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Against Climate Pessimism

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From TV series to literature, climate apocalypse has never been more fashionable. And the prophets of doom have a point, given capitalism's inertia in addressing the unfolding effects of climate change. But climate pessimists bend scientific evidence to their narrative of "collapse", and overlook the complex, unpredictable nature of social processes.

The environmental apocalypse is in vogue. One only needs to look at the book titles of some of Spain's most prestigious and widely read environmental authors to see this flirtation with the end of the world. In *Petrocalipsis* (a portmanteau of "petrol" and "apocalypse"), Antonio Turiel summarises more than a decade of scientific writings on energy. Similarly, Jorge Riechmann suggests that *Otro fin del mundo es posible* (Another end of the world is possible) in the title of one of his latest essays.

This is no bold or controversial use of words; it is tailored to a state of mind and narrative that is extremely normalised in our contemporary zeitgeist. The amount of novels, films, series, video games and theatre productions that imagine a dystopian future resulting from some devastating environmental catastrophe is overwhelming: *The Day After Tomorrow, Waterworld*, *The Rain*, *Snowpiercer*, *The Handmaid's Tale*, *Geostorm*, *Interstellar*, *Mad Max*, *The Road* and, of course, *The Collapse* – a French TV series that embodies the essence of climate pessimism and pulls at the heartstrings of political environmentalists. It is almost impossible to think of even a few titles that address the future from a perspective that is both grounded in environmental science and hopeful. For every Ursula K. Le Guin or Kim Stanley Robinson, there are a hundred screenwriters creating series like *The Walking Dead.*

In the 21st century, we've let slip through our fingers one of the greatest points of consensus in the modern era and one of the most fundamental elements in traditions of emancipation: that we should not confuse the status quo with possible future realities, that the facts of the present do not limit the possibilities of the future. The belief that the future will not simply be an extension of the present, but rather that things may be "improved" via political action is a shared axiom even as different visions of this political action remain. This slow cancellation of the future, as philosopher Mark Fisher calls it, is not only the result of a defeat in the battle of ideas; it also has an objective basis. Contemporary cultural dystopia is fed by an increasingly narrow and dangerous reality for society and nature. The environmental crisis is a destructive trap of our own making that has put modern civilisation in jeopardy and threatens to escalate the harrowing process of extinction –something that humankind is not immune to.

Climate chaos, the loss of biodiversity, diminished productivity (and therefore increased scarcity), tensions around the appropriation of basic resources (from fresh water to fossil fuels, arable land and critical minerals), pollution on a massive scale with very serious consequences on the lives of human beings – these are all themes examined in great depth in scientific literature, which has been taking on an increasingly sombre tone and casts few reasonable doubts on the severity of our situation.

Aside from the reduction of the hole in the ozone layer, there is not one single environmental performance indicator that shows hopeful signs of turning around the trajectory taken by industrial society. The popularity of the environmental apocalypse narrative is highly problematic for many

reasons, both epistemological and political, but it is in no way a gratuitous whim. It triggers feelings of eco-anxiety, despair and fatalism, which are understandable in light of the self-destructive inertia of capitalism.

Nevertheless, social environmentalism has not always placed societal collapse front and centre. For a long time, it understood its mission as exactly the opposite: anticipating a response to the risk of catastrophe that scientific studies began to indicate half a century ago. The *Limits to Growth* report never set out to put an end to industrial civilisation, but rather to alert the public to a series of environmental risks that could result in a catastrophe, but which were held at bay by a sufficient margin of technical and social strategy. Of course, from the very beginning it was already known that the window of opportunity to implement needed transformations was limited. Years passed without any systemic change in the dynamics that eventually led us to begin to exceed the limits of the planet in the 1980s.

The climate pessimists' moral is that there is no turning back. They believe that the most plausible future for modern civilisation is a Hobbesian struggle for resources and land in a social context of extreme inequality, played out against the backdrop of climate chaos and an overexploited planet. It makes no sense to rely on emancipatory projects, in a traditional sense. The role of environmentalism would be to inspire strategies that are merely adaptive, and at best palliative – in other words, a bottom-up version of what neoliberal governance of the climate crisis proposes from top down. In the words of Ron Scranton, the only thing we can do is "learn to die in the Anthropocene". Climate pessimism is, in essence, a stoic acceptance of and resignation to political failure.

Rejecting climate pessimism does not entail rejecting the possibility of catastrophe, which is a possible future rather than a morbid fantasy. Climate pessimists have made pertinent contributions to the environmental debate, pointing out, for example, the fact that renewable energies cannot possibly allow us to continue on our current path of economic growth.

Climate pessimists propose lucid ideas but draw erroneous conclusions from them. It is true that our ecological transition can no longer be the same as it would have been, for example, under the thwarted Green New Deal that was attempted in the late 1970s by Jimmy Carter's administration, influenced by the Club of Rome's enlightened bourgeoisie. Nor can we emulate socialist promises of automation and the end of work, whether in their classical or contemporary interpretations, with such suggestive names as fully automated luxury communism. None of this is within our reach anymore, and so an emancipatory plan adapted to the environmental reality of the Anthropocene must be more modest. However, neither the objective possibility of catastrophe nor the very real narrowing of emancipatory options available can justify the argumentative leap of accepting the utter ruin of industrial society as our unavoidable fate.

What does it mean to collapse?

Climate pessimism includes diverging nuances, trends and positions regarding the possible timing and causes of the disaster, and even the very notion of what "collapse" means. However, all of these positions overlap in that they imagine a troubled future in which the old world will come crashing down.

Climate pessimism contains many different academic theories, such as Sevigne and Stevens' "collapsology", and various forums for reflection and debate, such as the magazine *15-15-15*, which compile and organise collapsist materials, creating a coherent narrative. Nevertheless, climate pessimism can be better described as a constellation of discourses that share a style of argumentation underlying a common conceptual outline. As with any ideology, climate pessimism is, more than anything, an emotional state and aesthetic, a series of mindsets and pre-rational feelings that introduce

biases and other preferences into an understanding of our current reality and possible futures.

Of course, political action cannot be free of emotions or states of mind. It would be ridiculous to criticise climate pessimism for being punctuated with a set of myths, preferences, inclinations and expectations, just like any other ideological position. In reality, the opposite is true. The problem with climate pessimists is that they believe that their state of mind originates from a supposedly irrefutable "scientific" interpretation of reality.

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What does "collapse" really mean, though? Why speak of collapse instead of crisis, systemic change, regression, decadence, stalemates or, in the words of Latour, "mutation"? Why does no one use the word "collapse" to refer to the tragic population decrease caused by the more than 100 million deaths during the two World Wars, or the slow decline of the Spanish Empire, starting in 1640 until its final dissolution in 1898? Will the events of the 21st century more closely resemble Easter Island's alleged descent into cannibalism than these other processes?

"Collapse" derives from the Latin *collapsus*, the past participle of *collābi*, which means "fall" or "be ruined", and, as with many other sociological metaphors, it carries architectural nuances. Collapse refers to the moment when a building abruptly falls apart, leaving no possibility to stabilise or bolster it, resulting in a ruin that is impossible to restore to its previous form and structure. If the concept of "collapse" is to be used analytically, it would best be used to describe processes that are very destructive, rapid, and irreversible. The processes studied by climate pessimists don't necessarily meet these criteria.

For example, how much time is meant by "rapid"? In the absence of a working time frame, it is easy to equate, within the same category, a process such as the dissolution of the Western Roman Empire, which lasted several centuries, with the fall of the Incan Empire, which happened much more quickly due to the concurrence of a pandemic and military conquest. Is a numerical decrease of one key indicator, such as population or GDP, enough to start talking about collapse? Could we say that the USSR collapsed in the 1990s but Cuba did not? Problems of conceptual ambiguity are not uncommon in the social sciences, but they only become insurmountable sources of error when we pretend that there is no ambiguity and that it is possible to come to unequivocal conclusions using the empirical data available.

One of the weakest points of the theoretical outline of collapse is the recurrent use of the notion of "loss of social complexity" as an indicator of the catastrophic process in which our societies would find themselves immersed. This amounts to a conceptual blank cheque, the vagueness of which allows for anything to be considered a signal of collapse. After all, what does "social complexity" mean? Eduardo García explains it as follows: "Both the caterpillar and the butterfly are two complex systems, but which is more complex? In my opinion, the answer depends on which variables we use to define a system as more or less complex. If we give more relevance to quantitative variables such as weight or net caloric intake, the caterpillar would be more complex than the butterfly. However, if we focus on qualitative variables, such as reproductive capacity, the butterfly wins out over the caterpillar and would therefore be considered more complex."

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One reasonable way of reducing ambiguity around the idea of the "loss of social complexity" as an indicator of collapse would be to interpret it as a generalisation of the so-called "failed states". This shift is coherent with the political hypotheses of climate pessimists and helps to add clarity to the debate. Processes of the relatively rapid breakdown of the state's regulatory capacities – either by fragmenting into small units of statehood or breaking up into local or regional centres of power that are unable to manage perpetrators of violence in their territories (mafia, warlords) – are not at all unheard of in contemporary world history.

Moreover, thinking of collapse in terms of the collapse of the state offers us a point from which to conduct a comparative analysis of different political conflicts. Given the central role of the state in modern societies, the idea of its dissolution fits well with the intuitive image of collapse as the moment when, in the words of Yves Cochet, "the population cannot meet its own basic needs".

Most importantly, the State-focused definition of collapse strikes an emotional and aesthetic chord with the political imagination that mobilises majority of the climate pessimist movement: a kind of "prepper" anarchism based on thermodynamics. Many climate pessimists believe the environmental crisis will force us to lead more self-sufficient, community-based lives, with a strong touch of rural living and power structures that are much more simplified, and in which the modern State – barring its complete disappearance – will lose much of its importance. From this perspective, the most urgent political task is to stay one step ahead of the collapse by strengthening local resilience and preparing to organise "lifeboats", "Noah's arks" and other such metaphors.

Paralysing fear

Climate pessimists tend to believe that the rejection of their point of view has to do with the immaturity of our society, with an incapacity to rationally accept objective scientific data because it brings with it bad news. This belief contradicts widely accepted tenets of psychology, anthropology, and sociology regarding the relationship between knowledge and human behaviour: scientific truth has a very limited ability to mobilise people. In any society, objective knowledge competes with a torrent of feelings, emotions, myths, collective identities and institutional inertia. No society can reach a minimum level of cohesion and institutional stability without establishing a set of reasonably desirable beliefs about the future first. We fall frighteningly short of being able to combine this forward-looking future imperative with environmental sustainability.

When addressing problems such as the climate crisis, peak oil or the sixth mass extinction, a well-informed environmental movement does not lend itself to "daydreams", as Ernest Bloch called them in *The Principle of Hope*, but rather to "daymares". Thus, if any one thing defines climate pessimism it is the renunciation of hope as a political sentiment. If there is any moment when hope can play a decisive role, it is when surges of social transformation occur; revolt is not only fuelled by rage, exploitation or resentment. We therefore need to be able to create an outlet for all the built-up pain that we are feeling as a society in order to lend credibility to the seemingly dangerous belief in a better world.

We must look at the climate crisis without any naïveté, but also without surrendering our collective spirit to defeatism. “Undeceivable” and “Undisillusionable” – this is the magical alloy that, again according to Bloch, is always the stuff of emancipatory movements. Bloch also pointed out, in his book *Heritage of Our Times*, that in the vicious cycle that led to the failure of the Weimar Republic, the communists insisted on telling the truth about things, while the Nazis told lies. Let us not make the same mistake. We must allow ourselves, at least, to tell the most hopeful side of the truth, which has little to do with defending a belief in the collapse of industrial society.

Looking at collapse through rose tinted glasses, while politically dazzling, is a perspective restricted to an ideological bubble that only mobilises a small, albeit deeply convinced, minority. Most people maintain enough historical sense to understand that if modern society collapses, their daily life and that of their loved ones – if they survive – will take a terrifying turn for the worse. As tends to happen in such catastrophic situations, any political alternative, no matter how heinous – militarism, democratic involution, authoritarianism, etc. – would become preferable.

Yayo Herrero is fond of citing Naomi Klein’s sentiment that fear paralyses you if you’re alone and you don’t know where to run. This observation has a fault that neatly sums up the theoretical implications that feed climate pessimism: fear only helps for short distances, for sprints. In the long run, fear is too heavy a burden to bear. It eats away at collective trust and promotes an “every man for himself” attitude as well as a lack of solidarity.

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If catastrophe does not present as a sudden and all-encompassing occurrence, but rather as a process more akin to a degenerative illness than a heart attack, the collapsist state of mind can only provoke two reactions. You either contribute to the mentality of exclusion and predatory responses, or you foster a social climate similar to what psychologists call “learned helplessness”, a pathological condition in which a subject has learned not to respond to threats because they have come to understand that their reaction is useless. The internalisation of helplessness is an adaptive response to a reality locked in to a certain fate that leads to the development of a kind of “complacent fatalism”.

Ideology, not science

However, our rejection of climate pessimism is not only based on its erroneous political communication and inability to create transformative majorities. The more important debate has to do with the theoretical core and empirical basis of climate pessimism.

Firstly, the data that supports the idea of a failed State that will inevitably and irreversibly prevent the population from covering its basic needs does not coincide with scientific evidence. Although there is no doubt that industrial society is headed down an extremely turbulent and dangerous ecological path, there are many voices that, based on rigorous studies, stand behind a less chilling prognosis.

In contrast to the climate crisis, the scientific debate around the energy transition does not seem to have generated any consensus. There remain substantial doubts and degrees of variability. Scientific studies

include everything from Jacobson's extreme optimism (according to which we could increase our consumption five times over with renewable energy) to the pessimism of Carlos de Castro (for whom renewables will only cover a quarter of our global energy consumption). Who is right still remains to be seen. Unlike the most optimistic discourses, climate pessimism has seriously taken into consideration many relevant questions, such as the limitations of mineral resources in the expansion of renewable energy. However, when approaching this exact same data from a non-pessimist perspective, the situation looks quite different.

The studies on the issue of mineral resources most often cited in the climate pessimist world are those of Antonio Valero, Alicia Valero and the CIRCE Institute. In their work *Thanantia* they propose that, in scenario 2DS posited by the International Energy Agency (a moderately ambitious environmental scenario, as it only ensures a 50 per cent probability of temperatures not increasing by more than 2 degrees from now until the end of the century), the massive deployment of renewable energies could be hindered by high risks of scarcity in tellurium and another twelve elements: silver, cadmium, cobalt, chrome, copper, gallium, indium, lithium, manganese, nickel, platinum and zinc.

However, we must also add politics to the picture. As indicated by the data gathered by these researchers, a substantial reduction in the use of electric cars, motivated by transformative mobility policy (public transit, railways, relocation of centres of production, teleworking), would, in this same scenario, leave some leeway for carrying out a much safer and more hopeful energy transition.

Therefore, the best studies conducted in Spain on the limit of mineral resources continue to be compatible with a classic eco-socialist agenda based on a stable, profoundly circular state economy that aims to strategically abolish the private automobile. In the same vein, a dozen radical changes of this type – in terms of food supply, commercial aviation, public rationing of strategic resources and encouraging shared use over individual ownership – continue to offer us scientifically supported possibilities that differ greatly from those offered by the collapse of industrial society.

Even if the available evidence were able to back climate pessimists' point of view in debates on issues such as energy, which have not reached any real conclusion, their social prognosis would continue to be rooted in a political position as opposed to scientific proof. Cultural and political factors introduce an unmanageable degree of uncertainty for nature-based scientific research. Anthropological and sociological studies on climate science, for example, suggest that there are at least three logical errors that many natural scientists commit repeatedly upon attempting to address the social and political dimensions of the environmental crisis: the question of scale, problems of causal attribution and attitudes towards the general outlook.

Precisely because social factors take on so much weight at the meso- and micro-levels, it becomes much more comfortable for the natural sciences to think on a grand scale in terms of space and time. As for attribution (the possibility of identifying a specific factor as the cause of a social process, as happens with the concepts of climate war or climate migration), natural sciences work with extremely simplified models that turn reductionism into a methodological prerequisite. Social sciences operate in the opposite way, adding complexity and density to the object of study. As for more general attitudes towards prediction, it is practically taboo in the social sciences, which tend to explain facts retrospectively, while anticipatory prediction is almost a prerequisite for knowledge to be considered legitimate in the natural sciences.

Independent of the quality of the scientific investigations of our environmental problems, the sudden shift of focus from biophysics to the social realm is a definite source of poor sociological analysis riddled with

determinism, mechanical philosophy and reductionism. Given the nature of its epistemological assumptions, climate pessimism contributes squarely to these problems. It turns good natural scientists into bad social scientists, who, when they continue to misstep, end up becoming even worse political agitators.

Even if scientific consensus on the energy crisis were as solid as that of the climate crisis, and even if it presented the most compelling and damning results in line with those predicted by the most extreme climate pessimists (a drastic drop in the global availability of energy within five years), almost no natural science data could be used to indicate such a concrete social or historical notion of collapse as the failure of the state (or, as we have seen, other definitions of collapse which are even vaguer).

Peak oil, peak gas or even the climate emergency and the sixth mass extinction are not “events” that demolish our social system in one go like a meteor collision (this is why the film *Don’t Look Up* is a terrible metaphor for the environmental crisis). They are long processes, punctuated by and made up of cultural, economic, and political factors that add variability and uncertainty.

The laws of nature set limits, and it is worth pointing out that we live in a Promethean culture that has systematically denied these limits and continues to do so via its routine propaganda. However, biophysical limits mean that we can never get a head start on what is in store for us. They do not allow us to guarantee that the state order will fall or that we will be subject to a mass-scale return to rural life. This is because whatever happens will primarily depend on the interaction between the different forces and social perspectives that are imposed; it will depend on the result of cultural, ideological and moral battles that harbour many different solutions. Secondly, whatever the future holds in store will depend on how the aforementioned social perspectives have been historically expressed through systems of power and embodied by institutions that impose and implement them via our daily practices.

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There may be many failed states in the coming decades, but authoritarian regimes could also emerge, or environmentalist majorities could be built up to drive a hopeful democratic and anticolonial turn of events. Moreover, it is not out of the question that some regions of the world may profit from the collapse of others, reinforcing already existent colonial dynamics. However, neither the principles of thermodynamics nor Hubbert curves have much to say about this.

An open ending

When climate pessimism determines that a political event such as the breakdown of industrial society will result from current environmentally catastrophic trends (global warming, energy decline and loss of biodiversity), it systematically overlooks the variability introduced by the possible which sociological and cultural responses introduce. What we call industrial society is an extremely complex system, much less integrated than what we generally assume, in which partial connection coexists with fragmentation.

Even if we accept the collapsist hypothesis that we are in an irreversible and rapid energy decline and that there will be no miraculous technological breakthrough or leap in progress that will save us (if

nuclear fusion fails, limited mineral resources will mean very modest usage of renewable energy, and so on), there is a vast amount of generic yet extremely significant political and social variables that could affect that process. These include the exploitation of marginal fossil fuels with decreasing, but still viable, returns; the collectivisation of losses via state intervention; social conflicts that enable some groups to hoard energy and resources by dispossessing others; significant improvements in efficiency and technical design that give us greater room for manoeuvre; selective social transformations (such as drastic limitations on private mobility in cities or increased travel by sailing) which would reduce the strain on natural resources..

Nicholas Georgescu-Roegen, one of the most important environmental writers often but superficially cited by the climate pessimist world, offers one of the most solid theoretical apparati for avoiding the epistemic abuses of climate pessimism. In his works, he affirms that “no system of equations can describe an evolutionary process”, given that qualitative change “cannot be known ahead of time”.

This profound respect for the uncertainty introduced by emerging social and cultural phenomena partially explains Georgescu-Roegen’s position regarding the report *The Limits to Growth*, published one year after *The Entropy Law and the Economic Process*. Although he valued the contributions of the document to the economic debate and defended it from the fierce and unfounded criticism of conventional economists, he also considered that the “rigid nature of the arithmomorphic models used is unable to predict the evolutionary changes that these relations can undergo over time”. Furthermore, he added, “The human species, above all others, is not going to fall into a short coma. Its end is not yet in sight, not even close, and when it comes it will be after a very long series of surreptitious and prolonged crises.” Georgescu-Roegen’s warnings against arithmomania and the geometric spirit that aims to predict when and how a social process is going to occur also shield us from the climate pessimist tendencies of modern environmentalism.

The environmental movement needs to become familiar with theoretical and political milestones, analogous to what Marxism underwent with Lenin, Gramsci, Benjamin, Poulantzas, Mouffe, Laclau and Olin Wright. Such moments, in one way, serve to categorically enrich our system of ideas and to avoid the descent into determinist, reductionist or mechanistic worldviews. Much more importantly, instances of thought foster political interventions that are capable of generating impacts of historical significance. This dialogue with old emancipatory debates offers a breath of fresh air to the claustrophobic confinement that climate pessimism imposes on itself.

As an example, in the following text by Gramsci we have replaced a few terms with concepts used in contemporary environmentalist debate. The result provides useful tools for addressing questions such as the inevitability of collapse:

> *The unknowns are more numerous than the facts which can be ascertained and verified, and every single one of these unknowns could upset the eventual conclusion. History is not a mathematical calculation; it does not possess a decimal system, a progressive enumeration of equal quantities amenable to the four basic operations, the solution of equations and the*

extraction of roots. Quantity (~~economic structure~~ net energy) turns into quality because it becomes an instrument for action in men's hands – men whose worth is to be seen not only in terms of their weight, their size and the mechanical energy they derive from their muscles and nerves, but in the fact that they have a mind, that they suffer, understand, rejoice, desire and reject. In ~~a proletarian revolution~~ ***the green transition****, the unknown variable "humanity" is more mysterious than in any other event.*

The process of overcoming climate pessimist ideology, which, to use Bloch's above-mentioned dichotomy, is calculating in its long-sightedness and therefore is genuinely blind to the near future, can be partly supported by drawing such comparisons. The conclusion defended by Gramsci in the previous paragraph continues to be true. When worrisome and dangerous data on the environmental crisis gets into the hands of politically active and organised people, fatalism will remain subdued.

Doing away with the myth of progress is no longer a guarantee for success, but collapse is the inverse of that very same myth, and it does not hold up either. It is a theodicy turned upside down. Tragic endings cannot be guaranteed any more than happy endings. Fortunately, the mystery of humanity continues to be enshrouded because there is no mathematical formula that can predict the decisions it may or may not make.

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