...] *and inasmuch as those who do not understand the nature of things do not verify phenomena in any way, but merely image them after a fashion, and mistake their imagination for understanding* [...] (SPINOZA 1677).

In the passage above, the term "Nature" appears both as subject and meaning of "substance", "constitution", turning from *whole, universe*, into *part of something*.

In its first manifestation, the word "Nature" was connected with its etymological meaning (from the Latin verb *nascor*, to be generated) and it identified the world in its wholeness even within the perspective of infinite worlds. Because of anthropocentrism and modern ideologies, the spatial and semantic sphere of Nature reduces itself so that it identifies single aspects of entity. The word "Nature" turns from subject into predicate.

It remains so during the Enlightenment until the Nineteenth century, with various moral, scientific and philosophical nuances, but at the same time keeping its meaning of "predicate", leaving the role of subject to God and Man.

European Academies feature the fad to classify and order everything within a natural system, nourished by geographical and naturalistic explorations and discoveries.

Linnaeus's "System of Nature" and Buffon's "Natural History" add to cosmologies and they become reference points, essential for anyone who devoted himself to natural history.

The birth of cosmologic and systemic theories develops an intense debate in the Eighteenth and Nineteenth centuries, in which, beside naturalistic notions, ideological suggestions and socio-political implications find their place.

The word "Nature" imposes itself in essays by scientists and intellectuals, academicians and poets: it is an active subject, but also a background in which man acts with his intellect.

As it happened at the beginning of Western philosophical thought, man questions again the relation between Man, God and the World, assigning to Nature different and often conflicting roles.

Christian religion urges scientists' conscience, pushing them to support the theory of Creationism and fixity of species: God created the world in a single moment and He provided it with immutable laws, so that individuals change, but not the species.

Nature is God's unalterable law and for it everything is what it is and does what it is ordered to do. It is the maker of things, of its own laws, wise even if it has never been instructed by anyone; it does not allow interruptions; it operates secretly; in all its activities it follows what is more profitable; [...] *it follows carefully and solely the habit* (LINNAEUS 1735, quoted in LA VERGATA 1979).

Universe is unique in a philosophical sense. The Almighty created it all in once. [...] *The organic kingdom could have gone through a sequence of parallel revolutions and could have continuously preserved that sort of unit that makes all species an everlasting whole, but destined to take on from time to time new forms and new ways of being* (BONNET 1764).

It seems that there is no step forward with regard to medieval thought, and yet, we can recognize a new element: the use of words like "individual" and "species". These subjects imposed themselves in Enlightenment thinking as separate identities. Thus, in addition to the fixity of the Linnaean system and Creationism, a new movement appears, that from Mutationism leads to the revolutionary theory of Evolutionism.

Nature is the system of laws provided by the Creator, in order that things could exist and living beings could endure. [...] *An individual, whatever the species it belongs to, is nothing without the universe; one hundred, one thousand individuals are nothing as well: species are the only beings in Nature; as perpetual, ancient and permanent as Nature; and to consider them in a more correct manner, we consider them no more as a collection or a succession of similar individuals, but as a whole, free from number, free from time; an everlasting whole, always exactly the same* (BUFFON 1749-89).

Matter is eternal and necessary, but its combinations and its forms are transient and contingent; and is man other than combined matter, whose form always varies? [...] *Existence is essential to the universe, or to the total assemblage of essentially varied matter, that presents itself to our view, but then the combinations and the forms are not essential to it. This granted, although the matter which composes our earth has always had its form and its actual properties* (HOLBACH 1770).

The so-called dead nature is bound by a continuous chain with the living nature; we see the inorganic elements combining themselves to produce various organized bodies [...] *given fixed definite conditions, the lifeless matter is able to organize itself, to live, to feel sensations* (CABANIS 1802).

[...] *among its productions, Nature has actually formed neither classes, orders, families, genera nor constant species, but only individuals who succeed one another and resemble those from which they sprung. Now these individuals belong to infinitely diversified races, which blend together every variety of form and degree of organization; and this is maintained by each individual without variation, as long as a cause of change acts upon them* (LAMARCK 1809).

The natural history has a principle that is peculiar to it and that it is favourably employed in several occasions: it is the principle of conditions of existence, generally called principle of final causes. As nothing could exist if it does not combine the conditions that make its existence possible, so the different parts of every being must coordinate themselves, so that the whole being becomes possible (CUVIER 1817).

[...] *the natural series of affinities will also represent the order in which the several species came into existence, each one having had for its immediate antitype a closely allied species existing at the time of its origin.* [...] *The extinction would be in most cases effected by a gradual dying-out, but in some instances there might have been a sudden destruction of a species of limited range. To discover how the extinct species have from time to time been replaced by new ones down to the very latest geological period, is the most difficult, and at the same time the most interesting problem in the natural history of the earth* (WALLACE 1855).

The structure of every organic being is related, in the most essential yet often hidden manner, to that of all the other organic beings, with which it comes into competition for food or residence, or from which it has to escape, or on which it preys. [...] *Owing to this struggle, variations* [...] *will tend to the preservation of such individuals, and will generally be inherited by the offspring* (DARWIN 1859).

With the theory of the evolution of species, the term "Nature" obtains a nearly absolute meaning and it becomes subject and place of action of the subject itself. Genetic variations of species and their transmissions occur in Nature, but Nature itself changes as in a mirrors game.

Even in a Twentieth century absorbed in science and technology, ideologies and religious dogma continue pulling the word "Nature" as a too short blanket, that uncovers the bareness of thought, more focused on man's uniqueness than on the extraordinary varieties of living beings on Earth.

What is worse, a trend to methodically apply rules of nature to individuals and social behaviour pushes its way in Western thought, looking for a consolatory mirror in Nature and a legitimating of human actions. Thus, psychoanalytical theories reduce behaviour to not enough repressed instincts, and socio-biological theories, whose axioms lead "nature" to a forced similarity to "culture". The philosophic ground becomes slippery, susceptible of racist and absolutist drifts.

The 1970s mark a new way of thinking about Nature. At first in United States and then in Europe, a new word makes its way in political and social language: "ecology". Those are the years of the unpleasant awakening from the damages caused by chemicals (as atomic bomb and massive use of pesticides) and of the birth of a collective awareness towards environmental problems. "Environmentalism", "Ecology", "Organic" echo in mass media as a mantra to prevent the destruction of the world. So the word "nature" is deprived of its meaning that vanishes in the whirl of neologisms.

The ecological revolution brings with it the allure of "Paradise lost", "Good savage", "Good and wise Nature", inheriting in this way the best (and the innocence) of Western thought.

The vast amount of scientific discoveries in biological and climatic fields reveals the weakness, variability and interrelationship of the ecosystems, turning the ecological revolution from *social phenomenon* into *politic strategy.*

Beyond ideologies and religions and in spite of the delusion of omnipotence, insinuated by technology, contemporary Man reveals himself part of a world in which everything is interrelated, every single action has its direct or indirect consequence on the environment that surrounds him.

Now "Nature", indulgent mother and fertile womb, reveals itself as a fragile creature to nurse and preserve. Violated but not corrupted, tamed but not subdued, it has been stripped of its primitive name to dress itself with new words, in a desperate attempt to draw man's attention to itself.

After leaving behind the Linnaean "law of nature" and "system of nature", contemporary Man now follows the "law of profit": "eco" and "bio" appear to be consolatory and absolving suffixes of consumer products and ideas to adopt. But they are also banners of an ecological and animal right movement that has in Peter Singer a lucid and resolute spokesman: the book "Animal Liberation", published in New York in 1975 and immediately translated all over the world, is still the manifesto of the defence of animals and the nature in its totality.

Through the denunciation of bloodcurdling and unnecessary experiments carried out on animals in American and European laboratories, Singer tells the world the cruelty and delusion of omnipotence of some scientists, with the connivance of public opinion's indifference and ignorance.

[...] *the overwhelming majority of humans takes an active part in, acquiesces in, and allows their taxes to pay for practices that require the sacrifice of the most important interests of members of other species in order to promote the most trivial interests of our own species* (SINGER 1975).

In order to make ethics *count* in social decisions, ethics has to take marketing strategies into *account*.

Indeed, the consumer society does not allow any sacrifices: a cosmetic product made without test against animals, or an eco-sustainable touristic resort are chosen on condition that they maintain their characteristics as suggested by market laws and trends.

Their ethical and ecological value is a variable to differ in market, it is also an alternative that, in order to be competitive, must rely on consumer's feeling towards the environment. Such sensibility, even in its various facets, peeps out in these years, extricating itself between compromises and sense of guilt, and from heroic standpoints to fashion fads.

From a philosophical point of view, however, something deeper than "eco-friendly" makes its way in the Man of the new millennium: a no more *anthropocentric* vision but an *ecocentric* one.

Man is not only aware of the seriousness of the consequences of his *artificial* actions, but also of the fact that his *natural* being positions itself not over but inside the world. Man realizes that he is no longer the landlord, but a guest in a little home, to share with the other living beings.

The planet is overpopulated, we have taken too much space, and we have penetrated too much into the order of things. We have upset too much the equilibrium, we have sentenced to extinction too many species. Technology and natural science have turned us from being ruled by nature to be the rulers of the nature. [...] *Are we not called now to an entirely new type of duty* [...] *to take responsibility for new generations and the condition of nature on Earth?* (JONAS 1993).

THE GUARDIAN MAN

"*Be fruitful and multiply, and fill the earth, and subdue it; and rule over the fish of the sea and over the birds of the sky and over every living thing that moves on earth."* [...] *And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moves upon the earth, and upon all the fish of the sea;* [...] *every living thing that moves on earth will be your food"* (quoted in "Genesis").

The Word of God.

Animals do not give thanks to God.

Western Man inherits from the Old Testament an anthropocentric conception and he is even more convinced that Nature is at his own service: the development itself of civilization goes through agriculture and breeding, that are, respectively, rule over plants and animals.

The tolerance and charity are human feelings assigned to man only. There are no feelings towards animals, that are also God's creatures , but as they are devoid of soul, they are just slightly more than objects, to use and abuse.

Besides, when the animal acquires the role of symbol, the Christian religion worsens animal's situation, from the tempter snake to sacrificial lamb. We have to wait for Saint Francis of Assisi so that *charity* and *love* towards all the creatures become values of Christian culture. Yet, the example of the Italian friar appears to be an isolated one, or at least, never assumed as a basis for the relationship between the Christian and the Animal.

Up until now, the Church shows an indifferent attitude or feeble blame towards the abuses of animals and the defence of the environment, continuing to focus its attention on Man, the only creature provided with soul.

This is just the heart of the matter: the *soul*. To have it means to have feeling such as love and sorrow.

If we accept that animals have a soul, we have to consider that by ill-treating animals we cause them pain, plus keeping mothers apart from their whelps causes them sorrow, killing them means to infringe a Commandment.

If animals do not have a soul, everything is easier for man, and so the interpretation of creatures' behaviours is twisted: love is lust, sorrow is rage, the perseverance is obstinacy, the determination to live is cruelty, and intelligence is automatism.

From "Genesis" to Hegel, through Aristotle and Descartes, Western thought relegates the world of animals to an intermediate role between vegetable and man's kingdom.

Animals are subjects with instinctive reactions, not with feelings: they can be utilized as plants.

Why is so obvious that man has power over these beings? Because man derives this power from the fact that he was made in God's own likeness. In what was he made in God's own likeness? In intelligence, in mind, in the spiritual life, in the fact that man understands the truth and distinguishes justice from injustice (SAINT AUGUSTINE OF HIPPO 418).

Saint Augustine, one of the Church Fathers and mainstay of Christian thought, draws on the "Genesis", considering as postulate the hierarchy among God's creatures: the plants at the bottom, then the animals and, at the top, Man, God's own image and likeness.

Another mainstay of Christian theology and sharing the same position on the matter, also strengthened by Aristotelian philosophy, is Saint Thomas of Aquino:

In the hierarchy of living beings, the less perfect ones are made for the more perfect ones [...] *the plants are ordinary made for animals; and animals are made for man* (THOMAS OF AQUINO 1269).

The Holy Scriptures are the foundation of Christian theology, whereas the Christian philosophy does not find a univocal pattern, and it forks fol-

lowing two currents of thought, the Platonic and the Aristotelian one, so that it enters two parallel roads about man's attitude towards animals. According to Plato, as animals have a soul, they have to be treated with the same respect as man, whereas in Aristotle animals, even though they show some behavioural analogies with humans (in particular with children, women and... slaves!) they are at the service of man, the male provided of word and intellect.

[Every animal exists] *for man, the domestic ones in order to use them and feed on them; the wild ones, if not all, most of them at least, in order to feed on them and use them for other needs, such as clothes or to manufacture tools. So, if nature does not make anything imperfect or useless, necessarily, nature made all animals for man* (ARISTOTLE Fourth century BC).

What a prodigy of thought, which is able to reverse its effects to justify its causes!

In Aristotelian logic, Man is not only the ruler of natural beings, but also a condition of their existence.

Through Man's necessity, Nature gives a reason to its own expressions, otherwise it could be condemned to imperfection.

A logical and ideological philosophy, such as Aristotle's, charmed the Church Fathers, as they aimed at justifying man's supremacy through God's laws and also laws of nature.

So, everything squares with anthropocentrism both in a philosophical and naturalistic perspective.

Science, opposed by Church for taking sides, is highly regarded by the Church itself, because it could give a rational explanation of what there is of irrational in religion, so it could turn *acts of faith* into *postulates*.

In the Eighteenth century, the study of animal anatomy and comparative anatomy reveals baffling analogies between man and animals. Yet, the debate is left open between, on the one hand, those who interpret animal's motions as consequences of willpower, and, on the other, those who see in them the effects of an automatism.

The greatest exponent of this theory is Descartes, who, in his "Discourse on method", does not hesitate to compare animals to automata, a mechanism, even if they are one of God's remarkable creations.

None of this will seem strange to those who know how many varieties of automata, or moving machines, human industry can make, by using only very few pieces in comparison with the huge number of bones, muscles, nerves, arteries, veins, and all the other parts in the body of each animal. They will look on this body as a machine, which, having been made by the hand of God, is incomparably better ordered and more inherently admirable in its movements than any of those which human beings could have invented. [...] *They would never be able to use words or other signs to make words as we do to declare our thoughts to others.* [...] *And one should not confuse words with natural movements which attest to the passions and can be imitated by machines as well as by animals, nor should one think, like some ancients, that animals talk, although we do not understand their language* (DESCARTES 1637).

Thus, it would not be wrong to believe that animals are only sophisticated machines, with numerous mechanical reactions, neither to think that, as they are devoid of language, will and reason, they diverge from human nature and they are similar to the nature of things.

When facing the unknown, Man reacts with *mystification* or with *delegitimization.*

Descartes' theory achieves widespread success in philosophical and scientific thought between the Seventeenth and the Eighteenth centuries, weaving the first notions of physiology and anatomy together with the atavist conviction that Man only is provided with *soul*. Soul once again, as an incomputable evidence of Man's superiority in comparison with the other creatures.

Nicolas Malebranche was one of those who joined the Cartesian current, strengthening the theory according to which animals do not feel pain because they are devoid of soul:

Finally, it stands to reason that [...] *asserting that beasts feel, rave, know, although their souls are physical, it means to assert something that it is not known at all, and that implies a plain contradiction* (MALEBRANCHE 1675).

As centuries pass by, the ticklish relationship between ideologies and sciences shows no signs of fading.

In Germany, between the Eighteenth and the Nineteenth centuries, philosophy and science establish a close fellowship, taking up topics like *ethics.*

To what extent could scientists have gone without hurting the religious feeling and the rising public opinion?

The proliferation of anatomy halls, where animals' bodies are dismembered while still alive, instils the doubt that science could be *cruel*. So, even Kant intervenes to put down this suspicion:

When the vivisectionists make use of a live animals for their experiments, this is undoubtedly cruel, even if it is made in sight of something good. It can be allowed that animals are considered as man's tools; but it is undoubtedly unacceptable to us that they are considered his game. [...] *To conclude, our duties towards animals are indirectly duties towards humanity* (KANT, posthumous).

With the logic of an ethical system based on reason, Kant weighs the *results* and *means* of human behaviour: he acquits, in this case, the use of ani-

mals, because the result meets the (scientific) reason. Kant justifies the respect for animals not on moral grounds, but as Man's logical consequence, who expresses his superiority also through the rational employment of the world that he guards wisely.

Nevertheless, the question of animals' soul is still a problem to solve.

Leibniz embraces part of the Cartesian theory about the ontological distance between humans and animals, but he acknowledges that animals have an even minimal ability to reason and he regards them provided with soul:

The souls and the substance-forms of other bodies are entirely different from intelligent souls which alone know their actions, and not only do not perish through natural means but indeed always retain the knowledge of what they are (LEIBNIZ 1686).

In Leibniz's thinking the presence of animals depends on their being God's creatures, but this does not imply neither their being rational, nor the self-knowledge that are both human prerogatives. The animal behaves *a posteriori*, reacting to stimulus from the surrounding environment; man behaves *a priori*, by using reason.

The question of human self-knowledge and animal ontological unawareness recurs in Hegel, another great German philosopher steeped in Aristotelian logic:

Thought is, indeed, essential to humanity. It is this that distinguishes us from the brutes. In sensations cognition and intellection; in our instincts and volitions, as far as they are truly human Thought is an invariable element. [...] *The animal completes soon its education: but this must not be considered as an advantage of nature for animal. Its growing up is strengthening quantitatively only.*
Man must make himself what he must be: he must gain everything by himself; just because he is spirit: he must shake his naturalness off (HEGEL 1826).

In his tireless aim towards the edification of the spirit, man deviates from his natural being.

What in European Idealism and Romanticism seems a yearning for an Infinite not so far to reach, Nihilism reveals it as an illusion.

Having left behind Nature, Man has formed himself as an artificial being, in perpetual and agonizing search of the Absolute.

The haughtiness, derived from the conscience of his own rationality, caused him the expulsion from the Garden of Eden.

The same haughtiness, thrilled by Idealism, led him far from Nature.

Now Man is hanging in the nowhere land of mind, too proud to turn back and embrace again the world which received him, too narrow to reach the Infinite.

What is left is the illusion of living in a world created to satisfy man's needs that he has the moral duty to respect, in virtue of his *ratio* and of the *gratia* received from God.

As a benign guardian, a shepherd of an animal herd, Man guards the creatures and the world, on behalf of himself and God.

This conception, as we have seen, is rooted in the Christian tradition and it expresses itself in philosophical and scientific forms, so that it makes one of the most important representatives of the Eighteenth century write:

Nature is the external throne of the magnificence of God; the man who contemplates it, studies it, rises by degrees to the interior throne of the omnipotence; made to worship the Creator, he rules on every creatures; [...] *he beautifies Nature itself, tills it, increases it and refines it* (BUFFON 1764).

The fervour and delusion of omnipotence of the Enlightenment man are followed by technological man's ones. The scientific discoveries, in particular in the biogenetic field, trigger in an influential part of public opinion the conviction that new millennium man is able to influence Life. As a Platonic *Demiurge*, the scientist creates in the laboratory the *presuppositions* of life, whose mechanisms and dynamics are revealed.

THE GUEST MAN

Man's disposition to elect himself guardian of the world, in virtue of his intellect and of his privileged position in the pyramid of living beings, has permeated Western history from its origin until the present day.

The above disposition is still the prevailing ideology indeed, successfully permeating politics and so becoming a powerful instrument.

By legitimating Man's predominant position over the other beings for biological, ethical and religious reasons, the development of a society that is strongly marked by the rule and the exploitation of natural resources is automatically promoted.

Capitalism itself has turned Nature into a consumer good: the soil as a huge garden or pasture for animals bred to be killed; the sea as a tank for fish to eat, or as a track for oil tankers, or as a dumping ground for waste material to hide; the sky as a gas tank, or as the outermost space to occupy with aeroplanes or electromagnetic waves.

Everything seems to exist *for* Man, everything can be consumed, in spite of the basic laws of Nature, for which *"nothing can either be created or destroyed, everything transforms itself"*.

Nevertheless, there is someone who made this law the basis for his way of thinking. As the prevailing ideology mentioned above, this current of thought has ancient origins, amid the fragments that eluded monastic censorship or arrived from the East.

The one who receives the inheritance of the way of thinking of great masters like Zoroaster and Pythagoras, spreading it with encyclopaedic expertise, is Plutarch, a Greek philosopher of the Second century BC. In some of his works he pleads animals' right to enjoy the same respect granted by humans to their fellow beings, in virtue of the rationality and the sensitivity that harbour in every living creature. Even admitting the absence of intelligence in animals, it would be still unjust, in Plutarch's opinion, to ill-treat or eat them.

Moreover, it would be more incredible thinking that the no-humans are devoid of intelligence and feelings, that are vital elements for existence and survival, in a world where life is subject to continual choices and strategies.

Nature does everything with some purpose and to some end, did not create the sentient creature merely to be sentient when something happens to it. No, for there are in the world many things friendly to it, many also hostile; and it could not survive for a moment if it had not learned to give the one sort a wide berth while freely mixing with the other. It is, to be sure, sensation that enables each creature to recognize both kinds. (PLUTARCH Second century BC).

Plutarch, by inheriting from Pythagoras and the Greek physicists the ability to observe in an unbiased manner, is ahead of his time, anticipating the principles of natural selection as consequence (or drive) of interaction between animals and the environment, and between species and individuals.

The consideration about ethical issues involving also the animal world, anticipated by Plutarch, is drown on by Erasmus of Rotterdam with new consequences.

Until then, Man has been described as a rational and virtuous being, but in the Dutch philosopher's pages he proves to be a different creature, exclusively for his cruelty:

There is no more dangerous beast for man than man himself. Animals, when fighting among themselves, fight with the weapons provided by nature.
We arm ourselves to ruin other men, using unnatural weapons, devised by a diabolical craftsmanship. Animals do not rage at other animals for any reason, but only because they are enraged by the hunger or because they feel hunted, or because they fear for their whelps [...] *animals know only single and very short fights. Insofar as a battle can be bloody, it comes to an end when one of the adversaries is wounded. Who has never heard about thousands of animals that wiped out one another? Still, men do this everywhere* (ERASMUS 1526).

He then continues with the historical explanation about the process that has driven Man to kill his fellow men:

Primitive man sometimes had to fight wild beasts. Surviving these onslaughts, men began to hunt animals and wear their shins and eat their carcasses, and they proceeded from the harmful beasts to the harmless ones. Man began to fight just them. [...] *He passed from wild beasts to harmless animals* [...] *and the tyranny of the gluttony was such that no animal was able to escape man's cruel hunting.* [...] *And by exterminating animals, man realized that killing his own kind did not require a great effort* (ERASMUS 1526).

The concept of Man as executioner and of animals as victims persists throughout the centuries, silent and firm as the sense of guilt, in addition to a much more cheering opinion according to which man is part of a natural system, at the same level as animals.

This is a way of thinking that brought together some Enlightenment intellectuals such as Voltaire, La Mettrie, Montaigne, Locke and Hume, and then philosophers like Nietzsche, as far as Nineteenth century English naturalists, whose most well-known and influential voice is Darwin.

Presumptuousness is our natural and primary disease. Man is the most calamitous and the weakest of all creatures, but at the same time he is the proudest. [...] *And because of this supposition he compares himself to God, he assumes the divine prerogative, he distinguishes himself from the crowd of other creatures, he shares out among animals, his brothers and fellows, and he assigns them that portion of faculty and strength as he pleases* (MONTAIGNE 1580).

Despite all the ways in which man is superior to the other animals, putting him in the same class as them is doing him a great honour. The fact is that up to a certain age he is more of an animal than they are, because he is born with less instinct. [...] *But, again, look at that dog and that child who have both lost their master on the highway: the child is crying and doesn't know which way to turn, whereas the dog will soon find its master, having been helped more by its sense of smell than the child was by his reason* (LA METTRIE 1747).

Brutes have memory. This faculty of lying up and retaining the ideas that are brought into the mind, several other animals seem to have to a great degree, as well as man. For to pass to other instances, birds learning of tunes, and the endeavors one may observe in them to hit the notes right, put it past doubt with me, that they have perception and retain ideas in their memories, and use them for patterns (LOCKE 1690).

Nothing shows more the force of habit in reconciling us to any phœnomenon, than this, that men are not astonish'd at the operations of their own reason, at the same time, that they admire the instinct of ani-

mals, and find a difficulty in explaining it, merely because it cannot be reduc'd to the very same principles. To consider the matter aright, reason is nothing but a wonderful and unintelligible instinct in our souls [...] *there is evidently the same relation of ideas, and deriv'd from the same causes, in the minds of animals as in those of men* (HUME 1739).

The lower animals, like man, manifestly feel pleasure and pain, happiness and misery. Happiness is never better exhibited than by young animals, such as puppies, kittens, lambs, &c., when playing together, like our own children (DARWIN 1871).

The acknowledgement animals' *sensitivity*, *intelligence* and, first of all, the same fundamental nature as in man, triggers the debate about animals rights.

One of the most fervent champions of this theory is Jean-Jacques Rousseau:

Thus, the disputations on animals' participation in the natural law comes to an end; since animals take part in the natural law, it follows that they should also take part in the natural right and that man should have some duties towards them, as they share in some way our nature (ROUSSEAU 1754).

What was indicated as s*oul* in debates until the Seventeenth century, in the Eighteenth century, by a laic trend, it is called *sensitivity*, and it explains not an ontological characteristic but a faculty that is common to other creatures.

At this point, it remains to consider the possibility of including also animals in the ethical and normative position, and to allow them, as the civilized community, to enjoy the same rights. The fresh wind that blows on European Enlightenment, from the stern Switzerland to the vivacious France, also involves England, where even ethics becomes a science: Jeremy Bentham, philosopher and economist, auspicates the improvement of human social condition also by means of the acknowledgement of animals' dignity.

The day will come when the animals of creation will acquire those rights which the hand of tyranny took away from them (BENTHAM 1789).

One hundred years later, the respect for animals is still a hoary problem, due to the influence of Christian anthropocentrism, as Schopenhauer reveals:

Christianity's fundamental and absolutely inexplicable error [...] *is that it has separated, against nature, man from the world of animals to which he essentially belongs, by giving importance to man only and even regarding animals as things* [...] *unfortunately the consequence of this way of thinking makes them heard until now.* [...] *So now, to protect animals from the rough and indifferent crowd* [...] *some societies in defence of animals are being formed all over Europe and America* (SCHOPENHAUER 1851).

The protection of animals remains an open question, from Pythagoras to Schopenhauer, until the present day.

As it often happens, a social and political *modus operandi* is hidden by what could be a pure intellectual debate, and in this case the issue at stake is not so much animals themselves, but the modality of the relation between them and man, with various consequences: cultural of course, but also economical, as the weight of breeding, exploitation and consumption of animals for human society shows.

Therefore the matter is not of little account: the "management" of animals by Man implies the analysis of society itself.

In the mirrors room of history, Man sees the conditions of social minorities reflected in those of animals' majorities:

The present condition of the more highly organized domestic animals is in many ways very analogous to that of the negro slaves of a hundred years ago: look back, and you will find in their case precisely the same exclusion from the common pale of humanity; the same hypocritical fallacies, to justify that exclusion [...] *If "rights" exist at all they cannot be consistently awarded to men and denied to animals, since the same sense of justice and compassion apply in both cases* (SALT 1892).

The considerations above were by Henry Stephen Salt, one of the first English environmentalists, champion of "Animals Rights". So, the challenge for Man is to place himself not *above* the others but *with* them, by widening the action field of civil rights and ethics.

In the same contemporary current of thought also features Tom Regan, a valiant advocate of animals rights with a perspective which is not only environmentalist but also has a wider social meaning, assigning to animals the same inclination to satisfy their preferences and needs.

We share with animals a set of biological, social, and psychological interests. As we are benefited to extent that we have increased opportunities to satisfy these interests harmoniously, so, too, they are (REGAN 1983).

WHEN MAN LOOKED FOR HIS PLACE IN NATURE

The question of questions for mankind - the problem which underlines all others, and is more deeply interesting than any other - is the ascertainment of the place which Man occupies in nature and of his relations to the universe of things. [...] *But, in every age, one or the restless spirits, blessed with that constructive genius, which can only build on a secure foundation, or cursed with the mere spirit of scepticism, are*

unable to follow in the well-worn and comfortable track of their forefathers and contemporaries, and unmindful of thorns and stumbling-blocks, stricken out into paths of their own. [...] *History shows that the human mind, fed by constant accessions of knowledge, periodically grows too large for its theoretical coverings, and bursts them asunder to appear in new habiliments, as the feeding and growing grub, at intervals, casts its too narrow skin and assumes another, itself temporary* (HUXLEY 1863).

With these words Thomas Henry Huxley opens his book "Evidence as to Man's Place in Nature", an essay mainly well-known for the attitude in favour of Darwin's theory of natural selection. This essay is not an appendix of "The Origin of the Species", but an essay of a remarkable scientific, cultural and even philosophical value.

Huxley's acceptance of the Darwinian theory is not a mere one, but an attitude opened to the one he considers the most plausible theory of the origin of the species in his own time.

"On the Origin of the Species" by Charles Darwin, was published in 1859 and it soon stirred up a hornets' nest in Victorian England but, at the same time, was highly appreciated in a large part of the European scientific community.

The theory, today universally well-known, is full of intuitions that recent genetics and paleontological discoveries have bolstered.

Yet, the germ of the great scientific and cultural revolution is only mentioned in "On the Origin of the Species", to bloom with all its upsetting energy in "The Descent of Man and Selection in Relation to Sex": the descent of human race from the group of Primates, by analyzing physiological and instinctive analogies between man and apes.

In his autobiography, Darwin justifies the lapse of time between the first publication of his theory and the studies he carried out to deepen his research concerning human race, as follows:

My Descent of Man was published in Feb. 1871. As soon as I had become, in the year 1837 or 1838, convinced that species were mutable productions, I could not avoid the belief that man must come under the same law. [...] *It would have been useless and injurious to the success of the book to have paraded without giving any evidence my conviction with respect to his origin* (DARWIN 1887).

Thanks to his caution and editorial nose, Darwin fragments his wide and complex scientific framework in many essays, thus nourishing for years the debate between Creationism and Evolutionism.

In Darwin, Man is not the subject of scientific research, but one of the numerous natural elements to investigate and understand.

No other explanation has ever been given of the marvelous fact that the embryos of a man, dog, seal, bat, reptile, etc., can at first hardly be distinguished from each other. In order to understand the existence of rudimentary organs, we have only to suppose that a former progenitor possessed the parts in question in a perfect state, and that under changed habits of life they became greatly reduced, either from simple disuse, or through the natural selection of those individuals which were least encumbered with a superfluous part, aided by the other means previously indicated. Thus we can understand how it has come to pass that man and all other vertebrate animals have been constructed on the same general model, why they pass through the same early stages of development, and why they retain certain rudiments in common (DARWIN 1871).

Then Darwin adds to it, passing from common morphological analogies between man and animal, to moral implications:

There is no fundamental difference between man and the higher mammals in their mental faculties. [...] *As man possesses the same senses as the lower animals, his fundamental intuitions must be the same. Man has also some few instincts in common, as that of self-preservation, sexual love, the love of the mother for her new-born offspring, the desire possessed by the latter to suck, and so forth* (DARWIN 1871).

The theme of man and animals' mental faculty, instinct and sensitive sphere is further studied in detail in "The expression of the emotions in man and animals". Darwin states that he began to draft some notes about the theme in 1839, when his first child was born.

The observations by a loving father take turns with the ones by the sharp scientist, thus developing the theory according to which animals and men have in common some important analogies in the expression of emotions and feelings.

Darwin's theory includes both man and animals, from the more similar ones, like Primates, to the simplest vertebrates, in an evolutive scale that has nothing in common with the Christian hierarchy, but it answers the natural law of evolution and selection in relation to sex.

From his country house in Dawn, Darwin replies to the lively discussions in academic circles generated by his theory of evolution of species with revised and updated editions of his main essays and other less-known works but of great value in the biology field.

On the other hand, the scientist who was never tired of delivering public speeches about the theory of evolution of species was the aforementioned Thomas H. Huxley.

Darwin writes about him:

His mind is as quick as a flash of lightning and as sharp as a razor. He is the best talker whom I have known. [...] *He has been the mainstay in England of*

the principle of the gradual evolution of organic beings (DARWIN 1887).

If the theories by the prudent Darwin are still well-know it is also due to the contribution by the witty and persevering Huxley. He spent all his life in paleontological, biological and geological studies, animated by an open attitude towards new theories, since he was convinced that, as a living being on Earth, human way of thinking evolves, and therefore every theory is born and develops in a particular historical context and only its persistence in time can confirm its possible reliability.

This way of thinking is not a relativism, but an approach that Huxley himself calls *"agnosticism"*. With this term the English scientist wants to denote an open-minded attitude and the constant search for truth. In Huxley's *agnosticism* we can hear the Socratic echo of "I know nothing except the fact of my ignorance": the awareness of one's ignorance with regard to the vastness of the universe becomes a spur to open oneself to other theories, without accepting them in an uncritical way, considering them as steps of the long way towards knowledge.

Huxley rehabilitates the ancient wisdom of Greek physicists and Pythagoras, placing Man back in Nature but not inside a hierarchical system of theological taste. Huxley places Man in the Linnaean System of Nature, of which he acknowledges the intuition of Man's position in the Primates order.

It is as nature herself had foreseen the arrogance of man and with roman severity had provided that the intellect, by its very triumphs, should call into prominence the slaves, admonishing the conqueror that is but dust (HUXLEY 1863).

In Huxley's passages we can find both Montaigne's blame for human arrogance and the Linnaean idea about a Nature that regulates the dynamics among living beings. And we read about a man of great intelligence who trusts in a Nature that, as a benign mother, cools down her son's arrogant behaviour towards his own brothers. Finally, a paradoxical but not unusual reference in Huxley's laic thought to the Christian warning: "for you were made from dust, and to dust you will return" (Genesis).

Huxley's bright dialectical game uses the same Christian thought that contributed to generate man's feeling of superiority over the other creatures, and that shows the other side of the coin: Man is God's dearest creature indeed, but he holds in his corporeity the same destiny as lowest animals. Huxley's laicism, combined with a profound knowledge of the human being as *species* and as *individual*, searches unceasingly and firmly for Man's place in Nature and what it finds is not a *position* but a *condition for existence* that gives back to Man his own specificity and at the same time the genetic membership inside the natural system.

Thus, after the journey from the ancient Greek colonies to Christian Basilicas, from the then newly discovered lands to European Academies, Man has always looked for a place where he could live and feel at home.

And now he has found his home: in Nature.

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BIBLIOGRAPHY OF QUOTATIONS

ABBAGNANO N, 1993 – Storia della Filosofia. *UTET*, Torino.

AUGUSTINUS AURELIUS HIPPONENSIS, 413-418 – Epistolam Ioannis ad Parthos. In: MANDURINI G. (ed), 2000, Meditazioni sulla Lettera dell'amore di san Giovanni. *Città nuova*, Roma.

ARISTOTELE, IV sec. a.C. – Parti degli animali. In: VEGETTI M. & LANZA D. (ed), 1973, Opere, vol. V, *Laterza*, Bari.

ARISTOTELE, IV sec. a.C. – De Politica. In: GIANNANTONI G. & LAURENTI R. (ed), 1983, Politica, Opere vol. 9, *Laterza*, Bari.

BENTHAM J., 1789 – Introduction to the principles of morals and legislation. *Clarendon Press*, Oxford.

BONNET C., 1764 – La palingénésie philosophique. Lyon.

BRIZIO A.M., 1952 – Leonardo, scritti scelti. *UTET*, Torino.

BRUNO G., 1591 – Summa terminorum metaphysicorum. Zürich.

BRUNO G., 1591 – De immenso et innumerabilibus. Frankfurt.

BUFFON G.L. DE, 1749-89 – Histoire naturelle, générale et particulière, vol XII e XIII. *De L'Imprimerie Royale*, Paris.

CABANIS P-J. G., 1802 – Rapports du physique et du moral de l'homme. *Bailliere*, Paris.

CUVIER G, 1817 – Le règne animal distribué d'après son organisation. *Belin*, Paris.

DARWIN C., 1887 – The Autobiography of Charles Darwin 1809-1882. *Murray*, London.

DARWIN C., 1859 – On the origin of the species, or preservation of favoured races in the struggle for life. *Murray*, London.

DARWIN C., 1871 – The Descent of Man and Selection in Relation to Sex. *Murray*, London.

DARWIN C., 1871 The expression of the emotions in man and animals. *Murray*, London.

DESCARTES R, 1637 – Discours de la méthode. *Jan Maire*, Leyde.

ERASMUS D., 1526 – Dulce bellum inexpertis. *Manutius*, Venice.

GALILEI G., 1623 – Il Saggiatore. *Accademia dei Lincei*, Roma.

HEGEL G., 1826 – Vorlesungen über die Geschichte der Philosophie. *Duncker & Humblot*, Berlin.

HOLBACH P. H. D. DE, 1770 – Système de la nature. London.

HUME D. 1739 – Treatise of Human Nature. London.

HUXLEY T. H., 1863 – Evidence as to Man's Place in Nature. *Williams & Norgate*, London.

JONAS H., 1993 – Dem bösen Ende näher: Gespräche über das Verhältnis des Menschen zur Natur. *Suhrkamp*, Frankfurt.
KANT I., 1924 (posthumous) – Vorlesungen über Ethik. *Pan Verlag R. Heise*, Berlin.
LA METTRIE J. O. DE, 1747 (1960) – L'Homme machine. *Vartanian*, Princeton. In: MORAVIA S., 1974, Opere filosofiche. *Laterza*, Bari.
LAMARCK J.B.M.DE, 1809 – Philosophie zoologique. Paris.
LAMI A., 1991 – I presocratici: Testimonianze e frammenti da Talete a Empedocle. *Rizzoli*, Milano.
LA VERGATA A., 1979 – L'evoluzione biologica: da Linneo a Darwin. *Loescher*, Torino.
LEIBNIZ G. W., 1686 (1907) – Discours de métaphysique. *Henri Lestrienne*, Paris.
LOCKE J., 1690 (1894) – An Essay Concerning Human Understanding. *Campbell Fraser*, Oxford.
MONTAIGNE M.E. DE, 1580 – Apologie de Reymond Sebond in Essais. *Paris*.
PLUTARCH, 2nd century BC. – De sollertia animalium.
REGAN T., 1983 – The case for Animals Right. *University of California Press*, Berkeley.
ROUSSEAU J-J., 1754 – Discours sur l'origine de l'inégalité. In : BERNARDI B. & BACHOFEN B. (eds), 1995, Discours sur l'origine de l'inégalité. *Flammarion* , Paris.
SALT H. S., 1892 – Animal's Right considered in relation to Social Progress. *Centaur Press*, New York. In: REGAN T. & SINGER P., Animal rights and human obligations. *Englewood Cliffs*, New York.
SAVOCA G., 1995 – Genesi. *Edizioni Paoline*, Novara.
SCHOPENHAUER A. 1851 – Parerga und Paralipomena. *Druck und Verlag von A. W. Hayn*, Berlin.
SINGER P., 1975/1990 – Animal Liberation. *Cape*, London.
SPINOZA B. DE, 1677(posthumous) – Ethica ordine geometrico demonstrata.
TOMMASO D'AQUINO, 1265-74 – Summa Theologiae.
WALLACE A. R., 1855 – On the law which has regulated the Introduction of New Species. *Annals and Magazine of Natural History*. *Taylor & Francis*, London.

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