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**For an Economic Internalization
of Environmental Needs**

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For an Economic Internalization of Environmental Needs

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ABSTRACT

The reference point for any type of scientific and technological application is and remains respect for man, which must be accompanied by a necessary respect for all other living creatures. There is no doubt that nature and the environment represent a living creature. What today is viewed as the modern era has initiated a growing potential for environmental transformation. The acquisition and exploitation of resources has today become so invasive as to threaten the sustainable capacity of the environment, which has become irreversibly transformed from a common home into a mere resource for indiscriminate exploitation, especially through technology. Man must not abuse or deal arbitrarily with the earth, subjugating it completely to his will as if he did not know that the earth came first and man, though its immature ruler, is its guest. This tendency to recklessly and shamefully exploit resources is the result of a centuries-long historical and cultural process.

Il punto di riferimento per qualsiasi tipo di applicazione scientifica e tecnologica è e rimane il rispetto per l'uomo, che deve essere accompagnato da un rispetto necessario per tutte le altre creature viventi. Non c'è dubbio che la natura e l'ambiente rappresentino una creatura vivente. Ciò che oggi è visto come l'era moderna ha iniziato un potenziale crescente per la trasformazione ambientale. L'acquisizione e lo sfruttamento delle risorse sono oggi diventati così invasivi da minacciare la capacità sostenibile dell'ambiente, che si è trasformata irreversibilmente da una casa comune in una semplice risorsa per lo sfruttamento indiscriminato, soprattutto attraverso la tecnologia. L'uomo non deve abusare o occuparsi arbitrariamente della terra, soggiogandola completamente alla sua volontà come se non sapesse che la terra venne prima e che l'uomo, sebbene il suo sovrano immaturo, ne sia ospite. Questa tendenza a sfruttare incautamente e vergognosamente le risorse è il risultato di un processo storico e culturale secolare.

Keywords: respect for living creatures, environmental transformations, risks of modernity for environment, consumption of natural capital

1 – Introduction

There can be no design that entails a significant and revitalizing educational and cultural process without a complete rectification of the vision man and his economic-social and political constructs have of the environment. Man's relationship with the world and his environment is to some extent a key element of his human identity. As the Bible teaches us, this relationship arises from the even deeper relationship of man with God (cf. The Bible, Gen.

2.15). Man – whether we consider him a creature of God or not – governs the world by subjecting the earth and all it contains to his own desires, which implies important responsibilities with respect to himself and/or his Creator.

No one, not even the most steadfast exponents of the various religious denominations, would dream of arguing that the results of science and technology do not represent, as such, positive outcomes. In fact, science and technology represent a precious instrument for solving serious problems such as disease and hunger both through medicine and the production of plants resistant to harmful micro-organisms. However, the potential of science and technology is usually not neutral, and therefore it can be used for positive ends and the progress of man as well as for the degradation of both man and his environment.

The reference point for any type of scientific and technological application is and remains respect for man, which must be accompanied by a necessary respect for all other living creatures. There is no doubt that nature and the environment represent a living creature. John Paul II expressed this sentiment in his Encyclical titled *Sollicitudo Rei Socialis* 34 – 1988).

Man must not abuse or deal arbitrarily with the earth, subjugating it completely to his will as if he did not know that the earth came first and man, though its immature ruler, is its guest. This tendency to recklessly and shamefully exploit resources is the result of a centuries-long historical and cultural process. What today is viewed as the modern era has initiated a growing potential for environmental transformation. The acquisition and exploitation of resources has today become so invasive as to threaten the sustainable capacity of the environment, which has become irreversibly transformed from a common home into a mere resource for indiscriminate exploitation, especially through technology (Mella, 2014, Sect. 7). Other religious guidelines should be adequately taken into account. For the Islamic religion, for example, “It is mandatory to recycle water, share transport, prefer food and zero-mile products, print the Koran on recycled paper, install photovoltaic panels on mosques” (Adnkronos, 2015, online; For a broader view, see: www.focus.it/ambiente/ecologia/tutte-le-religioni-a-difesa-del-creato-ma-e-l-islam-e-la-piu-green; www.adiscuola.it/beyondthebarriers/wp-content/uploads/2017/02/La-tutela-dellambiente-nelle-religioni-1.pdf).

2 – The need for the awareness that resources and energy are limited

Nevertheless, technology and science bear little responsibility; instead, it is today’s mentality which is the cause of such disasters. We have started from the assumption that there exists an unlimited amount of energy and resources available and that their regeneration was entirely possible mechanically in the short term. Therefore, the natural world and the environment have been interpreted mechanically, and economic development in an extremely consumerist manner, resulting in the mayhem we are all aware of. Previous works (Rangone E. 2005) have presented the basic concept of globalization and considered different aspects this phenomenon has produced. Some of these are: the concentration of wealth in the hands of a small group of entrepreneurs; the loss of power of the national state; the absolute mobility of capital not always followed by equal mobility in the labor force; the birth and development of power and pressure groups outside of the traditional state; the need for an economic, sociological and human culture that can keep pace with present-day modernity; the need to examine the risks modernity brings, which, according to Giddens, are not only the traditional *External Risks* but also those caused by the impact our awareness of manipulation has on *Manufacture Risk*. The age of globalization for the economy, politics and culture cannot neglect the problem of the environment and of ecological sustainability in today’s model of development.

“The ecological problems the world is facing represents a challenge at least as great as that presented by global inequalities” (Giddens A. 2000).

For a long, perhaps too long, time we have assumed that economic development and the effective management of the environment were issues that were diametrically opposed and incompatible. Too often the introduction and application of environmental standards in production processes has been viewed as a tax on firms, with the complaint that this leads to increased costs and the loss of competitiveness in international markets.

Despite the presence of danger signs, traditional economics has only marginally dealt with this issue, at times ignoring it, sometimes only minimally facing it, and at times seeing recurring technological innovation as the panacea for solving the problem of economic growth: the overriding imperative of the free market. Even an old but respected veteran of international finance such as George Soros felt the need to question somewhat the academic position that still today staunchly defends the so-called *fundamentalism of the market* and places the ecological problem in the background (Soros G. 1998). Since history tells us that capitalism can exist and function under any political regime, even the less-democratic ones, it should come as no surprise that, in addition to the Western world, even the economic behavior of the ex-Soviet Union, China and India have created enormous pressure and tension on the environment.

3 – Economic calculations, financial statements and prospects for natural capital

Traditional economic calculations treat the consumption of renewable and non-renewable resources (so-called natural capital) as a good that contributes to wealth. The importance of achieving and increasing wealth is absolutely necessary under the market philosophy, since it is synonymous with economic wellbeing. If we consider the natural resource problem in terms of the cost-benefit relation, we see that in the rigid traditional accounting system the cutting down of a forest and its subsequent sale in the form of firewood, coal or finished furniture is analyzed and placed exclusively on the assets side of the balance sheet. There are no countervailing debit entries to take account of the destruction of natural capital or the environmental benefits the forest produced, such as soil stabilization, carbon dioxide absorption, or anything else that must and can be considered.

Soil, water and air are treated as semi-free goods – except when it is deemed economically opportune to delimit their possession – and their value in terms of scarcity is neither calculated nor evaluated. Instead, depleting minerals, fish stocks in uncontrolled national or international waters, and rare plant and animal species is considered a positive item in the balance sheet as well as encouraged through subsidies and incentives to producers in the interested sectors. In strictly corporate terms, taking into consideration such processes in accounting does not provide us with all the information we should be aware of. This type of balance sheet adopts the traditional form of analysis, which views the economy as operating independently of nature, almost as if it were an independent variable with respect to nature. We, however, are convinced that it is the exact opposite.

Paraphrasing the legal obligations private companies are under regarding the presentation for approval of the balance sheets, such documents do not respect the underlying supporting accounting documents: that is, they do not take into account the actual reality of corporations, thereby undermining the principles of reliability, clarity and transparency the shareholders are entitled to. In the case of the environment, which we are considering, everyone of us, the citizens of the world, are the shareholders, whatever our calling, nationalistic or cosmopolitan, and we must realize the urgency of achieving

adequate forms to control the impact globalization has on environmental needs. Let us recall the words Robert Kennedy spoke at the University of Kansas in 1968, several months before his assassination:

And this is one of the great tasks of leadership for us, as individuals and citizens this year. But even if we act to erase material poverty, there is another greater task, it is to confront the poverty of satisfaction - purpose and dignity - that afflicts us all. Too much and for too long, we seemed to have surrendered personal excellence and community values in the mere accumulation of material things. Our Gross National Product, now, is over \$800 billion dollars a year, but that Gross National Product - if we judge the United States of America by that - that Gross National Product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for the people who break them. It counts the destruction of the redwood and the loss of our natural wonder in chaotic sprawl. It counts napalm and counts nuclear warheads and armored cars for the police to fight the riots in our cities. It counts Whitman's rifle and Speck's knife, and the television programs which glorify violence in order to sell toys to our children. Yet the gross national product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile. And it can tell us everything about America except why we are proud that we are Americans. (Kennedy R. 1968)

We have seen that capitalism has an absolute obligation: growth. One of the first academics to speak of the distinction between growth and development was Schumpeter, for whom growth meant producing more while development meant producing and living in another manner. In advanced societies such as ours, there is a specific demand for a quality of life that cannot be satisfied through the production of more material goods and through traditional characteristics.

4 – Georgescu-Roegen and the entropic view of economic analysis

One of the most faithful disciples of Schumpeter was Georgescu-Roegen, who introduced into economic and social analysis important environmental and ecological observations. Georgescu-Roegen criticized neoclassical economic theory, proposing a reformulation – in thermodynamic and evolutionary biological terms – of the economic process and its relations with the environment and nature in general. In the early 1970s, he held that the economy must be analyzed in terms of potential and actual energy flows – entropy – that is, the energy that is utilized and therefore no longer available. Like other systems of physics, including the human body, the economy must be analyzed according to the second law of thermodynamics: entropy (Rifkin J. 2000).

This law has its own validity in economics since the economic system represents a subsystem of the natural world, and not the other way around. If the economy is considered as the main system and nature as a subsystem, then in order to examine economic phenomenology based on what Georgescu-Roegen terms the *mechanistic epistemology*, we undertake an operation that is surely artificial and dangerous.

Unlike how the neoclassical economists, Keynesian or Marxist, view the economic process, for Georgescu-Roegen it is not closed and self-sustaining, in that it cannot occur without an exchange that modifies the environment in its entirety, modifications that end up having repercussions as well on the entire process. This view of the economic process

represents a radical innovation in the economic literature, in the same way as the strongly innovative and sociologically relevant view of another economist: U. Beck, who proposes internalizing the environmental phenomenon in the study of the social sciences. Nothing more need be added apart from emphasizing that Georgescu-Roegen's theory, rejected for many years by mainstream economic doctrine, has today been rightfully reassessed given today's looming economic emergency.

While the hope is for the introduction of technologies capable of preserving our natural resources and/or providing a serious solution to the environmental problem, this task cannot be left solely to transnational companies, which characterize the era of globalization, or to science aligned with innovative technology, even when the latter embodies the most advanced biotechnologies, or to any other group.

5 – Some sociological considerations of the environmental problem

While waiting for the cosmopolitan view of the world to gain sway, several sociologists have underscored that nations and governments today cannot remain as bystanders and avoid assessing the so-called *external risks*, leaving such a colossal task in the hands of corporations.

One way of pragmatically evaluating risks, which also has the advantage of being associated with a response mechanism, is to address the problem in terms of responsibility. Who should find remedies if technological innovation produces harmful consequences? At the moment, risk and responsibility are mostly separated. For many ecological risks, we assume that the government is the ultimate guarantor.

A more effective approach would like innovators to be obliged by law to accept greater responsibility for what they do. Companies that produce and design genetically modified foods could be held responsible for the environmental or health damage they could cause, as to a limited extent it is already happening now. Since insurance companies are reluctant to cover a risk with so many unknowns, a curb on irresponsible practices would be placed.

More generally, however, we should try to democratize science and technology as part of the democratization project of democracy. We are not used to dealing with ecological issues under the heading of democracy because the problems related to science and technology are supposed to be solved by experts. The consequence of the increasingly pervasive influence of scientific and technological development on our lives, however, is that science cannot be left to scientists. Democratizing this development must be a qualifying policy commitment. This is a process that must happen at a transnational level as well as a more local one. However, the state can play an important role and this change can contribute to its restructuring. (Giddens, 2000, p. 133).

6 – Concluding considerations

Progress cannot occur without an internalization of the environmental problem in the systemic study of economics and without the systematic contribution of man as a promoter of a plan that contemplates a massive educational and cultural effort of renovation. To achieve these aspirations, we must decide to take on a sense of universal responsibility, identifying ourselves with the entire global community as well as with our national and local communities.

We are at the same time citizens of different countries and of a single world, where the local aspect of the latter comes to be confused with the global aspect. Being citizens of the world also means sharing the responsibility for the present and future wellbeing of man and the other forms of life. Living in the spirit of human solidarity and of the commonality of

interests with all life on our planet means beginning (or returning) to live with the necessary and fundamental reverence toward the mystery of our existence, aware with utmost humility of the place occupied by man on the global chessboard imposed by nature. In light of the above reasoning, we are obliged to support a new way of living, one with new or reconsidered human values, which will necessitate a reexamination of the behavior of both individuals and corporations, of both governments and present-day and (especially) future supranational institutions.

We will not get anywhere as long as we believe that the fish in international waters are free for the taking because the umpteenth restriction has not been enacted. Until, as pointed out at the summit in Turkey in March 2009, water remains a *necessity* and does not become a *right*, we cannot properly speak – as underscored by one of the representatives of the 155 participating countries – of the rights of man. How can we speak of the rights of man and not speak of the right of access to water? This is the main right that conditions all others, something we are firmly convinced of. As his Holiness Benedict XVI emphasized in his last Encyclical titled *Caritas in Veritate*:

It is therefore necessary to cultivate a public conscience that considers food and access to water as universal rights of all human beings, without distinction or discrimination.

Nevertheless, today we continue to perpetuate idealistic ‘enclosures’, one after the other, until finally arriving at that of human life, rather than lay bridges to bring together means, cultures, experiences, religions and ways of living.

Another passage from the above-mentioned Encyclical is significant:

In the list of areas where the pernicious effects of sin are evident, the economy has been included for some time now. We have a clear proof of this at the present time. The conviction that man is self-sufficient and can successfully eliminate the evil present in history by his own action alone has led him to confuse happiness and salvation with immanent forms of material prosperity and social action. Then, the conviction that the economy must be autonomous, that it must be shielded from “influences” of a moral character, has led man to abuse the economic process in a thoroughly destructive way (Enciclica *Caritas in Veritate*, del S.P. Benedetto XVI)

It is our duty as economic scholars, as individuals dealing with culture and research, but above all with all that pertains to mankind, to forcefully stress the need to change our focus if we want to avoid problems arising which, at that point, will have become unresolvable. Let the truth prevail!

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