Economy and Environment

Last centuries have been vertiginous in regard to the understanding of our planet: heliocentrism in the sixteenth century; the perception of the historicity of the Earth and life in the eighteenth and nineteenth centuries; the theory of the origin of the universe around 13,700 million years ago; the discovery of numerous planetary systems; etc. All this has implied a change in the vision of the dimensions and structure of the planet and its biosphere: the Earth appears as finite, small, dynamic and fragile. And it is precisely the latter that most disturbs our conscience as a human species during the last decades. In effect, we are aware of the critical situation in which we find ourselves. Due to human action, deep change phenomena are taking place: the sixth mass extinction of species, the alteration of the Earth's crust and climate, the pollution of the oceans. Geologists have coined a name to designate this new age: the Anthropocene. Such is the global nature of the anthropic impact on the planet that is already leaving its footprints not only in its biosphere but also in its physical dimensions.

We are, then, inhabiting the Anthropocene. Gradually, the awareness of the Earth's finitude is impregnating the perception of all its residents, generally starting from tangible issues that start to affect them. For its part, the various sciences related to the use of the planet are taking note of the problem. The same is also happening with Economics. The objective of this issue of *Cultura Económica* is to present some articles to enrich the debate in this field.

Alicia Bugallo, pioneer in Argentina in the field of the Philosophy of Ecology, offers a synthetic vision of the history of thought in the environmental field. She notes that the principles proposed by Jonas can be constituted as propositions for the ecological reason: "work in such a way that the effects of your actions are compatible with the permanence of an authentic human life on Earth"; or, in its negative version: "work in such a way that the effects of your action are not destructive to the future possibility of an authentic human life on Earth". Ecological Philosophy draws attention to the protection of *base-resources* for an indefinite future. It is not only about satisfying the individual needs of current and future generations, but about being responsible for a system, a global good that is indivisible, not individually distributable, as it is the biosphere system that sustains all life.

It is interesting to note that the proposed analysis allows to create a bridge to economists' cultural habits, tending to focus their studies mainly on incentives or material economic returns. Indeed, the difficulty of transitioning from the mental picture of an economist to an environmentalist or citizen with legitimate concerns for the environment needs the intermediation of the knowledge of what is actually happening on the planet; of a history of philosophical and ecological thought, as well as a theorization economically valid to those who have to obtain development for specific populations. What emerges from this is that, without natural sciences, without a philosophy of technology and development and without the elaboration of an environmental ethic that integrates human development, there is little chance for economists to open their minds to the real sustainability problem.

Javier Souza Casadinho, researcher and professor at UBA, postulates that agroecology is "a civilizational paradigm, much more holistic and with greater conceptual and practical depth than a mode of agricultural production, both to replace pesticides, especially the highly dangerous ones, as to recreate viable and sustainable productive systems towards the attainment of food sovereignty". This statement, based on years of monitoring Argentine agricultural practices, may be conflicting with the current productive model in the country, a model on which Argentine economy currently depends on. However, the production of transgenic soy and corn did not solve the problem of

access to food in our country. On the other hand, the use of agrochemicals intrinsically linked to GMOs is producing a significant ecological damage, as well as oncological diseases on human populations.

Is agroecology a valuable method in terms of production and ecology? The answer, for the author, is positive. He even points out that the model offers several advantages regarding productive, biological, social, political, and spiritual dimensions. On the other hand, he stresses that the prevailing transgenic model is clearly showing its limitations and its long-term infeasibility. The ultimate question that emerges is about the possible scale of the agroecological paradigm. Critiques come, in large part, from voices that maintain the impossibility of generalizing the model. However, the dimensions of pollution with agrochemicals and environmental damage in producing countries are noting that there would be no alternative to the agroecological model, which —it is worth clarifying— it does not consist of a return to preindustrial agriculture, but an ecologically sustainable way of producing food.

Guillermo L. Covernton addresses environmental debate in relation to possible economic systems, considering different positions. His central thesis is that it is a dynamic problem that only finds a solution –fragile, but possible– within the framework of a market economy supported by its institutions. He speaks of a "free market ecology". The other solutions are even more imperfect than this one, since they rest on less responsible powers such as the bureaucratic system or the political officials themselves, less apt than it is usually thought about their responsibility for the common good. Statist alternatives are even less reliable with regard to control over the environment. The contribution of the article lies in clearly putting the issue as an object of economic debate, noting its internal dynamism. However, his idea of a "free market ecology" leaves the impression of not sufficiently considering the seriousness of the problem that scientific diagnoses present. In particular, it is not clear about the imperative requirement for

economic thought to seriously consider the finitude of the planet. that is, the existence of biological and physical limits, which implies the need to integrate in the economic equation not only human factors –company, institutions, profits, etc. –, but also that of the probable dismantling of nature. A more explicit treatment of what is usually called "natural resources" in economic thought is owed. They have their own entity and, as perceived in the biosphere of the Earth, their ostensible limits. The challenge for economic thought seems, therefore, to integrate such finititude within their diagnoses and their development models.

Precisely this is the tone of the encyclical *Laudato Si'* by Pope Francis, devoted to promoting a social, economic and political thought that would massively addresses the situation of "our common home". The encyclical, based on data from Natural Sciences, carries out a diagnosis of the effects on the environment from human beings' cultural options, who are truly responsible for the situation. In this way, voracious consumerism is presented as a destructive tendency that is at the base of the ecological crisis. The document is quite critical of extreme consumption as the root that infuses the concrete characteristics of human economic activity, powered by technology. The latter is evaluated in a positive way, as regards its capacity to improve human life; nevertheless, it is treated in a critical way when it becomes an instrument for overflowing consumerism and when it is perceived as the only possible way to solve the environmental crisis. Technocracy, then, would not leave room for an ethical reflection on the meaning that should be given to technology. In the present issue of the journal, it is published a commentary on specific aspects of Laudato Si' in order to show the dimensions of recent Catholic Social Thought on the economic issue in terms of the environmental crisis.

The novelty of the environmental crisis requires thinking in a new way all forms of human interaction with the planet. Faced with the growing limits imposed by the environment -which is nothing else than the only common home, that is, the only territory of all human beings-economic thought must also be reformulated. Among other things, this implies the introduction of elements of analysis from Philosophy, Ethics and, obviously, the various sciences of the planet. As *Laudato Si'* highlights, the situation also demands the introduction of different systems of thought, coming from the heritage of people's wisdom, such as religions. In a particular way, the document promotes a dialogue between science and religion in order to think multidimensionally the serious problems of a planet in the path of an irreversible deterioration. The vitality of Economic Sciences seems to be related to the incorporation of analysis mechanisms of the Natural, and Philosophical Sciences, but also of means of human experiences such as those offered by religions.

For a Catholic University, which is structured not only from the field of natural and human disciplines but also from Theology, there is an intrinsic need to include, in a thematic or implicit way, the ultimate perspective of its worldview. There are several relevant elements in this field: the idea of a God creator; the vision of the Creation's purpose; the original place assigned to the human being along with the rest of the creatures with which he has made an evolutionary transit; an interaction between the living beings that, in their multiplicity of species, reflects something of the Trinitarian creator: the call to tend towards a new creation from the Easter event of Christ; etc. Theology can provide these supplements of meaning that help integrate an environmentally responsible vision to the current generation of believers who, from that horizon of understanding, can collaborate in the construction of a sustainable planet. On the other hand, far away rest Lynn White and other author's critiques about Judeo-Christian responsibility for the ecological disaster, based on the interpretation of Genesis' vocation of dominion assigned to the human being. No serious biblical exegesis of the various Christian confessions admits such a version today. There are important movements of Eco-theology and official statements in various churches in line with a clear configuration of commitment to caring for the planet.

In any case, the neutral space of debate is constituted by Philosophy and Environmental Bioethics. Any discipline of economic theory that intends to address in a comprehensive manner the productive matters that directly or indirectly comprise the environmental problem, must interact with them. In fact, given the magnitude of the ecological crisis, no approach from the Economic Sciences seems plausible without a serious dialogue with such disciplines.

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