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Agroecologias do Mundo:
Unidas para enfrentar
as crises globais



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Perplexidades e desafios de um mundo em mudança – o poder transformador da agroecologia como movimento político, social e científico

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Resumo: O ser humano aprende pela experiência e a mera existência de um movimento social, cívico, político e científico como a Agroecologia é um sinal de novidade, de inovação e de esperança para o futuro. A questão fundamental é o contexto histórico em que se dá a emergência desta forma de organização, modelo de racionalidade e Cosmogonia. É um projeto científico que procura trabalhar com uma perspetiva do ser humano integrada com a natureza da forma mais radical possível, entendendo as sociedades humanas como detentoras de capacidade de organização compatíveis com a não destruição do planeta, baseadas na justiça económica e climática e na paz entre os povos, através de comunidades vibrantes, espontâneas e criativas. Perante a hipótese de que o ser humano aprende, evolui e transforma-se a partir de experiências concretas, reais e objetivas, em primeira mão ou através da mímica e da experiência de outrem, de relatos diretos e indiretos, que incluem a imaginação e a ficção, a Agroecologia faz parte de um manancial rico e diversificado de iniciativas que importa debater, divulgar e promover. É urgente abrir as janelas da criatividade, que criam esperança e confiança no futuro. A ciência e a técnica, são instrumentos de realização humana e são meios que permitem criar mundos presentes e futuros baseados no melhor do potencial de toda a realidade.

Palavras-chave: paradigma emergente; sistemas complexos; sustentabilidade regenerativa; pesquisa militante.

Abstract: Human beings learn through experience, and the mere existence of a social, civic, political and scientific movement such as Agroecology is a sign of novelty, innovation and hope for the future. The fundamental question is the historical context in which this form of organisation, model of rationality and Cosmogony, emerged. It is a scientific project that seeks to work with a perspective of the human being integrated with nature in the most radical way possible, understanding human societies as having the capacity for organisation compatible with the non-destruction of the planet, based on economic and climate justice and peace between peoples, through vibrant, spontaneous and creative communities. Given the hypothesis that human beings learn, evolve and transform themselves based on concrete, real and objective experiences, first-hand or through mimicry and the experience of others, through direct and indirect accounts, which include imagination and fiction, Agroecology is part of a rich and diverse source of initiatives that need to be debated, disseminated and promoted. It is urgent to open the windows of creativity, which create hope and confidence in the future. Science and

technology are instruments of human achievement and are means that allow us to create present and future worlds based on the best potential of all reality.

Keywords: emerging paradigm; complex systems; regenerative sustainability; militant research.

Introduction

Agroecology, as a science, captures the ecological and holistic paradigm shift that has emerged as a reaction to specific historical contexts. Ecological principles applied to agriculture, have evolved to consider its intrinsic social and political dimensions (e.g., Francis, et al, 2003; Aguiar, et al, 2005; Gliessman, 2016; Barrios, et al, 2020; da Costa, et al, 2018; Guiné, et al, 2021; Costa-Pereira, et al, 2024).

Understanding the novelty of Agroecology (Altieri, 2012) implies addressing resistance to change and latent, subtle and apparently invisible issues. That is, contemporary societies are traversed by multiple tensions and paradoxes in relation to which it is the concrete, real, face-to-face experiences provided by movements such as Agroecology that allow us to demonstrate alternative pathways, and that create the evidence that other worlds and other futures are possible. Agroecology research has gained “prominence in technical, scientific, and political discourses.” (Costa-Pereira, et al, 2024).

Mitigating and adapting to climate change as a global issue is a strong focus of contemporary Agroecology (Gliessman, 2016; Guiné, et al, 2021). Confronting, denouncing and announcing new types of inter and intra human group relations, at the level of gender, ethnicity, generation or culture, addressing the urgency of implementing fair and emancipatory social relations, in which identity is a source of differentiation and wealth, creating inclusion through difference, with a differentiating universal, these creative tensions are articulated, integrated and operationalized by Agroecology. “Agroecology is a way of redesigning food systems, from the farm to the table, with a goal of achieving ecological, economic, and social sustainability.” (Gliessman, 2016).

Complexity theory is part of the DNA and functions as the backbone inner structure of Agroecology (Morin, 1999, 2012). For this reason, the present text, in the year 2024, and every possible offspring that might emerge, are dedicated to the cause of complexity, through Agroecology and all the parallel historical and contemporary movements that are emerging.

Edgar Morin, a militant researcher of the theory of complexity, who is still active and revolutionary, namely posting videos and campaigning, accomplished one hundred and three years on the 8th of July of 2024. Edgar Morin, not only is a living icon but also has a rich connection to Portugal, namely the signing of an important treaty, 1994, at Conventinho da Arrábida, in Setúbal - Manifesto of Transdisciplinarity, 1994, signed by B. Nicolescu, E. Morin and L. de Freitas - and the celebration of the 20th anniversary of the treaty, with an International Congress on Transdisciplinarity, by the University of Lisbon, in 2014; and, in 2024, the dedication of various memory and celebrative academic moments, throughout the academic year, at the Business School of the Polytechnic Institute of Setúbal.

The organisation of the text will cover items that include, Agroecology understood as the fast-spreading novelty of a vibrant research community; Agroecology’s holistic perspective and the natural and the social sciences; illustrative examples and applied research; how Agroecology works from an integrative perspective, focuses on integrated production and propels integrated change; the crucial role of social movements dynamics; how to enable the emergence of new possible futures; how Agroecology honours traditions and fosters societal change; and the crucial role of creating new

Cosmo visions and Cosmogonies, through visual narratives and imagination, collective techniques and data visualisation.

Cosmo visions, visual narratives and imagination

The crucial role of creating new Cosmo visions and Cosmogonies, through visual narratives and imagination, together with collective techniques and data visualisation, is part of the visual culture of the XIX and XX centuries, which has acquired the social status and academic statute of neo-baroque and neo-Renaissance in the XXI century. Data visualisation, as a tool for team work and for confronting the intentions of the authors with the outcomes the same authors have produced, in a highly psychoanalytic manner, has been developing throughout the last one hundred years, through Natural Language Processing and Large Language Models, which are the present versions of the Language and Action Perspective and Activity Theory of late nineteenth century (Duarte, et al, 2023).

Agroecology is also present in the designing and producing of board games and video games. As international organisations produced reports regularly, there are games that introduce the novelty of the texts to play a kind of Age of Empires approach. These strategic games help to consider the stakes that are present, in real life, all too real. Magnitude is a board game that models the choices and consequences government ministers face when trying to further their nation's development. It asks groups of players, national ministers, to implement a plan to maximize their nation's achievements towards the Millennium Development Goals, by a target year in an environment where disasters do occur as a fact, and thereby affect the country's progress toward those goals. Magnitude was created as part of a collaborative project, through the Parsons Humanitarian Design Lab and Game Design studio, including Lien Tran, Ben Norskov, Michelle Jackson, as well as the Visual Design of Hannah Lea Dykast.

Although there are epistemic considerations, paradigmatic insights, and mentality changes, what is being proposed here, interpreting Agroecology and other social change movements, is also hermeneutical, ontic and phenomenologically determined, meaning that it is the actual experience, individual and collective, singular and plural, in inner and in outer worlds, as has been happening since the cave ages, that is at work. Moreover, acknowledging the long term, almost immemorial, subtle and discrete slow changing dynamics enables identifying, recognising, valuing and celebrating the tiniest victories and breakthrough, however fragile, vulnerable and short-lived. Belief systems, values and ethical systems, are dynamic forces that enable cultural change, because, as Agroecology becomes ingrained in common practices, new realities emerge, fostering inclusive values and societal change (Gliessman, 2015). "The magnitude and urgency of the challenges facing agriculture and food systems demand profound modifications in different aspects of human activity to achieve real transformative change and sustainability." (Barrios, et al, 2020; p 230).

Arts and sport, street and public art and sport, besides and beyond museums and the Olympic games, bodily manifestations and participation, promote collective, shared and community enhancing experiences, significantly participated moments, which are the backbone of the creation of myths, symbols, rituals and new meanings. Literature is an open book for displaying the universal essence of deep-felt inner experiences. The Portuguese language, through the works of Llansol, Lispector, Saramago or Guimarães Rosa, illustrate unique experiences and create new narratives that enable other generations to expand their horizons and to overcome obstacles and difficulties. Saramago, at the speech when he received the Nobel prize, in 1998, narrated the memory of his grand-father, of how, at his death-bed, he raised himself in order to go to the backyard and individually embrace, one by one, every single tree, which he had planted and seen grow throughout his lifetime.

In another language, but also connected to memories of grand-parents experiences, is Tolstoy description, through the eyes of his childhood, of the difference, opposition and confrontation between his grandma's and his grandpa's prayers, which opposed clearly incompatible Cosmo visions. Her deity and rituals, was a permanent, wholesome, celebrative and overwhelming gratitude, about the simplest details, a long and enchanting melody of praise for the universe, whilst his divinity and rites were dark, shadowed, repetitive, monochordic, monochromatic, endless petitions, negotiations and petty trades, accountability and manoeuvre.

The argument that is being proposed is that Agroecology and other parallel life-changing social movements, enable the creation of visual narratives, new possible futures. Inês Costa-Pereira and her colleagues emphasize the need to gather a critical mass of collective efforts and stress that "the important role of family farming and its lack of support is a global problem that needs to be addressed collectively, to give it visibility and strength." (Costa-Pereira, et al, 2024). The use of the term family, is also extensible to small scale, as it includes non-family-owned producers, such as ecovillages or integral cooperatives. Family, although the vast majority is indeed family owned, connects to property ownership, since feudal times and feudal heritages, and to religiously influenced units. Both feudal and religiously determined realities, which are still present and active, are also being transformed, in sociological and anthropological terms, across regions and cultures, all over the world, and Agroecology is at the front line of those changes. When imagining more sophisticated stages of ecological evolution, a possible description "involves change that is global in scope and reaches beyond the food system to the nature of human culture, civilization, progress, and development. The depth of change is more than mere conversion or transition, and enters into the realm of full reform or transformation." (Gliessman, 2016).

Theory U, Dragon Dreaming, Tao Game, or Goethe's phenomenology, exemplify theories, processes, methodologies and approaches that enable training, practicing, and creating expertise and proficiency, awareness and sensitization, towards less obvious, direct and explicit realities. Transparency, responsibility and accountability are fundamental for healthy governance, yet, there is opaqueness in the immediate nearness of reality. Critical distance, and an advocaat's eye, the devil's advocate, is needed as it is hard to judge our own causes.

Conclusions

The basic argument that is important to highlight is that there is a novelty and a creative, fertile and generative dynamism in Agroecology, which is an indicator of what is lacking in contemporary societies, in terms of models of rationality and governance based on collective intelligence and the principles of equity, social and climate justice, and peace and prosperity, compatible with the non-exhaustion of natural resources (Costa-Pereira, et al, 2024; Graeber, 2009; Cortina, 2020). In other words, it is important to reflect, debate and discuss the creative potential that is present in Agroecology as an example of the integration of scientific, social and political dimensions that affect all of humanity. It is not just about food production and consumption, but the integration of all human activities in an ecosystem that is emancipatory and regenerative. The paradigm shift of Agroecology is an open quest for further development, holistic and in continuous development.

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