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Agroforestry: The Future of the Planet through the Operational Teams Management

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Abstract

The main purpose of this study is the presentation of the relationship between Art and Science, with regard to the production and conservation of life, in the context of developed societies of the 21st century, seen as two faces of the research of a reality, extremely complex, but that almost all aim to reduce to a simplistic equation. Despite all the climate summits that have taken place (we are going to the 26th), without any real solutions being reached as effective solutions for the future, there does not even seem to be a clear awareness of the circumstances that have led the world to a situation of emergency. That is why we sought to place the climate issue in the context of a revolution according to the principles of the paradigm of the decisive importance of small groups, of small initiatives, that is, of the "lean" philosophy for agriculture, which accompanied (and surpassed) the "lean" revolution that took place in the industry in the early 1970s. It should be remembered that this was the precise moment when the first warnings from the "Club de Roma" were heard, about the limits to growth and the predictable depletion of resources, as well as the need to reverse the path of increasing waste. Finally, we consider that this "coincidence of divergence" between the paradigms of agriculture (still deeply anchored in the productivism of a primary Taylorism) and that of industry (conceived, however, from the notion of team and organization in a network of small businesses, as well as an ability to work collaboratively), may not be the result of mere chance. In a well-documented article, discuss, based on a literature review, the relationship between people management and art. The authors support and support our position on the need for intuition (support of imagination, sensitivity and skill) in the management of human creativity, as we have defended in our works. Organizations open to the ambitions of art are better able to pursue multiple (non-hierarchical) goals, based on fluid and "semi-connected" technologies, as James March and Karl Weick teach, following John Dewey.

Keywords

Agroforestry, Management, Team, People, Planet, Future

1. Introduction: The Art and Science of Life Production/Conservation

We begin this introduction, by justifying the purposes of the call for art, when the theories that support "normal" science run into difficulties to explain the lived reality. We therefore resort to the considerations developed in a beautiful interview given by James March (March, 2006), saying about leadership according to an aesthetic conception, that ideas to gain strength of conviction, need to be elaborated as if they were the works of a true artist. Hence, it can be concluded that, for this purpose, it is necessary to grant this space for creativity to workers.

1.1. Intuition, Art and Sciences of People Management

What, however, does a researcher in People Management, as is our case, have to do with a problem that seems to be related, preferably, to the natural sciences? A difficult question, let's face it, to which we are not sure of being able to respond in the most appropriate way. We are of the opinion, however, that the "single thinking", about economic development based on the primacy of technology over people, inherited from Taylorism, but actually emerging from the way agricultural work was organized (from the cereal revolution) would be on the verge of exhaustion (Carvalho & Cardoso, 2010).

We proceed, therefore, to this reflection for four main orders of reasons: 1) first, as a matter of citizenship, as it is easy to see that any question placed outside the unanimist/alarmist purposes is subject to the treatment of "denialism", and this is something that science cannot, under any circumstances, admit, on pain of betraying its Socratic-Galillaic origins; 2) secondly, because everything seems to be reduced to the "demonization" of a gas (the famous CO_2, or carbon dioxide, composed of two essential elements for the production and conservation of life), of which, carbon, is liable of being kidnapped, in large numbers, by the woods; 3) thirdly, because in the management of food production, cereal production (and other equivalent products in deforestation requirements) was chosen, replacing the millennial diet based on fruits, fungi and vegetables, produced in forest environments, which forced the institutionalization of slavery, then servitude and the generalized proletarianization, finally, situations that are necessarily dealt with by People Management, the constitutive subject of our scientific specialty; 4) finally, human reality cannot fail to interest the three orders of knowledge that make man responsible for his insertion at the heart of the biosphere (knowledge, empirical, artistic and scientific).

We sincerely think that the world is going through a strange moment, in which we now rely more on so-called "scientific" thinking than before in the "retro-

grade" era of the dominance of religion, something that deserves careful reflection. We easily imagine science as the acquisition of certainties, when science is the function of constructing questions that lead us on the path of deconstructing unsustainable ideas, freeing us from unfounded and pernicious myths (Lopes & Picado, 2010).

Therefore, let us deepen, in particular, the domain of human thought in its purposes and competences to contribute to the preservation of Nature, starting from the notion of synthesis (founded on what has best produced empirical knowledge) to an analysis, as the way to a permanent innovation: the empirical knowledge that has been accumulated by the people over millennia, something that constitutes an unparalleled heritage, which allowed, in particular, to be able to sustain the progress of humanity, in the pre-scientific period, especially from the "grain revolution" and the sedentarization of humanity; scientific knowledge, based on a capacity for objective observation and rigorous experimentation, decisive to guarantee the greatest advances ever made by humanity, in technical and economic terms; and artistic knowledge, finally, which was instituted from intuition, which, as a rule, precedes science, and guides the latter, namely, in its initial methodological purposes in the search for creative ideas, even before proceeding with the analysis. In various circumstances, intuitive knowledge of art is therefore ahead of scientific knowledge, which is why we feel the need to convene it here.

Let us try to see, therefore, if art has advanced to scientific reflection, as we understand it, with regard to concerns about issues of work and human well-being, even before the urgency to install itself around the contemporary "business" (in terms dear to the founder of the so-called "blue economy"—Gunter Pauli) of the "climate emergency".

1.2. The Inspiration of Great Literature

Aleksandr Isayevich Solzhenitsyn, a writer endowed with enormous sensitivity, of Catholic inspiration, in a country of orthodox religious orientation, and one of the biggest names in Russian or world literature, in the 60s, is one of the examples of how art (in this case, literature) is often decades ahead of scientific reflection, as can be seen from this quote from a long-forgotten work, but which has, however, gained all the relevance today. In conjunction with this evocation, let us also remember the great pedagogue, famous for the conferences in Dornach, Switzerland, Rudolf Steiner (1861-1925), and a scholar concerned with the carcinogenicity of the society of his time, in good time (re)edited (Steiner, 2009). Deepening the same reflection, let us go back in time and evoke Goethe, in his poem Faust, in which the sale of the soul to the devil is made (without the price in power, in sex or in money), but in the name of dominion/control of Nature.

The holding of the 26th UN Conference on Climate Change, which took place in Glasgow on 31 Oct. the 12th of Nov. 2021, made it possible to see once again the urgency of a debate that involves citizens, "prisoners" of a communication

that only values generalized fears of failure (starting with those of the UN S.G.). We continue to passively watch plays that induce an irrational fear of the future, which seem to be repeated indefinitely for more than 30 years, moving from analysis to analysis of the situation without each one's actions following/preceding this same analytical posture. Anglo-Saxons consider that analyzing is equivalent to paralyzing, so, to be more precise, the impasse has lasted since the "Club de Roma" began to be invoked (by the way, by the way), in the 60s and 70s, to, ultimately, to support certain purposes that differ little from the worst "Malthusianist" proposals.

2. Problem Formulation

Without the formulation of a scientific problem, the task of looking for solutions is useless. To do so, in the context of these ultra-complex questions, requires an additional effort to mobilize intuition and approaches gathered in similar areas, so in this specific case we turn to the problem of the organization of human work and the Strategic Management of People.

Because the problem is of an extraordinary complexity, we proceed in steps, dividing this attempt to formulate the problem into two parts.

2.1. Decarbonization: Elucidation of the Assumptions of a Possible Fallacy and Presentation of a Case Study

Let's start at the beginning: what "grammar" and what nomenclatures to discuss the terms of the question?

In this emergency situation, considered critical for the future of humanity, we should be able to learn to debate the issue objectively (beyond the terms of a single thought, which seems to have settled in several domains). Above all, it is important to know, in a sustained way, what is at stake and what is urgent for all citizens to do, in their condition as consumers (all) or producers (many).

Let us pay attention to the question of the term "consecrated" to express "urgency", associated with the proposition considered as a "dogma" of "environmentalist" movements: the "excess" of "carbon dioxide" (CO_2), originating from economic activity, is at the origin of global warming.

The proposition appears under the guise of an "undeniable fact", not least because it would be quantified, with a rise of 1.2˚ above that of the beginning of the industrial era being currently observable. Therefore, it is said, and the published opinion confirms it, it becomes imperative to reduce emissions (which would already be in the condition of excessive), if we want to avoid a catastrophe of "biblical" proportions, in a future that would approach.

It is true, as Descartes warned us, that unanimous opinion does not constitute a scientific argument. But let's move forward with the use of the subject of Chemistry, taught to young people in secondary education.

This disciplinary area teaches, namely, and in summary, that: 1) CO_2 molecules are particularly stable in the atmosphere; 2) these same molecules were

previously "captured" in the form of so-called fossil fuels, in the subsoil, however burned; 3) CO_2 molecules will not disappear from the atmosphere for the next 10,000 years.

What can we do, therefore, beyond manifestations/claims and/or cultivating an attitude of fear in the face of the future? Fear (the most primitive human emotion) is the most effective means of paralysis of action. In the name of what interests is the action of people who need optimism to be paralyzed? Do they not know? And yet, everyone will understand that, no matter how much emissions of something that is as stable as CO_2 are reduced, it will continue (a little or a lot) to add to what already exists, so its accumulation will continue in growing.

The carbonization of the economy is inevitable, especially if we consider that fossil fuels represent, even today, 80% of the total energy consumed, in tasks necessary for our daily well-being, in the words of a scholar, of the Jean-Marc Jancovici, among many others (Jancovici & Le Treut, 2009). It should be noted that, according to the same researcher, this percentage remains stable, after three very significant "technological revolutions": 1) the increasing efficiency of heat engines, particularly since the 1970s; 2) efficiency gains, namely those resulting from the digitization of procedures; 3) and, above all, note that this undeniable act did not change the energy mix, the huge investments in the so-called green/alternative energies or, even more surprising, the commitment to intelligent energy management systems.

Let us continue to reflect, however, on the energy needs of developing countries, which aspire to levels comparable to those of the West, and which will not hesitate to turn to coal, gas and oil to achieve this. Let's face it, they don't lack reasons. Now, if these peoples increase their emissions, even if the developed countries reduce theirs, the whole will always be much higher.

Finally, let us underline the particularity of the fact that the CO_2 available in a fossil state, in the meantime transformed into energy, was the result of its capture by trees and other terrestrial or marine plants, hundreds of millions of years ago.

If the scientific proposals underlying Lavoisier's law are correct, the cycle of emission to the atmosphere could be reversed, turning it back into plant carbon and oxygen, by the action of tree photosynthesis in alliance with the planting of vegetables and with the vegetation cover of wild herbs, on the surface.

We believe that the Academy, especially Business Sciences and Management, or Psychology that studies common thinking through the social representations of populations (Moscovici, 1976) assume a tremendous responsibility in this climate management out of fear or "inconsequential contestation" (Moscovici, 1976).

Let's put it, in terms of the "magic" hypothesis, that there was a technological solution to sequester CO_2 on a large scale. Who doubts that it would be impossible for any government in the world to resist the pressure of a frightened public opinion, regardless of the level of public funding/spending? But if the solution exists and it is natural, can't that fact be made patent to public opinion? The latter would no longer panic in the presence of a future that would depend on eve-

ryone.

There is, however, the question of "capture", not that of CO_2, but that of the power system. Solutions based on generalized participation do not allow the same capacities, the same possibilities, to generate high profits for the integrated system of world monopolies (from cereals to those of phytosanitary products, medicines and fertilisers, from renewable energies to those of mechanical constructions), and hence obstacles to the investigation of the effectiveness of citizen action measures on a global scale, in coordination with the action of nature. These are (will they continue to be?) held in the private offices of some "curious". Even so, constituting a small number of these curious around this issue of the "blue economy" (in the terms of G. Pauli), the world can count on a resilient resistance, based on the creativity of experimentation based on "adhoratic organizations", capable of devising strategies for change based on their situation as "minority groups" (Moscovici, 2011). With greater or "superior" difficulty, ways will be found to facilitate the ("lean") articulation between "bio" production and "smart" consumption, a situation that will prove to be favorable to all stakeholders, even in the absence of any subsidies. What is the status of the most successful experience in our country?

Specifically, at Herdade do Freixo do Meio (HFM), the Community Support Agriculture program (the so-called CSA) was created to guide the growth process based on demand and supply, rigorously programmed in order to avoid waste. The CSA is organized as a "Users Cooperative", which intends to make HFM, above all, a space for life experiences "with" nature (mushroom picking, for example), a place of cooperation, a purpose of social inclusion, an exemplary case of personal development and an opportunity to build community and solidarity, from an internal and external point of view (from local to global). The objective is to achieve economic sustainability alongside the effective practice of adequate social and environmental policies. To this end, on the production side, the CSA program has a small bakery, small local partner producers and seven micro-factories: olive oil; wine and vinegar; acorn and derivatives; poultry, lamb, pork, veal; baby meat; cereals, nuts and pulses; charcuterie; frozen; vegetable preserves; herbs; fruits and vegetables; milk and dairy products; eggs, bread and pastries; dehydrated products; soups and ready meals (quiches, pies); honey and juices. On the consumption side, the program is articulated with consumption through the online store, own stores (on site and in Lisbon—Avenida de Madrid, 21-C), partner stores, the "Horeca" channel and, above all, the organization of baskets ordered and delivered to the cooperating consumers, the "Users Cooperative" that integrates the entire organization. It is just a beginning, but it is already an auspicious case-example of a transforming paradigm in the history of the last 12 millennia of sedentary humanity! For all 580 hectares of HFM, it is estimated that there is a potential to feed 12,000 people (1200 in the current situation).

It remains for us, therefore, to provisionally conclude, returning to the beginning of our reflection on the formulation of this ultra-complex problem, that there are co-occurrences that are not usually considered, in the climate equation,

without knowing why!

In addition, co-occurrences cannot be scientifically "read" as causes.

What was previously sequestered to produce, underground, the fossil fuel reserves (a transformation that took place in billions of years), which allowed, since the end of the 18th century, the industrial revolution, can be transformed again into trees. with "perennial" characteristics (ie in cycles longer than 30 years, on average, otherwise the balance will be null, after being cut for the most diverse purposes). If the same CO_2 can be "sequestered" again, even very quickly, by a specific tree device, similar to what has been experienced by Eng. Alfredo Sendim in Montemor o Novo, why pretend that there is no alternative to the "negotiated" decarbonization in more or less theatricalized summits? It should be noted that the roots of trees, planted in the way described in this text, form, in the subsoil, a compact web capable of generating a capacity to "capture" carbon, in about four times the volume/weight of carbon. CO_2 can be "captured" in the trunks and branches.

Proceeding, therefore, with a causal relationship, between an increase in CO_2, on the one hand, and an increase in the Earth's temperature, on the other, can be pure nonsense. At least admit the hypothesis, analysing the whys!

Indeed, one must count on the fact that agriculture, driven by multinationals (of cereals, soy, coffee, bananas, palm oil, or the most diverse intensive monoculture plantations), within the scope of called the green revolution, is associated with massive deforestation (not just in the Amazon). What happened in Europe, so that we don't stop at the "demonization" of Brazilian leaders?

The EU's Common Agricultural Policy (CAP) consecrated the transition from traditional integrated agroforestry production (in Portugal, there was a cork oak system, for example), to a predominance of cereal cultivation (for human and animal food), which only could have been boosted by deforestation and large farms. The consequences were not long in coming: the active population employed in agriculture was 18% in 1957 (the beginning of the EEC, the future EU), 30 years later from a little over 6%, as reported by Mallet (1990). Remember, therefore, that in those years the end of the USSR and the much-celebrated "final" victory of capitalism occurred, the "End of History", as Fukuyama said, quoting Hegel (Fukuyama, 1992). started to effectively watch the question of what to do in the face of global warming arise, a problem that would appear, in an apocalyptic form, carried out by the then American Vice-President, Al Gore. It is in this context that the biggest question of our time begins to be posed, that of reversing the degradation of biodiversity by a tiny minority, still far from being visible (even in Ernest Gotsch's Brazil) despite having the conditions to "coherent, consistent and active" that Serge Moscovici spoke about (Moscovici, 2011).

Posteriori, however, it appears that, with Gotsch, something was born that could become a force capable of proposing a new paradigm of systemic thinking for the scientific approach to nature. In the same period, in the European community, on the verge of becoming the EU, those who rejoiced (invoking, once

again, Hegel) at the end of the traditional retrograde peasantry, under the double pressure of "agronomic sciences and the mechanization of the culture of deforested lands. At most, some voices appeared (in the romantic taste) to lament the end of a peasant culture" (Nouvellon, 1990). What is certain is that Ernest Gotsch's message has not been able to get through. How has such great scientific myopia been possible?

It was a kind of model of "Taylorization" of agriculture, which took place/encouraged, when the industry, where the Scientific Organization of Work (Taylor) was born, had long ago reconverted itself to the idea of a network organization, based on small units interrelated, working collaboratively. Now, when talking about "excess", we agree that such terminology does not fail to imply a relationship and not an absolute value. It would then be a relationship that implies a deficit. Let's see, in this case, if this is not what is happening with the infamous CO_2.

Is CO_2 excessive in the atmosphere, the result of a deficit of trees that capture it?

We think that there is a vice of reasoning (perhaps not innocent at all) that consists in leading us to the fallacy of planning, that is, the common way of reasoning: "think global to act locally".

It would be deduced that CO_2 affects everyone, hence (?!) the bet on electric mobility.

We will pay the price (no doubt) and we are asked to be grateful!

But is it the only possible thought and the only way to go?

What could be proposed to citizens concerned about climate change?

Changing the economic paradigm, developing an economy based on nature close to that which was carried out in industry, in the 1980s, with the so-called "lean" production, that is, choosing to combine human action with the action of nature and with knowledge (this tripartite approach, as Eng. Alfredo Sendim usually says), such a fact could translate into the alternative paradigm of "thinking locally to act globally". Concretely, working from local opportunities, guided by surprise, by intuition, considering, in the case that we explore here, that everywhere there are soils that can be reforested based on fruit species. This would be the basis for a new way of thinking about the economy as the interaction between a "myriad" of small businesses connected in a network (as dreamed by the former head of Labor, in the USA, R. Reich), and in this way allowing agroforestry to rediscover its place in the reorganization of a "Local" based economy and "Global" action. These two aspects can, effectively, be enhanced by combining the potential of both parameters: a network society, or "Glocalization".

It should be noted that it has been the notion of scale that has guided the so-called macro-economy of the era of Globalization (dreaming of great achievements), instead of the "lazy" bet on the multiplication of small local achievements, which is much more difficult to manage. However, it is the large agglomerations, for example, that lead to the economy of waste. As highlighted by

Eng. A. Sendim, a sanitary facility based on "Dry waste" technology, for example, is a local resource. The same situation, in a large agglomeration, converts this potential resource into a huge, virtually unsolvable problem. The same can be said of the various vinegars, derived from citrus residues, based on a small-scale biological detergent, "necessarily" replaced by industrial bleach, in large agglomerations (as explained in the "blue economy" courses by G. Pauli).

This is not a simple approach, as can easily be seen. The organizational difficulties felt and studied by us at Herdade do Freixo do Meio show us that the science of organization requires an experienced hand. Effectively, the effectiveness assumed by "lean" management requires a strong commitment, translated into adequate investment in "intellectual capital" (Lopes, 2012), aimed at controlling the hidden costs of any human activity and finding innovative solutions to guarantee the sustainability within the scope of the new economic paradigm.

But we are convinced that what has already been achieved should be celebrated with the dignity of a "monument" at the height of the social experimentation that takes place there in the simplicity of the biodiversity found.

It should be noted, however, that such an alternative would allow all citizens to participate in the solution, organizing themselves cooperatively to contract consumption with agricultural production cooperatives, preferably certified, from an environmental point of view. There would also be room for the contracting of mutually winning partnerships with a restaurant focused on sustainability and nutritional quality.

Effective and economical!? Perhaps a thousand times more economical, we would say, than the touted decarbonization, according to the "UN model—Multinationals of the Green Revolution". We are convinced that if the positive externalities of such a model were quantified (and remunerated), it would be easy to arrive at the estimated monetary values.

Let's see how this model enhances: 1) the fight against the "excess" of CO_2; 2) the greater capacity for water infiltration into the soil; 3) the drastic decrease in food imports; 4) its circulation in ships over long distances; 5) reduction of the work of large agricultural machines; 6) the decrease in fires fueled by afforestation in a monoculture regime and by the lack of animals in extensive pasture; 7) the production of medicinal species (recommended by the medical movement of "endobiogenics"); 8) replacing cereals with vegetables and fruits; 9) replacement of meat from animals raised in captivity with healthy meat from animals raised in freedom; 10) as well as, above all, the revitalization of the "interior of the country" with the consequent reduction of the suffocating pressure of the overpopulation of the metropolises.

2.2. The Reconciliation of Man with Nature, Mediated by Knowledge

It may seem strange, but if this hypothesis is made viable, the organizational world of the future could be marked by the end of what we have designated as the "curse of the machine" that, over successive generations, destroyed human

work (as Gorz, 1980 said). Assuming that the tree is the technology par excellence, which nature offers us, it not only does not destroy human work, but also makes all Eco-Malthusian discourses unfeasible. The system thus generated would be negentropic (in the words of Morin, 2005), producing more than it consumes in resources. Ernest Gotsch speaks of "sytropy" as antagonistic to entropy (consumption/depletion of resources). According to the master of syntropic agroforestry, it is about safeguarding and/or promoting systems characterized by natural succession, biodiversity and fertility, density and tree stratification, a system capable of producing as much fruit and vegetables as possible in a reduced space. To understand the reality of the whole "Nature-Man-Knowledge", E. Morin prefers to develop the complexity approach. He says that it would tie the Gordian knot in the problem of the relationship between the empirical, the logical and the rational. It is this same approach to nature through complexity that makes men like E. Gotsch, A. Sendim and their followers: to incorporate in human thought the "intelligence" of nature.

The fruit tree is not just nature and work because, in "intelligent" nature, man discovers the knowledge necessary to carry out the "reversal" of the degradation of biodiversity lost by the illusion of "humanization of the Earth", based on mechanized work, against nature.

And as for the viability of the cooperative model (training/consumption/production/credit) in the immediate future, what can I say?

We studied the cooperative movement and we know its weaknesses and potential.

We know, in fact, that there is a Europe that is more cooperative and another, in which we belong, that is more subject to competition. Two main ideas deserve our interest: 1) the future is not in sight if we do not develop cooperative production relationships, as demonstrated by Prof Thomas Philippon (2007) of the University of N.Y. and the World Bank, in a work, published in 2007, in the aftermath of the greatest crisis of capitalism, in the 21st century; 2) on the other hand, the birth of the Mondragón cooperative community (the first modern company in the world to create a "glocalized" multinational, based on the idea of monetary circulation in a restricted circuit), in the 1950s, in the Spanish Basque country, the from an initiative of the local parish priest (J. Arismendiarreta) based on his alms box in the poor parish (with unemployment around 80%). Such an initiative clearly shows the viability of the model proposed here, as recognized by a study published by the Peter Drucker Foundation (FPD), challenging the management world to follow it as a paradigm for the future of business sciences and Strategic People Management. This unique leader, in his lucidity of inventing the "smallest possible business", will have invented, according to the FPD, a new revolutionary model of productive organization "in a network", open to the whole world.

Let us return to the question of whether we can guide a rural community on the path of this small agroforestry management adventure.

We can easily see that the answer can only be positive, if we know how to act on the basis of demonstration, if farmers are trained and encouraged to plant the said forests, if they are trained to cultivate, in the available soil, created by the biodiverse arboreal system, the fruits and seasonal vegetables, but also (and this constitutes the heart of the new business system) if consumers are challenged/encouraged to organize themselves into consumer cooperatives in order to guarantee the economic viability of production.

To reach sustainability, it remains to know how to do the math. According to some calculations, this even reaches challenging numbers: on a hectare of land, about 1,800 fruit trees can be planted and there is still plenty of space for the successive production of vegetables, because this system does not degrade the soil, which is continuously productive. The average income, in current currency, of this hectare of land can be very high, even. The land is "too" generous with those who want it and know how to protect it, to the point of offering them a plurality of food solutions: from medicinal plants to vegetables, from the abundance of fruits to a variety of wild mushrooms, fed chickens or land arboreal to pigs, all born/nurtured within the scope of a biodiversity susceptible of being able to impose itself as the new agroecological normality of the Earth.

3. Elements for the Recognition of a New Paradigm: Exemplary Cases

How? Are there even examples of this way of thinking and acting, and/or quantifying? At where?

Of course, it will even seem hard to believe! Is it really possible that so many people let themselves be deceived and did not start, rather, for a more careful observation of nature and for experimentation? Let's see!

In the first place, we consider that there is, effectively, hope in the alliance between man and nature mediated by accumulated knowledge, as several authors have defended, such as Ernest Gotsch, with evidence accumulated in the Atlantic Forest of Brazil, or, closer to us, such as Alfredo Sendim, at Herdade do Freixo do Meio, in Montemor-o-Novo, or many other places where work with nature has been experimented with. And, more importantly, to know if, based on this new agroforestry model (which recovers the best that man has achieved with the domestication of fruit trees), this hope can flourish in the life of every human being, once reconverted to the ancestral way to work "with" nature.

Secondly, we understand that sustainability requires, from our point of view, the incorporation, in short, of a new management model. It would be the latter that would allow the necessary inspiration, based on updated scientific knowledge, to be able to "lead" nature in a rapid and sustained reversal of the degradation of biodiversity. Gunter Pauli speaks, in his lectures, of "freeing Nature from the human domain", a formulation that we consider totally equivalent to ours. What we wanted to emphasize was the idea of "preservation/protection" of Nature, because it is not in our hands. It is man who has to reconcile himself

with Nature, as seems evident to us. It is not, as can be seen,

We assume that this management model would lead the demand economy to articulate, in a balanced way, with the supply economy. Produce what you can and want to buy, with knowledge of the facts (adequate training in terms of healthy eating) and with purchasing power, due to a sustainable economy.

As can be seen, an articulation of the two mentioned models (agroforestry and management) is necessary, the first of which can be conceived as a new scientific continent (Althusser, 1983). It is therefore important to grasp this new scientific reality, otherwise the conditions for the emergence of a new paradigm (in the terms of Khun, 1962; 1990), based on a conception of biodiversity, capable of generating an increase in "wealth" will not be met, well-being and consequent energy savings.

We think, in fact, that we have brought together the four) conditions for the emergence of this new paradigm of sustainable biodiversity: 1) there is a paradigmatic crisis of the agro-industrial model born from the cereal revolution (about 12,000 years ago) and deepened (since a little more than 200 years) from the industrial revolution; 2) the theoretical approach of the superiority of the technology of the tree over that of the machine, in terms of productivity, health and employment, (the machine should be subsidiary and not the main element of human civilization); 3) there are case studies that allow us to observe the conditions in which the new model of collaborative action (man-nature) could work; 4) a theoretical approach to systemic intelligence that allows man to stop being the only truly "predatory" species, that is, one that does not produce more wealth for the whole of nature than the one it consumes. It would be this "revolutionary" theory that Th. Khun puts in the position of effectively combating the previous theory according to which humanity could only overcome hunger through the celebrated potential of the "green revolution".

In order to overcome the hunger of a growing population, would we have to accept the hostility of the environment and threaten life as a whole?

Management Sciences have ignored this type of criticism of the fragmentation of human work and the dominance of the machine over man (Boulé, 2018), assuming it as progress, a condition for investment and growth of wealth. The thinkers of the "Frankfurt School" (as well as some of its followers) were the most lucid to denounce this mirage of the continuous/uninterrupted progress of humanity after the Age of Enlightenment, combined with the so-called "progressive" force of the "Industrial Revolution". According to these authors (in particular Adorno, first, and Habermas, later), the philosophy of modernity would have disguised itself since the beginning of the 20th century, proposing a "critical theory of instrumental reason", tending to be called: unfinished project; interrupted search; profound failure. New dominations would succeed the old powers, radically compromising the improvement of living conditions in society through technical-scientific development, in rupture with the forces of Nature.

Ernest Gotsch or Alfredo Sendim are field pioneers, well-connected with the

theories of the precursors (Sandes, 2019), deep connoisseurs and lovers of experimentation, enthusiasts of effective solutions, working in a context of a "collective intelligence" that observes and acts with the Nature. These studies advocate that each crop be installed according to its characteristics: 1) size (height, crown type, distance between plants); 2) cultural requirements throughout its development cycle (need for light, water and nutrition); 3) each of these two aspects should be carefully considered when planning the system as a complex whole (Sandes, 2019). It seems obvious, but this evidence needs to be remembered: water and soil are not perennial elements, as a certain economic conception assumes, inducing a noticeable indifference between many strata of the population. We conclude that without water there is no life and without soil there is no food, just as without trees (associated with an intensive vegetation cover) we have neither soil nor water available. It is agroforestry that keeps the paths of hope open, in the production of arable land, in the regulation of cycles and the distribution of water and, consequently, of food.

4. Results: Care for Nature versus Mastery of Nature

The technical proposals for a solution have therefore existed for years, opening paths of hope for a sustainable economy in our country (Dias, 2018).

What we have seen in our interventions is that there is a lack of organizational solutions (inspired by "lean" solutions) that allow economic sustainability, without resorting to the formula of subsidization, all of which are oriented towards the "sustainability of monocultures of all kinds. Little or nothing has even been left for research into participatory and collaborative formulas for the sustainability of agroforestry experiences, without a voice being raised to annoy established interests". It is our observation, we do not want to say that it is just like that.

It is therefore important, therefore, to question the published opinion, so that it can explain why it does not focus on them, if even some potentates, such as Michelin or GrupoPão de Açucar, are willing to go beyond the monocultures (the emblematic rubber plantations, in particular). Public opinion should, therefore, cultivate an attitude of (dis)trust and care, because other "solutions" are out there and can cross our collective path. We have listed three types of these proposals.

There are actually some types of proposals, which perhaps would not displease the "Nazi" authorities. See: 1) a drastic reduction in the world population is proposed (J. Bezos from Amazon, among others); 2) there are official documents in which the environmentalist concern for the protection of nature (in a system of more or less integral reserves), translates into an attitude "against" the human presence, which seems to be the dream of some cadres and even of certain policies from the EU; 3) there is even talk of a dramatic reduction in national income (as we run the risk of seeing happen, if nothing is done), when before decarbonization was presented as a program that only brought benefits.

No, these proposals do not seem to be in line with current scientific knowledge, as we have tried to illustrate. Within the scope of the proposals of the

pioneers of the planting of agroforestry forests (or syntropic, in the sense of the effectiveness of an anti-entropy), we would all have an active role to play, in a relational process of collective gain.

This whole set of proposals, as always happens with revolutionary innovations (to quote, freely, the lecturer Idriss Aberkane) may seem: the fruit of a completely ridiculous idea; or else a more or less crazy, even dangerous reflection; We are convinced, however, that this alternative approach to the proposals of the "European" policy of "decarbonisation" to respond to the excess of CO_2 in the atmosphere, will one day end up being considered as an obvious paradigm. Not recognizing that deforestation by intensive agriculture is a war against Nature, with consequences contrary to the stated purposes, is something strange. Indeed, this war is destined to consume the dreams of our children and the genius of our science, to paraphrase D. Eisenhower, as he leaves the US presidency. This statesman demanded from his fellow citizens an indispensable effort of inventiveness to do things differently. It would be essential, in particular, to bet on "weapons" of massive construction (we think of lean management or the mobilization of the power of Intellectual Capital, applied to Nature through agroforestry) and not to promote the destructive war in which humanity allowed itself to be involved.

5. Conclusion

We conclude with an appeal: analyse the demonstrations that are documented on video (see the references in the notes) and appreciate the experiments that those pioneers propose to us and that have long been postponed in the search for the rebalancing of Mother Nature.

Consider, for a moment, a panoramic view, from above, of these landscaped fields and compare yourself with the gardens designed by the landscapers. Nature offers itself to our contemplation, emphasizing the superior beauty of the "agroforestry woods", conceived as imaginary carpets, in relief, "woven" as if they were fairy shapes, in which the visible side emerges from the ground floor vegetation, occupying levels in height, while the invisible slope is structured like an intertwined web of roots "anchored" at different depths, supporting a biodiversity full of abundance. We would say that it is Nature that challenges the art and science of management, forcing them to do their best in terms of a rigorously crafted communication of this paradigm, revolutionary in more ways than one.

Effectively, as producers, as promoters or as consumers, we can all take a place in this extraordinary struggle of "connoisseurs and friends of nature" who can help us avoid the climate tragedy. In this way, we can be active in returning to the replanting of the new "Gardens of Eden", from where the ambition of the (pretended) dominion over nature (which some have called "wise") is "expelling" us all. It is important to underline this fact, because not only are the current climate emigrants being expelled from their lands. In the long run, we will be next, without an "intelligent reconciliation", in close relationship with nature.

Let us return to R. Steiner's terms to situate his system of creating knowledge of the real: walking together; talk about each other's experiences; to reflect, in short, so that in a collaborative way we can reach, as people, a level of a deeper rapprochement to the real of objective nature. "Walking—talking—thinking", he said, in a purpose close to that of Weick's (2001) "action-selection-retention". Here is a whole program for our time of intelligent reencounter with mother nature, as advocated by Steiner, the passionate disciple of Goethe (in his denunciation of Faust—the dominating entrepreneur/capitalist) and the lucid precursor of Solzhenitsyn (who would take up the same denunciations to regenerate nature/mother Russia, freed from the economy of planning domination, which was killing the innovative capacity of its fellow citizens).

The strategic management of people, a combination of behavioural sciences, labour economics and the art of team cooperation, has powerfully helped to win the start of the "lean" organization in quality management, in industry and in services. As far as the active promotion of the resumption of the ancestral connection of each human being (producer/consumer) to Nature (our true mother) is concerned, the same "lean" philosophy will help, we are convinced, in its elevation to the condition of supreme art: adequacy consumer desires with production, by motivated and empowered employees. Seeing each person as no one has ever seen them, just like seeing nature in an original way, kissing it like a mother, is, as we well know, the path to its description, painting, sculpture or composition of materials, it demands above all intuition, letting yourself be surprised, creating bonds (as the fox advised the little prince). Constructing a successful formulation of a problem arguably appeals to intuition, which develops with observation and fascination with nature, and which guides reasoning, as E. Kant did, absorbed in the contemplation of what he called the second absolute wonder constituted by the whole of the universe symbolized by the celestial system—the "Starry Sky"—in parallel with the "Consciousness" of every human being.

We cannot fail, therefore, at the end of this text, to return to one of R. Steiner's basic intuitions, for whom "whoever nature begins to reveal its manifest secrets cannot fail to experience an irresistible yearning for its most worthy interpreter: Art".

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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