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ENERGY TRANSITION, CLIMATE JUSTICE AND THE RIGHT TO EXIST: PATHS TO THE TRANSITION TO A LOW-CARBON SOCIETY AND JURISDICTIONAL ROLE IN THE CLIMATE IMBROGLIO

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ABSTRACT

The climate emergency has imposed a new agenda in the scope of international relations, bringing to regulation the need to reconcile fields of knowledge that are different from each other, such as law, the study of energy, issues of an economic, political and social nature, with multiple interests, agendas, claims that need to be modulated, not in favor of immediate interests, but equating in an equitable way the needs of present and future generations and, more broadly, of the conservation of life (human and non-human) on the planet. Thus, based on an approximation of the concepts of climate justice and energy transition, the text seeks to analyze the role of social, political, and economic agents and their actions at the global, regional, and subnational levels in creating possible solutions in this context of urgent needs of climate change. The text highlights how the capitalocene (era of capital in the interior of the Holocene) is responsible for an unprecedented crisis that threatens the existence of life on the planet. It was highlighted that the solutions to the problem posed are permeated by two needs, one immediate and rapid with the transition of use of clean, efficient and accessible technologies associated with another change or social transformation, this one deeper with an ontological basis in modern society, with the abandonment of utilitarianism and the estrangement of the human in relation to nature and the product of his work, with a turn towards a society of non-exploitation. In this perspective, the change in the human relationship with nature is reflected in the need for technologies that need to be more than sustainable, because it is no longer enough to be renewable, it is necessary that they are also clean – understood as low emissions of Greenhouse Gases (GHG) – to be able to break the catastrophic future that lies ahead. In this context, given the need for regulation and the difficulty in promoting large global pacts for this purpose, such as the possibility of regional, bi- and multilateral regulations, they can play a more effective role in achieving global emissions targets. And so the hypothesis of

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unification of anti-systemic struggles for the formulation of a new low-carbon society arises, based on the concept of the right to existence (or the right to the material conditions of natural and social existence) highlighting that the sense of action of climate justice can establish a meeting of interests and the possibility of strategic use of climate litigation as a mechanism to induce public policies at the subnational levels, national and regional governments, so that they can contribute to the fight against climate change and to the construction of another society, low-carbon and anti-capitalist.

Keywords: Climate Litigation. GEE. Public Policies. Energies.

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INTRODUCTION

The object of this essay is to present some relationships between the notions of energy transition and climate justice. To this end, the text will cover an analysis and a conjuncture related to the elements of touch between the two concepts, first indicating the obviousness, such as the idea of energy justice, which will not be developed since the objective is to look for less obvious, more ontological connections between the objects under analysis; and, how these connections can be engaged, from a theoretical point of view, as the formation of a conceptual basis that connects the various struggles agglutinated in the concept of climate justice, as well as from a practical point of view, so that sometimes as a tactic, sometimes as a strategy of action, they can instrumentalize social movements with categories, tools and instruments that can be handled from an institutional point of view to induce the changes in the speed and intensity necessary to that alarming predictions related to climate catastrophes can be minimized, through mitigations and/or adaptations when it is not possible to avoid them.

In this sense, the text presents some possible forms of engagement to strengthen civil society for greater organicity, as well as the theoretical bases for this organization, through political action and institutional action to provoke changes inducing public policies through the performance of the function of jurisdictional action, is decisively placed in the current context of post-truth and climate denialism in a specific and scientific way in general.

Thus, the text will present some concepts for the formation of a common symbolic field, and then explore the ideas of ontological link between energy transition and climate justice and how both constitute faces of a common struggle against the current form of organization of modern society and the social relations that reproduce it, that is, against the very form of social metabolism developed and reproduced that is in crisis.

The text also develops and presents the two ways to solve the problem, although they are not the only ones mapped, but which are presented here as alternatives to climate breakdown, the first and most radical, carried out through a social transformation, and the second, through a transformation of technological solutions with the development and improvement of new technologies capable of surpassing fossil energy in efficiency. energy concentration, availability and affordability.

Furthermore, the insufficiency and slowness of the process of implementing climate policies to mitigate GHG emissions and their effective adoption, in the model adopted since

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the 1970s of the last century, which depend on the locution of the efforts of the State and the market, are also questioned. Just as the criticism of the technological model is developed from the Brazilian regulatory policy of energies (fuel matrix and electricity matrix), in the context of the climate crisis from the current need for an energy transition, it starts to be reflected beyond the reading of sustainability, using the category of Climate Justice, for this elaboration, especially with regard to climate litigation, in our view, a more essential issue that proposes a deeper rupture in the state of affairs and in the very structuring of political law and legal law in today's society and throughout the twenty-first century. It is also for these reasons that the most superficial and obvious issues, such as those related to energy justice and GHG mitigation, will not be developed in this text. Which is dedicated to issues related to other issues that are understood as absolutely fundamental, such as the necessary engagement of civil society in the struggle for rapid change that makes it possible to minimize the impacts and damage caused by climate change on the planet.

RESULTS AND DISCUSSION

ANTHROPOGENIC GLOBAL WARMING

What is global warming? What are its consequences for human beings? Why is it necessary to reflect on and understand global warming, if eventually the Earth goes through warmer or colder periods? To understand the problem and its severity, some contextualizations are necessary. And the answers to these questions involve understanding the consequences of anthropogenic interference in climate change, so that the common citizen, not a climate scholar, can understand the reason why extreme weather events have happened with greater frequency and intensity and how it would be possible to reverse this situation. Therefore, this contextualization will be carried out, with the gathering of information related to the knowledge of climatology and meteorology, in relation to the climate system and the cycles of glaciation and thawing of the planet, in a didactic way.

As explained by Sônia Maria Barros de Oliveira (2014) and António Heitor (1993), the climate system is composed of a set of interrelated parts that carry out a process of energy exchange between the planet and the cosmos, generating temperature balance. In a simple way, planet Earth is constantly bombarded by cosmic rays and these are partly absorbed and partly reflected/returned to the cosmos, as a result of this transfer there is a thermal balance that provides the development of life on the planet. This Earth System or

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Climate System is formed by five elemental components, which are: air, water, ice, land and vegetation. The planet's temperature is the result of the interactions between these components and the energy coming from the cosmos, especially from sunlight. Thus, structures such as surface ice (from the polar ice caps, *permafrost*,[4] mountain tops and white snow on the ground), forests and vegetation covers of the soil and sand of deserts, the water cycle (clouds and water vapor), oceans and, finally, the earth's atmosphere its gaseous composition and wind cycle, geological activity of volcanoes and groundwater, they are all elements of the great climate system, whose constant interaction causes temperature oscillations that sometimes tend to cool and sometimes to warm.

Each of these microsystems has an influence on the retention or absorption of energy in the form of heat, and/or the return of this energy, being responsible for its reflectivity to cosmic space, thus generating a thermal balance. These microsystems are interrelated, forming the Climate System and act to generate the balance of energy exchanges that provide the stability of the planet's temperature, this balance does not tend to entropy (Heitor, 1994).

Within this process of energetic exchanges with the cosmos, the reflectivity or return of energy to cosmic space is called terrestrial albedo. The albedo consists of this greater or lesser capacity that the components of the climate system have, in the interaction with cosmic energy, especially sunlight, to reflect, to return part of this energy to the cosmos. The Earth's albedo capacity is directly related to the planet's surface cover and the composition of the atmosphere. Thus, surface ice, whether from the polar ice caps, *permafrost*, mountaintops, or white snow cover, is responsible for returning much of the energy back into outer space, reflecting light and cosmic rays back into outer space. The waters of the oceans, seas and lakes on the other hand, absorb this energy that is transformed into heat that heats the waters. The gases that predominantly make up the atmosphere of planet Earth are Nitrogen (N2) available in a proportion of 80% of the atmospheric volume, Oxygen (O2) making up 19% of the volume and Argon (Air) with 0.9% of the total volume, thus, these three gases correspond to about 99% of the volume of the Earth's atmosphere. These gases are inert to light and cosmic radiation, meaning they do not heat up or generate heat in interaction with light and cosmic radiation. There are, however, other gases that make up the atmosphere, such as carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), ozone, (O3) and water vapor that, unlike the

[4] Frozen soil in the tundras of Asia.

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predominant gases, are reactive to light and radiation from cosmic rays. Considering that the molecules of these gases vibrate at frequencies close to that of white light and cosmic rays, notably the infrared rays that make up white light, so that when bombarded by light and cosmic rays they increase their vibration according to the incidence of light, which causes an increase in the temperature of their molecules, by increasing the temperature and by radiation heating its surroundings, this process, here simplified in a layman's and didactic way, is called the greenhouse effect, and the gases that in interaction with infrared light heat up increasing the surrounding temperature, are called Greenhouse Gases or simply GHG.

In this way, considering the conditions of terrestrial albedo added to the changes and variations in the incidence of sunlight on the planet, the conditions for the analysis and understanding of the terrestrial climate system are verified. Regarding the variation in the incidence of insolation, considering that sunlight undergoes changes in incidence due to the Earth's orbit in relation to the Sun, it can be seen that insolation is better represented and understood by Milankovich's cycles,[5] that is, periodically the planet gets closer to the Sun, which in turn periodically also has an increase in activity and due to peaks of solar storms, thus increasing solar radiation on the planet in calculable periods (Oliveira, 2014; Heitor, 1993).

This Earth's Climate System is going through periods of glaciation and thawing over the millennia of the planet's existence. As indicated by the climatological studies of paleoclimatology,[6] the records obtained through the analysis of perforations in the ice at the planet's poles, allow us to have an understanding of the climate on the planet in the last 800 thousand years. The records show that in a cyclical way, with long cycles of glaciation that last for something around 80 thousand years on average, interspersed by periods of melting that tend to last about 10 to 15 thousand years. It is in these periods of thaw that life develops in great exuberance on the planet. The planet is currently in one of these melting intervals that began about 11,000 years ago and is known as the Holocene.

Everything that humanity built and that there is historical record and part of the prehistoric occurred in the Holocene. From the development of agriculture to the Pyramids

[5] Russian astronomer who mathematically described the cycles of insolation that the planet periodically undergoes as a result of the variation of its orbit.
[6] Study and reconstruction of past climates, trying to identify the natural trends of climate change over a long period of time.

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of Egypt to Christ the Redeemer in Rio de Janeiro, all human achievements have been developed in this period of thaw. But in the last 300 years, human activity has begun a process of interference in the climate. The development of industrial society, modern or capitalist, initiates a process hitherto original on the planet, which is unnatural climate change, or rather the interference of an animal species in the climate system.

Until then, all climate changes were caused by natural occurrences, by the interaction of the components of this climate system, which was caricaturally described above in a didactic way, to understand natural processes and form a common symbolic field that allows the understanding of the object that intends to address here.

In other words, the cycles of cooling and warming of the planet until the beginning of modern, industrial society have always occurred due to the interaction of the components of the climate system and the natural cycles of glaciation and thawing described. But, in the last 300 years, the way humanity relates to nature has made the human species the first to interfere in this climate system through its way of relating to the environment and nature through its way of life and social organization.

The modern, industrial society, or even capitalist society, which arises on the basis of scientific and technological knowledge, sought to develop a set of mechanisms to dominate and control nature and replace chaos and unpredictability, with order and foresight, with the social organization of the world. Guided by an ideology or myth of progress, infinite growth and the utilitarian relationship with nature, it developed a relationship of domination and exploitation, which became a guiding model of the economic mode of production and reproduction of social life, culminating in a process of degradation and pollution of all components of the climate system. As the basis of this economic and social development, the driving element of this entire social structure and its development are the energies that thus occupy a basic space in this process and are responsible, predominantly for changing the composition of the gases in the atmosphere, through the production of electricity or the burning of fuels, the production and use of energies are responsible for the increase of GHGs released into the earth's atmosphere in the last three centuries, which generated an increase in the parts per million of carbon dioxide (CO2), the parts per billion of methane (CH4) and nitrous oxide (N2O) in the atmospheric composition. The increase in GHG concentration with the constant and increasing use of energy (in the form of electricity and fuels) has been one of the factors responsible for the increase in the planet's temperature. And in this context, this increase in temperature caused by human action was called

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anthropogenic global warming.

The increase in GHG concentration eventually happens in nature, however, what studies on ice perforations from the polar ice caps indicate is that the current concentration is much higher than previous periods, finding few parallels in the last 800 thousand years of record. This increase in GHG concentration is one of the factors responsible for the increase in the average temperature of the planet, which has come to be called global warming. Global warming, in turn, is responsible for extreme weather events, such as excessive rainfall in short periods of time, longer droughts, extreme heat waves, changes in the places where rainfall is concentrated, causing water crises in certain places and floods in others, in addition to changes in wind cycles; And it stands out, not only the increase in the intensity of these events, but also the increase in the frequency with which these events occur and are repeated. These situations are already becoming commonplace in the headlines of traditional media, electronic and virtual.

Aware of human interference in the climate, Dutch chemist Paul Crutzen popularized the concept of the Anthropocene in the 2000s, to designate within the Holocene, a period in which humanity began to modify the Earth's climate. This concept does not generate consensus in the humanities or is even recognized in climatology or geology, either because it treats all humanity as equally responsible for anthropogenic global warming by placing the blame on a generic and abstract human, or because it does not meet the requirements for geological taxonomy to be determined as a geological epoch. But, at the same time, it fulfills the function of drawing attention to something original, unprecedented in the history of the planet, which is the fact that a living being with its actions is capable of altering the planet's climate, by its way of organizing social life by using nature. For this reason, authors from the humanities began to call the period the Capitalocene, or period of capital, because the understanding of the socio-metabolic relations developed within the mode of production and the reproduction of social life in capitalism are the cause of exploitation and environmental degradation. In this way, responsibility would not be equal and shared in the same way by all humans, but some countries, institutions, companies, citizens and people would be more responsible than others for climate change in the last 300 years. At the limit, it would be enough to call it capitalism, without a specific neologism, such as Capitalocene to say the same. In any case, although both concepts, Anthropocene or Capitalocene, are equally insufficient for the composition of a new geological epoch, in their treatment they draw attention to the climatic problem generated by the warming of

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anthropic global temperature, making the discussion relevant, for this reason, the fact that it places human action and the form of organization of capitalist society, The industrial crisis at the heart of the problem of the climate crisis and global warming turn out to be concepts, relevant from the point of view of climate policy and a symbol of the need for rapid changes in the complex causes of the problem.

This framework thus imposes the need for governments, the market and civil society to take an urgent position, so that together, they can develop solutions to this crisis, which is conventionally called the climate emergency, whose effects are developing very rapidly at the beginning of the 21st century, affecting humanity and putting it at a crossroads. what choices must be made, so that the situation of this global climate emergency does not worsen, and that policies and actions can actually be developed to mitigate GHG emissions, as well as adaptation strategies and policies so that those most vulnerable to the eventual and already inevitable social collapses caused by extreme weather; and that thus, they can resist and survive the climatic events that will hit them and react, fight so that the results of policies to combat global warming take effect and warming stabilizes and perhaps, the global temperature can cool again before the point of no return is exceeded by GHG emissions.

Thus, the general picture is not simple, but there are still other factors to be overcome, because not only the technical, scientific and socioeconomic issues involved, it is still necessary to consider in this framework an additional problem, which is the current global network of disinformation that, associated with scientific denialism in general and anthropogenic global warming in a more specific way, They also cause disturbances in the political and social order, to the point of making it impossible for mitigation policies to be implemented or even negotiated. This is due to false information, conspiracy theories or even scientific theories that formally oppose the evidence of anthropogenic global warming, by attributing the causes of the climate crisis to nature and its cycles. And with that, the political defense that nothing should be done, since human action would not be responsible for climate change.

In this sense, Noam Chomisky and Robert Pollin (2020) indicate that although only 3% of American scientists somehow have some adherence to global warming denial theories, their voices have greater social repercussions than those of the 97% who adhere to the explanation. The voices of this 3% were enough for, in a world of dissemination of messages of engagement on social networks and with a discourse that generates

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adherence for the most immediate but also important issues, paraphrasing the authors, it is easier to think about stopping or slowing down the pace of economic development (which means a decrease in jobs and income) for the benefit of future generations, when there is no daily concern with the 'how' food will be put on the table to feed the family the next day. In other words, even in the face of increasingly frequent and larger evidence and disasters, the basic need is an extremely efficient element of convincing and persuasion. So the fact that 97% of climate scientists in the United States form a consensus on global warming, the political discourse of denial of anthropogenic causes, is still capable of convincing and mobilizing a lot of social support. In Brazil, according to José Eli da Veiga (2014), the scientific consensus among experts is also very broad, but the policies to combat global warming, both internal and external, are contradictory, to the point that the author speaks of a climate 'misgovernance', which associated with the efficient network of disinformation that exists in Brazil, disarticulates and eventually hinders the implementation of simple goals, such as fire control, *vg.* (2014, p. 104-119).

Thus, even with the data and reports of the IPCC, an acronym for Intergovernmental Panel on Climate Change,[7] there is still a difficulty in achieving consensus in the countries at the summits of international relations, as well as internally on issues of internal support for development and signing of agreements, taking political positions and the practice of public policies for effective reduction of emissions for GHG mitigation.

ENERGY AND THE ENERGY TRANSITION

The climate crisis and global warming require current measures to minimize present and future impacts that threaten life on the planet. The current climate condition has its origin in the human actions of the last 300 years, which have historically contributed to the results of change and aggravation of problems related to the planet's climate balance. In this way, the energy transition presents itself as a possibility to induce social and technological changes capable of contributing to the containment of damage by mitigating the GHG footprint of modern society and also contributing to the debate of which society we

[7] The IPCC - *Intergovernmental Panel on Climate Change* was created in 1988 and is responsible for periodic climate monitoring and the preparation of guiding documents for global debates with reliable information, prepared by a network of scientists responsible for research, analysis and preparation of reports and analysis of climate change monitoring data as well as development, through software simulations of models of possible scenarios of evolution of the consequences of human interference in the climate, with 3 three levels of modulation of results (optimistic, moderate and pessimistic in relation to the fulfillment of emission targets based on the data collected in the reports). For more on the IPCC, visit: http://www.ipcc.ch.

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want.

In this sense, an energy transition is based on the assumption that climate change caused directly by human action on the planet is an unnatural problem, that is, a socially constructed problem, and, therefore, that society has a duty to solve it collectively through common efforts.

In fact, there is also a consensus that not all human beings have contributed equally to the current state of climate emergency (Rammê, 2012). Thus, it is clear that this action has a direct relationship with the way modern society is organized around energies and their relationship with nature, in a relationship of exploitation (Arévalo, 2022).

Thus, a difficult theoretical-practical web emerges, in which solutions must be thought, reflected and understood within a relational dynamic between current and future needs, whose actions result in a possible collision course of the rights of the present generations (to growth, development, access to technologies, amenities and facilities of modern life, in addition to integration) and the right to exist on this planet of the current and future generations of humanity and other species of humanity. life that are at risk in the face of planetary warming.

In this context, the idea of sustainability, forged within this model of social production as a palliative measure, is no longer sufficient to stop the damage that can make unfeasible a possible future in which human and non-human life are sustainable, or rather, a future in which the existence of life on this planet is possible, and in which the human species can develop and prosper.

The idea of a sustainable development that allocates the need to balance the triad of institutional values (public and private) in a governance that balances the social-economic-environmental, has been shown to be insufficient over the last 70 years (particularly from the 1970s to the present), since history always denotes the preponderance of the economic factor over the others (social and environmental) since the publication of the '*Meadows* Reports' (1968-1972) and *Brundtlend* (1983-1987), respectively 'Limits to Growth' (in a more pessimistic tone) and 'Our Common Future' in an optimistic indication of sustainable development as a solution to the problem,' until COP26 in 2021 and COP27 in 2022, what was observed were few concrete advances towards changing man's relationship with nature and the proposed social objectives.

Any observer attentive to COP26 can see that the most important thing was how the regulation of carbon trading would be carried out, in its economic and financial frameworks,

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with the issues of energy justice (environmental and social issues) being absolutely ancillary, which were being debated on the margins of interests in the billionaire carbon credit market.

But, not only that, leaving the fate of humanity in the hands of the market does not seem to be the best way, this is evident when, for example, we analyze the way large corporations and energy conglomerates decide and develop their action strategies, putting the profit of shareholders and the distribution of their dividends always ahead of any other result and business objective. The case of ExxonMobil, described by Chomsky and Pollin (2019), is an example of this reality, when in the 1960s it financed a research, developed by its scientists, which concluded that the action of the company and fossil energy companies represented a great threat, as it effectively contributed to global warming. The company's board of directors received this information firsthand, before any warnings or surveys published similar results. Aware of this information, the conglomerate's decision-making councils chose to hide the results. But not only that, when in 1988 the first scientific document indicating the causes of global warming and establishing relations with the fossil energy sector appeared, the company began to develop denialist campaigns, in defense of the use of fossil fuels and calling into question the results of the research released. Even the same results being known to the company's top decision-making echelons almost 20 years before the 1988 disclosure. More recently, ExxonMobil opposed NASA reports on the state of the art of global warming, a survey that disclosed 97% of American scientists recognize anthropogenic global warming as a reality, but the company, by carrying out an extremely efficient campaign of disinformation, managed to achieve its result, because even after NASA's campaigns only 20% of the citizens of that country are aware of the consensus among scientists, the strategy was the same, sowing doubt about the polls and publishing other forms of half-truths (Chomsky and Pollin, 2019, 77 and 79).

In the limit, it is not possible to leave the fate of humanity in the hands of those who make a lot of money, make an immediate profit from the *status quo*, are not intelligent or rational, or even a possibility that should/can be suggested.

On the other hand, the constituted powers, legislative and executive, whether in internal regulation or in the development of globally centralized policies, also do not advance for various reasons, whether due to the limits of national interests and/or energy dependence for internal development, or due to the maintenance of leadership or positioning in the multilateral world or the maintenance of *status* of superpower; or even

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internal issues in which environmental policies can be vetoed by denialist political projects, such as Donald Trump in the United States or Jair Bolsonaro in Brazil. The paralysis of the legislature internally, in the face of the need to maintain agendas that generate immediate political support and observable engagement through *clicks*, likes on social networks, influence the direction of legislative agendas according to customs or withdrawal of rights when those of alienated bases in relation to global warming due to very successful disinformation campaigns; even with the consequences of extreme weather events already being felt in the present, with immediate consequences and with the potential to worsen in a short period of time, also make the political solution negotiated both internally and internationally inefficient or even with a difficulty in advancing on urgent and sensitive issues.

In this sense and context, the development of the ideas of Climate Justice and energy justice[8] seem to be more appropriate to the speed of the necessary responses to the severity of the climate crisis experienced today, as they introduce means of coercive jurisdictional protection to the realization of GHG emission targets and policies used by civil society, in addition to reparations imposed on Governments and against Transnational Corporations (conglomerates), and in a more appropriate perspective, the imposition not only of reparation, but of the possibility of imposing the reconstitution of the *environmental status quo*, which would consist of the full recovery of nature to the state of affairs prior to the harmful event, in relation to the impacts caused by the action/omission of these agents, who, in the limit, are the ones who profit the most from out-of-control emissions, serious environmental accidents, or even with the underreporting of GHGs, actions that are responsible for the current climate crisis. We will return to this more legal point later in the text.

Today, the energy transition presents itself as a turning point (Capra, 2021) or inflection point in human history and for its success, energies cannot only be renewable (sustainable), they need above all to be low GGE emission, with a low carbon footprint in their production chain, that is, in addition to being renewable, they need to be clean, with low carbon footprint/emission.

[8] The concepts of climate justice and energy justice, in addition to being a concern and a right, bring a measure of procedural guarantee, through which a series of specific procedural and judicializable remedies can be handled both in domestic and international courts in the pursuit of the effectiveness of the goals of combating climate injustice and energy injustice, that make it possible for measures to combat the climate crisis and equal access to clean and renewable energy to actually be implemented, even if through judicialization.

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In fact, if the energy transition is limited to producing renewable energies in a predatory way, as the predecessor energies were and are produced, it will not be possible to reverse the global warming situation, so that future generations of human beings can survive on the planet, because the point of no return will be passed, and the consequences of this event are unknown. But the forecasts do not point to manageable scenarios.

For this reason, at the limit, the energy transition must be thought of as a societal transition, a social transformation, with the restructuring of the forms of relationship between man and man and man with nature, that is, in a reunion, re-enchantment, or even with the end of the estrangement between man and nature and the estrangement between man and the product of his work, that is, a new society based on another form of sociability in which another possibility of social integration is developed, changing the way humanity integrates and how it relates to each other and to nature; and fundamentally, to understand themselves as part of nature in the great ecosystem that makes existence on this planet possible.

Thus, in the foundations of the energy transition there is also a criticism of Cartesian science and its analytical and fragmentary view of society and the disconnections between areas of knowledge in the face of the necessary hyperspecialization developed by scientific understanding, which makes it impossible to see the general picture, the whole, which is lost in the hyperfragmentation of objects. Still, within it is the very critique of the modern ideology of progress and development without limits, in the face of a clearly limited world. Thus, a systemic, holistic reading of the problems, a vision of the concrete totality of their multiple determinations is fundamental for an adequate response, whether from a scientific point of view, from a technical point of view, or from a political or economic point of view (Capra, 2012; Kosik, 1976; Morin, 2006).

And in this sense, the energy transition, carried out only as a transition of the energy matrix, from fossil energy to electricity, does not change the way we relate to nature and to each other, but rather, it maintains and reaffirms the predatory form of relationship with nature, with the maintenance of the same structure of economic exploitation of the relationship, and it is noteworthy that in this sense, this transition model will not be able to meet the GHG emissions targets, with the reductions in water and soil pollution levels, that is, with a real confrontation of climate change.

In this way, thinking and reflecting on the energy transition is also a reflection on the relationship of the human in its singular context, but also in a framework of totality, because

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collective and individual actions must be guided by an understanding that either the problem is faced in its radical causes or humanity will be doomed to self-destruction.

In this context, it is essential that each State develops coordinated actions in the global scope of goal planning, but it is equally necessary that national and subnational actions are planned, organized, controlled and inspected so that the goals and standards are achieved and verified effectively, with a guarantee of verifiable results for policy management.

And it is precisely for this reason that a homogenization of energy treatment may not be the most appropriate alternative, as it requires scalability and an attempt at universalization, a technical-economic criterion that, in the limit, is one of the factors that contributed to the current climate crisis situation.

Thus, global plans of emission targets and limits must be agreed, but the implementation of mitigation policies and actions is a dramatically local and regional matter. There is no way to standardize, globally standardize, the *mix* of energies without galvanizing the structure of exploitation of nature and thus putting at risk the production of sustainable and clean energy, by linking these forms of energy to global conglomerates that meet only the imperative of profit. Since, as the twentieth century and the beginning of the twenty-first century have already demonstrated, production on a large scale will also be very difficult, although it may be renewable, and in this context, clean energy is left aside in the face of the need to expand the profits of the energy business, controlled by large global oligopolies, as is currently the case in the oil industry (Arévalo, 2022).

Based on this premise, it is essential that each State develops its strategies according to its local and regional possibilities of access to clean energy, as well as develops its tactics and transition strategy according to the local natural vocation associated with the development of local technologies with exchange, partnerships and international cooperation for technological development.

Thus, the planning of an effective transition cannot rely only on *fortune*, but must be an action of *virtù* associated with fortune (Machiavelli, 1999), both engaged so that the development of public policies, aligned with precise metrics of calculations and public and social control, can guarantee the right to existence, the material conditions of existence of present and future generations, with the possibility of a healthy, balanced life with energy and social justice in a balanced environment, with available water and a climate favorable to the existence of plural human life and non-human life (Assis *et all*, 2023; Assis *et all*,

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2024).

Another relevant issue is that, if, on the one hand, it is not enough to think and act with an energy policy that seeks only renewable energies and low GHG emissions,[9] on the other hand, it is essential to think and reflect on the various models, modes, routes, and forms of transition, without myths, prejudices, and determinations that are not given by reality and its scientific understanding in its sense of totality, multidisciplinary and complex.

In this sense, the energy transition will be different in each region, country, continent and hemisphere. In fact, the global North and South will not necessarily follow a single path of energy transition, relational to their modes and energy production routes. But this does not prevent the standardization of measures, metrics and objectives, which must be common in the sense indicated in the sense of combating climate change by human or anthropic action.

The energy transition is an issue that involves energy for industrial, agricultural and livestock production, mining, for food from production to food preparation, for health from personal care to highly complex exams, for the mobility of goods and people, in short, all social, political and economic life is ballasted by the energy that is consumed in daily life. In this sense, the way of life of social production and reproduction is all based on the way our society relates to energy (its production, distribution, consumption and reproduction).

In a way, the transition has been assumed as the transition from the Petroleum society to the Electricity Society, as indicated by studies such as Santos (2019, p. 143), 'energy transition, another name for the electrification of the economy', but the *energy mix* in different sectors can have different sources, even to generate electricity. The path should not be the one that is presented as simpler or even as a given, but the one that actually leads to a society with broad access to clean and low-GHG emission energies, and electrification is not necessarily a low-emission path as shown by the studies by Öivind Andersson and Pål Börjesson (2021). And this change requires society to rethink its structuring in a radical way.

In this sense, the theoretical critique carried out from the concept of capitalocene

[9] Renewable energies, roughly speaking, are those in which the cycle of production-use-reproduction does not exceed that of a human generation, that is, it is possible to be reproduced with man and his existence as a time reference, that is, the criterion of GHG emissions and polluting potential are not necessarily incorporated into the sense of being renewable, For this reason, it is necessary to think about renewable and clean energies, which are concerned with emissions and pollution, which is why, for example, the German energy transition model put an end to nuclear energy, which is absolutely renewable, but is not necessarily clean, because the polluting potential is very high in relation to inevitable accidents over time.

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gains relevance, because in this context of discussion, since modern society and its way of life and production are in fact largely responsible for the current climate crisis, a new form of social organization is needed to respond to the climate crisis and the energy transition must be one of the driving engines of this societal change, to guarantee human existence on the planet.

CLIMATE JUSTICE AS AN INDICATIVE ELEMENT OF THE STRUGGLE FOR SOCIETAL CHANGE

Gomes Canotinho in Rule of Law (1999), carries out a historical and theoretical construction of the development of the sense of the Rule of Law based on the understanding of the Rule of Law, understood as the Absolutist State, unlimited that does not submit to the laws that arises with the crisis of feudalism in Europe which, through historical processes of transformation, economic, political, philosophical and scientific, it is transformed into the modern state, it becomes the rule of law, liberal, contained and conformed by fundamental rights and subject to legality; this state, after the atrocities of Nazi-fascist authoritarianism, conforms to the Constitutional State of Law, with the recognition of the normative force of the Constitution that subordinates not only formally, but materially legality and the rule of the majority, arriving at the present time, to the Environmental Rule of Law, a concept that is emerging in the German political-constitutional doctrine (*Umweltrechts-Staat*), in which, in addition to the guarantees already achieved (which must be maintained), he would reveal the need for the State to assume responsibility and guarantee 'environmental self-sustainability', highlighting the author that:

> The first is the obligation of the State, in cooperation with other States and citizens or civil society groups, to promote public policies (economic, educational, planning) guided by the requirements of ecological sustainability. The second relates to the duty to adopt environmentally friendly public and private behaviour in order to give concrete expression to the assumption of *responsibility by public authorities towards future generations*.
> Finally, the state of the environment is a state of environmental justice. Again, justice points to the requirements of equality, otherwise the environmental risks represented by industries, waste, discharges, will be moved to depressed areas or to states without ecological defenses. The plastic formulas used in environmental rights, in domestic, international and Community legislation, such as those of "polluter pays", "producer-polluter pays", "prohibition of waste tourism", intend to condemn some rules of environmental conduct where, precisely with technical and scientific requirements, material principles of environmental justice are not alien (Canotilho, 1999, p. 17).

In fact, in our perspective, the development of a Constitutional State of Environmental Law, or Constitutional State of Climate Law, does not constitute a new form

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of authoritarian action, on the contrary, as Canotilho indicates, it is a development without loss of the conditions already achieved in relation to the limits of the powers established in the face of the rights of citizens to exist in the present and not to extinction in the future, But there are some new elements in this perspective brought about by the climate emergency and the awakening of climate justice, in addition to an environmental right.

The idea of Climate Justice has within it something more material than the ideal abstraction contained in the idea of 'future generations', the protective core of the environmental protection system, forged under the sieve and aegis of the notion of sustainability. Climate Justice is something else, it is a justice of the now, to guarantee material conditions of natural and social existence in the present, enabling a future in which the existence of human and non-human lives are possible, expanding the meaning of future generations to the material concept of the right to material conditions of existence, natural (related to the rights of nature) and social related to human rights in their present and historical concreteness.

In this way, Climate Justice establishes a material and concrete link that has been able to engage various anti-systemic and anti-capitalist struggles in its core of demands. The ontological element that unifies these struggles is the right to material conditions of existence, seen in two dimensions, natural existence understood as the metabolic conditions of the human body and its relationship to a natural environment, extension of vital needs and integrated into nature (from this point of view nature and the human body are reintegrated into the metabolic relationship that guarantees the emergence, development and withering away of biological life in the ecological system integrated into it), and on the other hand, the material conditions of social existence, such as subsistence conditions, such as clean water, adequate food, a roof over the head to protect from extreme or non-extreme soil and climatic conditions, low GHG emission energy for work and production, the management of vital time as and for the expression of political and cultural existence without threats on the basis of race, ethnicity, sex, gender identity, enabling the breaking with the utilitarianism that guides capitalist society and the relations of exploitation of nature and man.

These struggles, which are systemic alternatives to the current socio-metabolic model, can, based on the idea of the Right to Existence (the right to material conditions of natural and social existence) as a unifying abstraction of the anti-extinction struggle, against the logic of profit and development without limits, unify the social struggles agglutinated

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around the demands of Climate Justice, such as the anti-racist, anti-patriarchy (feminist), anti-LGBTQIA+phobic, anti-immigrant (especially in relation to climate refugees), anti-worker and anti-poor struggle.

In this way, it constitutes a dimension of unification of fragmentary and fragmented social struggles that can become catalyzed and unified by the concept of the right to existence or rather the right to the material conditions of existence, in its two dimensions, the natural and the social (Bernando, 1991, 2000).

The right to existence, which appears as an antipode, or antithesis to the right to property in the French Revolution, for Seferian (2020, p. 223), and is presented in a double structure, both of the rights conquered and useful to the maintenance of the material conditions of biological existence (through access to wealth product of work, that is, through economic existence), and from the political point of view in the expression of the possibility of struggle mediated by self-organization and management. In this perspective, the right to existence would have a double dimension and a double structuring (as a Political right – the one that guarantees the possibility of participation and influence as an expression of the group in the public space, in an understanding close to the understanding of Antônio Negri (2002), contained in the form of constituent power, as a power of organizing and propositional political action in civil society – and as a Legal right, being those that can be judicialized and demanded in the within the structure of the judiciary, that is, those that become an extension of the subject of law, in the representation of the legal form described by Pachukanis (2017).

From the point of view of the double structuring, as a right, existence structured as a political right, has the potential to reconcile the political and economic dimensions of the working classes – and their struggles from individual to collective within the struggle against all forms of social oppression (expressions of capital) through this linking of all struggles, having as a common characteristic the struggle for the material existence of the human and other species against capital, social relationship basis of structuring modern industrial society, based on the exploitation of man by man and nature by man, that is, extrapolating the natural limits of the conditions of bourgeois existence diffuse in the structuring of modern, capitalist society.

In this sense, that catalyzing can be carried out by the idea of climate justice, to tactically, within the system, create anti-systemic alternatives, with the guarantee of material conditions of existence for humans and nature, with the induction of public policies to

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overcome the order of capital, with the rupture of the logic of profit and the imposition of a logic of cooperation and survival, beyond the idea of sustainability (regulated capitalism).

Thus, the idea of climate justice includes anti-systemic ontological elements that can enable the development of other alternatives in the environment of social struggle and dispute, such as the development of living well (or living well), degrowth, the rights of nature, deglobalization, ecofeminism and other perspectives that are oriented towards the construction of relations of non-exploitation and the guarantee of rights of nature, with perspectives that point to the end of anthropocentrism, utilitarianism, patriarchy, racism, LGBTQIA+phobia (Buttler, 2011; Gudynas, 2019; Solón, Azam, Aguiton and Beltran, 2019; Seferian, 2020).

In fact, far beyond the Kantian proposal, with its individualistic action ethic in the understanding of Climate Justice proposed by Mary Robinson (2021), the concept of Climate Justice includes and has structural elements that can represent an ontological shift that guarantees the effectiveness of anti-systemic social struggles, as it is an abstraction linked to this material and concrete element, that people feel in their daily lives, in their daily existence, which is the guarantee of the material conditions of their existence and the existence of others (human and non-human), a suffocated cry of humanity, which from time to time resurfaces in moments of crisis, or express itself in the desire that arises in artistic expression, sometimes as in Beethoven's 9th Symphony - *Ode an die Freude*,[10] in another as Lennon's Imagine,[11] but always the same desire.

This ontological element, in practice, enables social groups fragmented in civil society to organize their struggle collectively, and thus to plead for concrete actions in the guarantee and realization of the rights to existence (material conditions of existence), handled with the Judiciary in the realization of their rights and induction of public policies.

The problem here is that, as Lenio Streck (2015) points out, the Judiciary does not make public policies, but rather induces change, as observed in cases where the law is no longer adequate to the ethical and moral conditions of its time and that, in this way, the text must be articulated with the axiological dimension of the society in which it is inserted, it can authorize social advancement in the struggle for their rights and for their

[10] *Freude, schöner Götterfunken, Tochter aus Elysium, Wir betreten feuertrunken, Himmlische, dein Heiligtum. Deine Zauber binden wieder, Was die Mode streng geteilt, Alle Menschen werden Brüder, Wo dein sanfter Flügel weilt.* Joy, beautiful spark of the gods, daughter of Elisha, we enter your sanctuary numb, in epiphany. Your magic ends division, differences, and again. All men live as brothers, under his wings.
[11] *Imagine all the people. Livin' life in Peace. You. You may say I'm a dreamer. But I'm not the only one. I hope someday you'll join us and the world will be as one.*

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implementation. It is at this point that the induction of policies that represent this new ethics becomes absolutely necessary when the jurisdictional function acts, to ensure the effective protection of these rights, by responding to the demands formulated by civil society as a means of removing executive and legislative powers/functions from inertia, inaction and paralysis. In other words, it is an action as a response mediated by judicialization in the face of the inertia, atrophy or paralysis of those constituted powers, in this way, it is not about judicial activism, but about the recognition of legitimate and grounded social struggles, whose effectiveness of rights has been denied by the dysfunction of others.

In view of the paralysis of the Executive and the Legislative, it is up to the Judiciary, when responding to legitimate demands, based on the right to the material conditions of natural and social existence, and thus to carry out specific protections that guarantee practical results of preservation, realization or concretion of the rights to existence, or their equivalents in the legal system by prioritizing the perpetuity of the conditions for the maintenance of life (human and non-human) on the planet.

Thus, this movement can induce the action of the State in the protection of the environment and the implementation of climate policies at the domestic level and of the States in the law of regional and global Human Rights systems through the jurisdictional provocation made by organized civil society through these anti-systemic movements.

An absolutely valid alternative that can have effects is the request for injunctive relief of environmental crimes, or even the specific relief of reconstitutions of the *status quo* to accidents and disasters. One of the reasons why corporations and conglomerates do not anticipate accidents is the costs of containment actions and reforms that prevent collapses or disasters. Disasters such as Mariana and Brumadinho, for example, are announced accidents whose calculations for them to be avoided are made, known, but which end up being higher than the values of compensation and reparation actions after the accidents. When the judiciary starts to impose on companies and the State that inspects the activities the obligation to decontaminate, requiring practices to recover and reconstitute the environment to the natural *status quo* as before the accident (Gudynas, 2019), when considering the very high costs for this to be done, the practices of companies and Governments will be different, because the costs of environmental reconstitution, in years and investments, will force the prevention agenda that will make more financial sense.

From this perspective, the extension of the meaning of Climate Justice indicates a possibility of ontological change in society. The central element of this ontological change

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would be centered on the abstraction characterized by the material and concrete element, a component of the law, the material conditions of natural and social existence, unifying the already existing struggles agglutinated by the understanding of Climate Justice.

Still in this sense, a deeper fundamental shift would be characterized by a possible new understanding of the legal system, since the axiological structure of fundamental rights would be altered, since, in the plan of organization of the axiological hierarchy, the material conditions of existence would precede or be at a level prior to the rights to human dignity, the right to life, individual freedoms and equality; since without material conditions of existence (natural and social), there is no way that any of the other rights can be exercised, or even, without the guarantee of these, that society itself exists.

On the other hand, climate litigation as an inducer of rights (reparation, accountability, recovery, financing and equity) and public policies (in the face of the inertia of the majority constituted powers and in the face of climate denialism in society), the performance of the jurisdictional function with its duty of counter-majoritarian action of the State, ends up being the activity/function that can lead to changes more quickly (even with all the jurisdictional problems) in the induction of the State and the market towards the implementation of policies to mitigate GHG emissions. This is due to the difficulty that universal and totalizing norms, arising from a centralism of international action, thus becoming one of the possibilities of action in a polycentric organization of control (mitigation and adaptation) of climate change guided by organized civil society in the claim of rights to material conditions of existence through the notion of Climate Justice.

The discussion of climate change law, Climate Justice and energy justice and the possibility of judicialization from the perspective of the protection of existential and intergenerational rights, as one of the ways to accelerate the process of achieving the sustainable development goals is an alternative. Climate justice as a guarantee of the effectiveness of sustainability, political-economic impositions – sanctions, reparations, environmental recoveries imposed via specific protections of obligations to do, not to do and provide) to induce social practices towards a low-carbon society mediated by the action of civil society (individually and collectively), is already possible. And it can be used as an inducer for the realization of the energy transition in domestic environments (local judiciary) and globally in the Regional and Global Systems for the protection of Human Rights.

The notion of Climate Justice has the nature of a guarantee and remedies this gap by establishing the process for guaranteeing intergenerational rights to be claimed both

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internally and in International Courts, which was not contemplated in the sense of sustainable development, as they are treated as objectives, goals, not as rights and principles of law. But, beyond that, also for less abstract struggles, for concrete issues of our time, such as the struggle for the right to existence (human and non-human), with an advance to the logic of exploitation of modernity, a logic of coexistence of life, cooperation and a relationship of protection and care, all shaped in the sense of the rights of Nature and the right to the material conditions of existence.

Our social structure daily denies the right to existence (in its double dimension and structuring), that of the material conditions of existence (exploiting, excluding, segregating, discarding and killing) in the economic face and, at the same time, by denying economic existence, the right to the existence of the voice, visibility of the organized struggle, of the collective organization, of the possibility of self-determination and management of useful time (political dimension) is suppressed. This is true for over-exploited, precarious, uberized work, as much as it is for issues of gender, race, the environment, and climate refugees, in addition to other contemporary struggles, an expression of a counter-systemic resistance. They all have this fundamental abstraction in common. The struggle for the right to existence, which can be expressed beyond the general juridical form of law. In an expression of an anti-legal law (not politically domesticated by the limits of liberal-bourgeois legality within the constituted powers), but preserving a radical expression (of the constituent power as a power of action and creation) of a specific form of law (escaping the legality of the general legal form of law described by Pachukanis, 2017).

Containing the creative power, an element of chaos opposed to the modern order, but which arises from this modernity, developing on the debate of climate justice as a possibility to gather struggles, build a tactic, for action of ontological change in the framework of the climate crisis and global warming to socially overcome this imbroglio.

Climate Justice, by bringing together, and nucleating the counter-systemic struggles, can from an abstraction that does not assimilate the general juridical form of law (which are not co-opted and assimilated as an abstraction that universalizes the commodity form in the general theory of law), to a theory-practice (praxis) of a specific law, inducing concrete changes through the action of civil society, in groups organized around the abstraction of the right to existence (material conditions of existence – social and natural). This popular organization could take the form of popular councils for the rights to existence, they could

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organize and combat all dimensions of the crisis of the Capitalocene, that is, of capitalism within the Holocene (Scartezini, 2024).

Classes and social groups today can be brought together in councils that oppose the right to the unlimited expansion of profits, based on the struggle for the right to existence. In this sense, the right to existence must be understood as more than a right of the working class, as a specific right with the characteristic of incorporating into the anti-capitalist struggle other social groups that suffer specific dimensions of the oppression of capital, because it is a right that is imposed in an anti-capitalist way, against capital, against the way modern society is structured. Thus, it must be considered that there is in the expression of the right to existence a double dimension of material existence, that is, the right to material conditions of social existence (economic and political) and the right to material conditions of natural existence (rights of nature – human and non-human life and the right to non-extinction), and in its aspect of material conditions of political and economic existence, we see the social struggles for the visibility and equality of LGBTQIA+ groups, feminism and the fight against patriarchy, the poor, workers, etc.

From the point of view of classes, the working class is not the only one that finds itself in a situation of opposition of interests with the capitalist classes (bourgeoisie and managers), the complexification of the production system, introduced new anti-capitalist struggles within the system, via fragmentation, this fragmentation at a certain moment in history, served the search for legal rights (integrated within the logic of the general theory of law, Thus, assimilating in the universal abstract form of commodity) to each of these classes and social groups, which, when assimilated into the system, stabilized the conflicts, in the game within the rules of bourgeois civil society of concessions and setbacks of rights for this game of conquest stabilization and intensification of social cleavages, as the cyclical crises could become a bargaining chip. In which the achievements and losses perpetuate the social structure that in capitalist terms grows as the conflict generates opportunities for new profits, that is, the logic of capitalism to develop from social conflicts and the assimilation of anti-capitalist struggles and proposals absorbed within the system, becoming a commodity in the form of conversion into legal rights (a sociometabolism of capital). The most recent example of this form of absorption occurred in the new Latin American Constitutionalism, with the inclusion of the idea of "*Pacha Mama*" and "rights of Nature" in the Constitutions (Bolivia and Ecuador, *vg.*), but which soon after were co-opted and domesticated by the logic of capital exploitation in infra-constitutional regulation and political

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practice that did not carry out the proposals contained therein, and their abstract content was filled by the logic of exploitation and profit (Gudynas, 2020).

In the same way, the modern legal logic, in general, based on the idea of limiting and conforming the entire struggle (revolutionary in a stationary struggle from the constituent power – unstable, chaotic and creative – to the constituted power – stable, ordered and controlled/dominated), so that every struggle consolidated in constitutional terms is stabilized and controlled in the system, which by the control of constitutionality itself, which, It establishes goals for development and possibilities within the defined rules of the game. In other words, nothing beyond or nothing below the text is assimilated, thus, the freedom of political creation and the creative power of the revolution is accommodated, bridged, contained, conditioned and imprisoned within the progressive and retrogressive limits of the written text. Thus, the structure of the State guarantees the established order, in its clearest and most precise sense, of stabilization of the current social system. These are the objective limits of any citizenship, or of any reformism. But that the social struggle ontologically guided by the right to material conditions of existence has the potential to break, especially in its structuring as a political right, in the capacity for centralization of struggles against capital, in the expression of a capacity for organization and political creation limited by the creative power of demand.

Indeed, these are some considerations that can and should be reflected from the point of view of the possibility of a social/societal transition. But, as previously indicated, there is not only the possibility of a social transition, but also the possibility of a technological transition, and here it is highlighted, one is not exclusive in relation to the other, on the contrary, both are conditions for overcoming the current system.

Regarding the possibility of a transition guided by a technological revolution, it is possible to observe in the development of technologies that can be used by people in the production of their own energy in a clean way, with low GHG emissions, as some of the constraints that can be overcome in the field of technological development.

In this way, the idea of energy justice can be observed as a society that organizes itself in relation to energy production in a different way, thus, the question arises: should society be guided by scalability or privilege local means for domestic and local use of its energy(s)?

Biofuels and photovoltaic solar energy represent possibilities for local solutions to meet local needs, in the Brazilian case they should be centralized in global conglomerates

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or be free to the local and collective development of these energies. On the issue of scalability, one of the barriers to be overcome by fuel technologies, when reflected under the logic of a non-exploitation society, is it reasonable for scalability to exist? Why is it scalable? Isn't this exactly one of the causes, the origins of the environmental problem and the climate crisis? In this sense, the idea of energy justice must be guided by the plurality of modalities and local scalability (locally scalable for individual and collective local use) and clean energies scalable globally/regionally for large energy consumers, not necessarily in equal or linked matrices. That is, the development of local energy for local consumers, coming from renewable sources of multiple production routes, and oriented according to the characteristics of each location considering the fleet and energy: local and global.

Brazilian energy transition has problems of model choice and direction in the organization, some of which are listed here, as problems of current choices and the mistaken role attributed to biofuels in the transition. Since these are treated as a means, or as fuels of transition from an easy mobility model to an electric mobility model. That is, they are not treated as an important part of the solution to the problem, as an end. These should have the function of reducing the CO2 footprint of the vehicle fleet, considering that in the context of a life cycle analysis, biofuels are more carbon efficient in hybrid vehicles with multi-fex combustion engines than vehicles in other engines.

The use of biofuels in electric motors powered by energy cells – electrochemical conversion of ethanol, etc – is also a promising technological solution, which associated with the development of a better public transport network could largely solve the problems of GHG emissions.

Thus, as the social solution is more difficult to build, the rupture with the mode of production, the easiest way is through the technical revolution of energy, thus, biofuels associated with hybrid vehicles and partial electrification, especially vehicles powered by energy cells (hydrogen EVs, obtained by various routes, especially ethanol), with the expansion of the efficient public transport service would already be an alternative fully applicable to Brazil and part of Latin America to overcome the issues of regional GHG emissions.

Brazil needs a different energy transition policy and strategy from the existing one. As Biofuels taking a greater role to contribute in this context. In addition, the understanding that a low-carbon society and world will not be of a single fuel or a single energy, but of a

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plurality that may have different energies for different purposes of vehicle use, such as the commercial fleet and (vs) individual fleet, having non-standard engines between them.

Considering that the exits of societal transition can be very long and that it is not known if there is this time available before warming brings results in the impossibility of recovering the material conditions of natural existence, technological solutions can meet this need, but bearing in mind that it is social transformations that can attack the root of the problems faced and therefore must be kept on the agenda of social debate. But, given the urgency of ways out of the effects of the climate crisis, technological changes are more feasible and rapid implementation, that is, in a pragmatic way in combating the imminence of catastrophes and the possibility of extinction of life, they are urgent measures of easier social assimilation, and therefore will be in constant dispute between market agents to maintain the exploitative system of capitalism in its socio-metabolic reorganizations, But a new form of social metabolism that is a preserver of life (human and non-human and its natural conditions and of existence), non-exploitative and inclusive (preserved from the material conditions of existence) must be gestated in the process of development of these new technologies, that is, technology is an emergency solution that must be included in a perennial solution. from a transformation in society to an anti-capitalist society. Hence the relevance of the use of existing low-emission technologies and the investment in research, development and innovations in these low-GHG emission technologies, and their implementation to replace high-emission technologies must be increasingly concrete and constant. It is still important to consider that the focus of the transition should be production, the production relationship, there is a constant focus on energy consumption, but exploitation relationships arise within the scope of its production. Consumption is an accessory and secondary factor in the process of exploitation. That is why the self-generation of energy for consumption is something of relevance, which, in addition to reducing the need for large explorations and large energy projects, can change the relationship of exploitation, in the possibility of self- and cogeneration and production for use and distribution (both onerous and free for collective use).

CONCLUSION

It is concluded that in the relationship between energy transition and climate justice there are immediate and apparent links, but there are deeper relationships of an ontological nature that can directly contribute to a social transformation, avoiding climate catastrophe.

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Thus, as there is no time to lose to avoid the point of no return, thinking beyond the alternatives of green economic growth is indispensable and urgent, these ontological relations between movements constitute an indispensable tool for this reflection.

It is also evident that it is not enough to change energies, it is necessary to change society and its structuring social relationship. Climate Justice is a tool to support the various fronts of struggle for social changes necessary to break with the society of exploitation of nature and humanity, towards a new society of non-exploitation.

From the point of view of technological changes, alongside solar, geothermal and wind electrification technologies, it is essential to develop a biofuels policy, especially in the case of Brazil, giving this national technology greater prominence, as this technology should not be taken as a technology of lesser importance, or transition technology. but as a technology to be assimilated as the new, which should be adopted as a technology of a low-carbon society, and not as a transition technology for this society, given the capacity to reduce emissions that they have in relation to the others and also the ease and expertise in their development and production.

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