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Economics and finance for an integral ecology

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What is happening to the earth, our common home, tells us that today the very survival of the human species is at stake, or at least the possibility of continuing a good quality life. The environmental crisis, which in these dimensions is unprecedented in human history, represents a radical change in living conditions. This suggests that we must make substantial changes to our collective approach. Experts have known this for a long time, but in recent months there has been a very rapid acceleration. The “Fridays for Future” movement and the thought and action of Pope Francis (*Laudato si'* and the movement that has arisen), have turned history on its head – Greta Thunberg’s speech at the United Nations Summit may be the most important political speech of the 21st century.

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That is why it is clear that companies must change their behaviors, not out of altruism or for the common good, but simply if they do not want to fail. The only real ruler of capitalism is the consumer with his preferences. This is a great fragility because in the end, if consumers change preferences together, companies can only change products quickly. We are already seeing it with plastic: only a few months ago it was still possible to hold conferences – perhaps on ethics and economics – with plastic bottles on the table in plain sight. Today it is no longer possible, because that visible bottle undermines any ethical discourse that is pronounced on that same chair. All this happened in a few months. In a few months this wave of epoch-making change will extend to many other products: from cars to airplanes – it is already clear that the aviation industry is undergoing a radical change. Businesses are sensing all this because by vocation, as Jevons pointed out at the end of the 19th century, the entrepreneur is a forerunner of market trends.

Economics

Problems inequalities

In a study undertaken by the International Monetary Fund (2013), regarding the disposable income in 109 countries, it is concluded that between 1990 and 2010 internal inequalities have grown among the so-called advanced countries (21 countries considered), in emerging European countries (21), in Asian countries (14) and in North-East African nations (12). The last report of the International Monetary Fund² confirmed the trend of growth in inequalities and at the level of countries it is noted that in advanced economies, the income of the richest 1% of the population, grows three times faster than the income of the rest of the population.

Muhammad Yunus, inventor of modern microcredit said in his latest book: The word inequality is inadequate to describe this situation, which is unsustainable and unacceptable. If you wanted to describe the difference between ants and elephants, you certainly would not use the term inequality!³

2 IMF Annual Report 2017: *Promoting Inclusive Growth* in <http://www.imf.org/external/pubs/ft/ar/2017/eng/index.htm>.

3 M. Yunus, *Un mondo a tre zeri. Come eliminare definitivamente povertà, disoccupazione e inquinamento*, Feltrinelli, Milano 2018, 53 (translation from Italian to English).

“When you get to the point where one person has a huge share of the wealth of a country, what can prevent that person from imposing his will on the whole nation? Implicitly or explicitly his wishes become law”, writes Yunus.⁴ Those left behind in what Angus Deaton calls “the great escape” from poverty has less and less possibilities: children who die today in Africa would not have died in France or the United States even 60 years ago.

Gender gap

Unfortunately, inequalities persist in the world even at the man-woman level. In the world, various reports are published on the situation of women in relation to men, about economic opportunities, rights, freedoms and equal opportunities. Equality of rights and opportunities between men and women has not yet been reached in many countries in the world. The gender gap report, published by the World Economic Forum⁵, measures the woman-man gap with respect to four domains: economic and employment opportunities, education, health and politics. In 2017, the global index, measured in 144 countries, stands at 68% (58% for the economy, 95% for education, 96% for health and 23% for political participation).

What explanations are given to this phenomenon? They are primarily cultural. For example, the World Values Survey, a global survey of values, which collects data all over the world year by year, has a series of questions that make it possible to derive attitudes towards women.

The questions, among others, are:

- When jobs are scarce, men should have more right to a job than women
- Being a housewife is just as fulfilling as working for pay
- A university education is more important for a boy than for a girl
- Men make better political leaders than women
- Men make better business executives than women

A synthesis measure is constructed, which is linked to the labour market participation, showing that in countries where there are more negative cultural

4 Ibidem, 3.

5 <https://www.weforum.org/reports/the-global-gender-gap-report-2017>.

attitudes towards women, they work less. Likewise, parity in the workplace is closely correlated with attitudes towards women in society.

We should try to take off our glasses that make us see the typically male economic rationality (instrumental, linked to incentives, meritocracy) as a rule, and start asking ourselves if the differences observed in behaviour can offer suggestions for alternative scenarios that would make the economy and more human, finance, because they are more representative of the whole human family.

A World without Work?

The World Economic Forum indicates that since 2015 the hourly cost of a robot equals that of a person. Faced with the rapid changes taking place, the proposals are to tax the robot or the added value of its contribution, to make the use of the person more convenient.

In reality, the idea that is emerging, of factories like empty boxes, with a lot of production and few workers, is quite forced. But even if the worst predictions were true, the narration of a nefarious future will not improve it, nor will it slow it down. Investment in technology, training and new work organization is essential to not stay out of the processes of change. The problem is not that the robots arrive (and they come if productivity increases), but it is like accompanying this process, and how to make sure that higher productivity does not become just extra-profits.

Compared to transformations in the world of work, according to OECD⁶ estimates over the next ten years, 9% of existing jobs will be completely replaced by robots, while 35% will undergo a transformation.

Roots

In its history and tradition, economic science has always struggled to understand sustainability, and we wonder why.

A first reason is the absence of the limit category. When, for example, indifference curves are constructed in microeconomics, which allow the choice

6 M. Arntz, T. Gregory, U. Zierahn, *The Risk of Automation for Jobs in OECD Countries: A Comparative Analysis*, "OECD Social, Employment and Migration Working Papers" No. 189, OECD Publishing, Paris 2016.

between different goods, one of the fundamental principles, a so-called axiom, is the principle of non-satiety.⁷ This principle postulates that, other things being equal, a consumer will always choose, between two, a basket with a greater quantity of goods. Having more is always better, this seems to suggest economic theory. It is clear that the hundredth pair of shoes will give me an additional usefulness much smaller than the second pair, and this is the principle of marginal utility that grows at decreasing rates, but a couple more is always better. In other words, the additional utility deriving from the consumption of an asset can never be negative. Which therefore means the absence of the limit, unless the limit is given by a budget constraint, that is, not having resources to be able to afford a pair of shoes more.

The principle of non-satiety is also accompanied by the utility maximization process: the goal of the consumer is to maximize its usefulness, the goal of the producer is to maximize the benefits and minimize costs. These logics make us understand how difficult it is to talk about limitations in economic terms, unless this limit does not become part of the constraints, but having a limit can never be a goal to be achieved. This also depended on the dominant culture in the eighteenth and nineteenth centuries, when the economy was born and developed, dominated by the absolute scarcity of goods and by a largely uninhabited land, and which seemed unlimited. Moving the frontier always forward appeared as the most natural goal of economic science.

Secondly, over time we have witnessed the eclipse of the Earth among the productive factors: in the first economic models the productive factors were given by land, capital and labour. Over time there have remained only capital and labour, and the earth has disappeared. From the only factor with a forgotten factor: this was the fate of the earth in modern economic science. And yet, as *Laudato si'* reminds us, if we do not see the earth we inevitably tend to outrage and destroy it.

Moreover, the mutual benefit, the basic principle of economic science, has been applied only to inter-human relations, but not with the earth or with other non-anthropocentric resources, with which the relationship was not conceived as reciprocity, but rather predatory. Market exchanges are made because they are mutually beneficial, because everyone has something to gain in the exchange. This is also why markets are so widespread, and can also be conceived

7 Other axioms are those of completeness, continuity and transitivity.

as great acts of human co-operation. The same principle, however, does not apply to the relationship with the earth, which in economic calculations is only exploited. In this sense, it is illuminated by a passage from *Laudato si'*:

The intervention of the human being on nature has always occurred, but for a long time had the characteristic of accompanying, to support the possibilities offered by the things themselves. It was a matter of receiving what the natural reality allows itself, as if holding out the hand. On the other hand, what interests us now is to extract everything that is possible from things through the imposition of the human hand, which tends to ignore or forget the very reality of what it has before it. This is why the human being and things have ceased to give each other a friendly hand, becoming instead of the contenders. From here it is easy to pass on to the idea of infinite or unlimited growth, which has impressed economists, theorists of finance and technology. This supposes the lie about the infinite availability of the planet's goods, which leads to "squeezing" it to the limit and beyond the limit. This is the false assumption that "there is an unlimited quantity of energy and usable means, that their immediate regeneration is possible and that the negative effects of the manipulations of nature can be easily absorbed."⁸

Finally, the paradigms that the economy has chosen have been the animal and the physics: not the vegetable one. The economic models have never taken the plant world as an example, which would have much to teach us. 99% of the terrestrial biomass is made from plants. It means that the animal kingdom remains less than 1% and therefore also for man. We are surrounded by the plant kingdom, which has been able to evolve and adapt so well as to populate almost the entire planet. But we know little, almost nothing of this kingdom. Also because it moves at a much lower speed than ours: often it is necessary to get sick or grow old, slow down, to match the life of the plants. Man has always been fascinated by the ability of plants to generate life: we sow a grain and get one hundred, a thousand. A capacity for life infinitely greater and more powerful than that of animals, which in their whole existence can generate few children. Plants, flowers and meadows have immense reproductive capacity.

When 500 million years ago evolution broke into plants and animals, plants decided to stay still. From this depends a lot, almost everything, of the

8 Francis, Enc. *Laudato si'*. *On care for our common home*, 14.05.2015, n. 86.

difference between animals and plants. Living in the same place, plants must learn to know the environment perfectly. They have over twenty senses, and not five like us, to be able to resist. They then had to learn to perform all our functions but without organs: plants feel, see, decide, but with their whole body. Faced with problems in the surrounding environment, animals can move, plants do not, and therefore they must find other solutions to survive. Their intelligence is widespread in every cell of plant organisms: a plant can lose 90% of its roots and body and be able to survive and communicate with others. Each end of a plant root can detect at least 15 different types of chemical and physical parameters. Sometimes a bud can also emerge from a cut trunk (as Isaiah well knew 11,1). The vulnerability and extreme softness of the plants have therefore produced a great resilience to crises. What does the plant world have to say about the economy?⁹

The undertakings of the past centuries have been structured on the animal model: a strong functional division of labour and a hierarchical order. This hierarchical-functional organization has allowed companies to run a lot, to move in search of opportunities, to react to stimuli and changes in environments, to become the most successful body in these decades of great “climate change”, especially if compared with the civil and political communities, much slower, more democratic, widespread, anchored to the territory.

The companies have been and are, the great winners of the evolutionary history of our fast time. At a certain point, however, at the turn of the second millennia, the environment of the human world has changed drastically with the arrival of the internet and networks, which are very similar to plants. The same metaphor of the web or web (web) reminds us very closely of the widespread life of plants, certainly not the organs and hierarchies of animals. And who today wants to move in this new environment, must breathe, listen, remember, talk with the whole body: like plants. It must therefore rethink and distort the rigid hierarchical structure.

Who today wants to survive and grow in the new economy is increasingly called to evolve by decentralizing and spreading all the functions (including entrepreneurial), renouncing a hierarchical control of all the processes and decisions, activating and empowering all the cells of the body. The animal economic model has not shown itself capable of sustainability, but, in general,

9 On these themes Cf. S. Mancuso, *Plant Revolution*, Giunti Editore, Firenze 2017.

has plundered the earth. We were not good guests of the earth: she let us in, opened her table and gave her fruit, but we did not respect her as she should. Will the capital of the third millennium be vegetal?

It has already been observed that by imitating certain plant organisms there would be cheaper and faster tools to explore the planets, or to build efficient communication networks. The plant world and its rate of innovation tells us that hierarchical organizations and subdivisions in organs are not very innovative. Innovation needs widespread knowledge, collective intelligence. The complexity of the current world could be read more easily by looking at the world of plants, which have been able to develop extremely complex networks. Perhaps 'sister plant' can give us new words to relearn to live in a land of which we are custodians – shomer – but not predators.

New Perspectives

An interesting contribution to the meeting between economy and limit, comes from India and Gandhi¹⁰, which has formulated, among the many reflections, some economic principles. His general rule was: the less is preferred to the most. Because, when possible, it is smarter to have less things, to empty out rather than to fill up, to use the essential and not the superfluous. Why do I have five assets if I need four? In Gandhian humanism, the most is not a sign of abundance but of waste, and therefore of irrationality, of stupidity. Thus it is expressed, in fact, in 1942:

“Man’s happiness really lies in contentment. He who is discontented, however much he possesses, become a slave to his desires. And there is really no slavery equal to that of desires... And what is true for the individual is true for society.”¹¹

But its first economic law, which also has a certain fascination for us, is exactly the opposite of the law that we have laid at the foundation of Western capitalism and its economic theory. The whole commercial and advertising system is based exactly on the insatiability of consumers. It is better to take three and pay two. Growth, GDP, and markets are the fruit and development of this simple axiom. By supporting these ideas, Gandhi does not intend

10 Cf. G. Salio, *Gandhi. Economia gandhiana e sviluppo sostenibile*, Edizioni Seb27, Torino 2000; and A. K. Dasgupta, *Gandhi's Economic Thought*, Routledge, New York 1996.

11 M. Gandhi, *Harijan* (1 February 1942, CW 73) 94.

to justify misery; on the contrary, he fights for the improvement of the conditions of the poorest. He says, though:

The only statement that has to be examined is whether it can be laid down as a law of universal application that material advancement means moral progress.¹²

For Gandhi, work, and in particular manual work, is very important: those who do not work with their own hands do not fully develop their own humanity. Some think that his thinking, emphasizing how the manual work, is somewhat backward. In reality I think this way of understanding work has a lot to say to us today. With the great division and specialization of work that we have witnessed over time, manual labour and care work have lost importance, but there is great wisdom, and Gandhi had understood it, in cultivating the work of their hands and the care of others: it makes us more human. According to him, everyone must try to look after himself, without being served, but at the same time caring for the little ones, the elderly and the disabled affects us all.¹³

Today a Canadian philosopher, Jennifer Nedelski, resumes in a certain sense the thought of Gandhi applying it to the transformations of the work we are witnessing. The future that is coming, as well as seeing technological revolutions and work automation, is also accompanied by an increase in the average age, with the consequent increase in care and assistance needs. Nedelski's proposal is to work all the less and to dedicate oneself to care activities. The hours freed from work could be returned to society in a different way: for the care of children, the elderly, the weak, in the family and in the neighbourhoods of reference, and for the cultivation of our relationships and our humanity.

This proposal is something different from the slogan "work less, work all": it is saying that work and care of oneself and of others are two co-essential dimensions of life and make us more human. I do not really know the character of a person until I look at her while working, at the same time I do not really know her heart and her degree of humanity, until I see her taking care of another person.

12 M. Gandhi, *Speech at Muir College Economic Society* (22 December 1916, CW 13) 312.

13 M. Gandhi, *Young India* (14 June 1928, CW 36) 400.

The proposal, for now only imaginary, which I highlighted in this speech, is certainly not obtainable in a short period, but it would be a necessary and desirable evolution towards a more mature society, where everyone can express themselves as people, in work and in care of himself and of others. In order for it to be a eutopia (good place) and not a utopia (not place), it would require a collective commitment and a broad vision, a long-term horizon. Starting to compare is a first, necessary step, which could represent the start of a process.

Other contributions

Kate Raworth, in her book “The Doughnut Economics” describes humanity’s long-term goals with the image of a doughnut, i.e. two concentric circles. Inside the inner circle (in the hole) there are critical deprivations for humanity (illiteracy, hunger, etc.); beyond the outer circle, which represents the ecological roof, there are environmental degradation, climate change, loss of biodiversity, etc.

Between the two circles, the so-called donut: the space within which we can satisfy the needs of all within the limits of the planet. The author then describes the economic objectives that we must necessarily set ourselves to stay within the limits of the donut.

In a passage she dwells on the principle of non-satiety and on growth: “spatial metaphors such as ‘good is up’ and ‘good is in front’ have become deeply rooted in Western culture, shaping our way of thinking and speaking... It adapts to the profound conviction, expressed by Paul Samuelson in his textbook, that ‘although more material goods are not in themselves the most important thing, a society is happier when it progresses’”. (p. 61). And he concludes that a profound change in our metaphors is necessary: from ‘good is upwards’ to ‘good is in balance’.

Elinor Ostrom, Nobel Prize winner for economics, conducted her research, largely empirical, on the management of collective goods and found a great capacity for cooperation and collaboration in caring for common goods, more than the theory foresees: “At the centre of the explanation of the frequency of cooperative behaviour, at higher levels than those foreseen in most social issues, are the trust that individuals have in others, the investment that others will make in reputation and, finally, the probability that participants will use reciprocal rules”.

In particular, a cooperative management of common goods can only take place when those who use them belong to a homogeneous group, trust each other, expect to be able to share the goods with their descendants, and can organize themselves to supervise the common goods themselves.

Finance

New perspectives

Another tool that we have at our disposal for sustainability and to direct the economy towards the custody of the land is the financial one: through money, production moves, work moves. Sustainable and responsible investments can be an important sign to take steps towards a more humane and fairer economy.

“Sustainable and Responsible Investment is a medium to long term investment strategy that, in the evaluation of companies and institutions, integrates financial analysis with environmental, social and good governance, in order to create value for the investor and for society as a whole”.

How does sustainable finance work, how does the selection of funds that can guarantee sustainability work? The savings management companies most attentive to these dimensions usually operate with two criteria, that of excluding those who do not guarantee sustainability and that of rewarding those who operate in a virtuous manner.

First of all, we start from exclusion criteria in the selection of the portfolio of securities, i.e. shares and bonds of governments and companies that are part of an investment fund:

- Sectoral exclusions (oil sector, gambling, etc.)
- Exclusions on the basis of non-compliance with international conventions (anti-personnel mines, biodiversity, corruption, ILO rules on workers, etc.)
- Exclusion on the basis of failure to respect human rights (exclusion of states applying the death penalty, etc.).
- With the exception of companies and states that do not meet the established criteria, a ranking of titles is constructed in order to be able to select the best in class according to certain criteria:
- Environmental (reduction of polluting emissions, efficient use of energy, environmental reporting, etc.)

- Social (health and safety in the workplace, policies for the respect of human rights, equal opportunities and gender equality)
- Governance (separation of chairman/admber, presence of a code of ethics, remuneration plans...)

Companies and states that pass these screenings will enter the investment universe of funds that want to guarantee sustainability criteria to investors.

It may seem as if all these criteria are being met without profitable investment opportunities. No, it is not!

Recent financial literature is showing that the focus on environmental, social and corporate governance sustainability translates into less risky and more profitable investments in the medium to long term. Moreover, studies that have begun to seriously consider ESG (Environmental, Social, Governance) risk (hence the acronym ESG), which has an impact on the performance of the securities of a mutual fund, reveal the high and significant correlation with the traditional portfolio risk.

Future choices, in the direction of sustainability, of a sustainable economy, in the context of religious institutions, parishes and dioceses, could have a great evocative power. They would spur Italy and the whole world on.

If the world's largest funds, such as BlackRock and Vanguard Group, are beginning to assess the opportunity for such investments, then the time is ripe for a paradigm shift: we need starters to do so for intrinsic reasons, and not just for convenience.

Sustainability is a way of looking to future generations, but also a way of living a reconciled life, a friend of the earth, of nature, permeated with gratuitousness.

Our contribution

There is no middle ground, either we work for a civilised and fair economy, or we work to contribute to exclusion and inequality. When we blame an economy that kills and creates waste, and it is right to do so, are we aware that that economy is nothing more than us, and that instead we are immersed in it? When we blame the multinationals, we do not take into account the fact that we have created the conditions that allow industry to work at the expense of health, the environment, respect for the planet, widening inequalities. When we buy the products with the lowest prices without looking at the

production chain, without looking at what the manufacturing companies do to the environment, we are accomplices of an economy that kills.

When we are not attentive to how our financial investments are made, to which companies they favour, but think only of the return that derives from them, we are accomplices of a system that favours predators. This does not mean that there is no need for rules and those who enforce them, for appeals to the rulers and to the whole world, but it is rather easy to condemn an unjust economic system, it is much less so to recognise ourselves as part of that system.

If money is deposited in banks that finance arms factories, we are accomplices to wars. If our banks finance gambling companies, how can we parreiosly denounce this scourge which is devastating Europe and which in some cities, such as Rome, is the main cause of poverty? If our banks finance businesses that do not respect the environment, we are contributing to global climate change.

Conclusion

Psalm 145 contains a verse that is often used in an educational key: “One generation tells the other about your works”. It should certainly be interpreted in the line of a transmission of wisdom, content, traditions, conquests and dreams from the generations before to the generations that follow. Here, however, I would try a different interpretation: even the new generations, those who come later, have to tell the works of God to those who preceded them.

If creation is a perfect work because it is not completed, if the Spirit makes all things new and will gradually lead us to the whole Truth, if God does not stop speaking, then there is a word that the new generations have to tell us in this sense. And so narration and listening become reciprocal, symbols of that covenant between men and women, between young and old, to whom the earth has been entrusted.

In 1902 the scientist Kropoktin published a text entitled: “Mutual support as a factor of evolution”. Cooperation, it is claimed, has a higher generating power than competition. And the plants prove it to us. Lichens, for example, are the result of the symbiosis between fungi and algae. Both benefit from their fusion: the fungi use the products of algae photosynthesis, and the alga in turn receives protection and nutrients. And the lichens are able to withstand any adversity: they can reproduce where neither fungi nor algae

could live. Of these examples, there are many: cooperative solutions are used in defence, in pollination, in strategies of resistance to stress, in the search for nutrients. “Plants are masters of cooperation and through alliances and communities they have managed to build mutual societies in every corner of the earth”, says Stefano Mancuso in his book *The Nation of Plants*. Mutual cooperation has given life, to economic experiences that are attentive to the territories and have been able to generate inclusive development.

