

Anthropocene and the dawn of a planetary civilization

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Contributions to ANTHROPOLOGY TODAY over the last few years make it plain that anthropologists have done much to contribute to public debates on contemporary crises, including global warming and the current viral pandemic.¹ Questions have been raised about anthropology's capacity to intervene more effectively in political debates. I argue here that one way for us to do this is to engage in a broader collective conversation around the tales of acceleration and technofutures spreading fast around the globe. Through our locally grounded empathy, ethnographic scrutiny and ecumenical disciplinary practices, we have all the elements needed to work together at strengthening our 'collect and compare' methods. With their clear focus on concrete practices, anthropologies of climate change, environmental and ecological catastrophes, human disasters and epidemics are already exploring empirical facts more thoroughly than other social science approaches do. We need now to create opportunities for more systematic comparative studies of how catastrophes are experienced and broadcast, for these will have an 'impact factor' far more significant than academic debates about the Anthropocene.

The impact of anthropological insights

How do we know that climate change is not only happening but also accelerating? We know it because we have seen wildfires repeatedly burning Australia, California, Canada and Siberia. Freak, extreme weather events (hurricanes, tsunamis, hailstorms, heatwaves, droughts, floods) are striking harder and more often. The melting of glaciers and icebergs, not to mention the Arctic and the Antarctic, is accelerating. Fires are intentionally started in the Brazilian Amazon and wherever the extractivist mindset reigns free. Almost everywhere on earth today, the value of deforested land systematically outstrips that of standing trees. In the meantime, ecological restoration projects, considered too costly, are stalled.

According to the World Health Organization, air pollution kills an estimated seven million people worldwide every year. Nine out of ten people breathe air containing high levels of pollutants harmful to human health and the climate. The global circulation of atmospheric pollutants has been extensively researched, but stringent measures to improve air quality are still lacking in most countries.

Media reporting and our direct experience tell us that about a year ago, a catastrophe began to outrival all others: the Covid-19 pandemic. Unlike localized droughts and floods or sudden storms and passing hurricanes, the pandemic has had a global impact; its pain is felt in all countries. To date, this highly infectious virus has killed over five million people. Governments have taken drastic measures to control its spread, forcing people to stay home and prohibiting them from travelling or socializing. In the most developed parts of the world, digitalization for commerce, work, leisure and learning has grown exponentially.

With their freedom of movement curtailed, millions of people worldwide have had time to rethink how they live, relate to each other, work and consume. How many have pondered about the substance of human rights and fundamental freedoms? How many have reassessed their values and priorities? The inequalities that Covid-19 has made so visible have horrified those who care about public goods and services, and who try, day after day, to make a good life without harming others. If the pandemic's immediate material physical impact has been minimal compared to

catastrophes caused by extreme weather events, it has ruined millions. Who is not worried that economies around the world will be devastated for years to come?

With their passion for documenting the human condition in all its diversity, anthropologists try to make their distinct voices heard in the public sphere. Jean Segata (2020) warned that while Covid-19 is a disease on a global scale, it is *not* a universal phenomenon disrupting the dominant narratives of modernist triumphalism. However, has his assertion that '[T]he assumption of the universality of viruses, bacteria, and vectors has allowed the colonization of local health and disease knowledge' been discussed? Such voices, I fear, sink in the sea of reports celebrating accelerated scientific progress and mass vaccination.² Covid-19 has exposed the failure of one-way interventions within everyday life systems of increasing complexity and interdependence. However, the powerful narrative of a health-crisis-requiring-health-intervention-to-get-us-back-to-normality continues to dominate, undisturbed. Frédérick Keck's (2020) highly original research on the cultural construction of frontiers between species has got him interviews in the French national and international press, but at what cost?

One journalist, whose sole interest appears to be to foster irrational fears against biotechnology (particularly the conspiracy theories that attribute the origin of Covid-19 to lab experiments in China or elsewhere), chooses to title the interview 'Nature is the greatest terrorist threat' (Thibert 2020). Anthropologists researching economic globalization find it equally difficult to challenge public discourse on the role of 'supply chains' in ordering the world economy. Supply chains, whether imagined as globalizing or deglobalizing, continue, as Musaraj notes, 'to be discussed as disembodied relations among commodities, money, and borders', without any concern for the people who make these chains work or for the 'uneven distributions of the burden of care' (Musaraj 2020). By contrast, experts in logistics have filled the media with comparative discussions of 'just-in-time' inventory policies and other procurement strategies. As economists argue about the best way to manage supply and demand without endangering supply chains, they create new opportunities for one kind of naturalization: the supreme logic of efficiency gains.

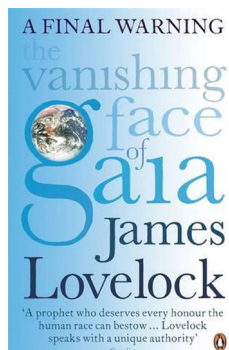
It is my impression that economic factors dominate planetary discussions on how to deal better with Covid-19 and minimize the threat it poses to human health and social lives. I am not speaking from the position of an interdisciplinary scientist who has spent months with her team studying Covid-19 in its multidimensional reality. My grasp is informed by daily life under the pandemic regime, supplemented by varied and unequal doses of news from the media-saturated culture I operate in, under which I train my ethnographic self to sharpen its reflexivity. I cannot help but notice that so little has been said or written on the zoonic origin of the virus. We more commonly discuss bats as dangerous sources of infectious diseases in people than reflect on the destruction of their habitats and ecosystems. Both, moreover, seem to have occurred far more often in the first half of 2020 than they have in the second half. Photographs of deer, goats and other 'wild' animals visiting urban spaces in full daylight were widely circulated throughout Europe during the first lockdowns of early spring 2020.³ How can we explain their absence in subsequent lockdowns?

1. Eriksen (2020); Hornborg (2020); Munyikwa (2020).

2. That the toy company Mattel has created a Barbie doll in honour of Oxford vaccine co-creator Professor Dame Sarah Gilbert is a fascinating addition to the stories being created and circulated during the pandemic.

3. Lagrou (n.d.). See also Soubelet (2020).

4. See Bauer & Ellis (2018) for a fascinating discussion between geologists, earth scientists, STS (science and technology studies) thinkers and post-modern anthropologists on whether the 'Anthropocene divide' obscures rather than clarifies understandings of human-environmental relationships as forming a complex continuum over time and space. Like Jesse Ribot,



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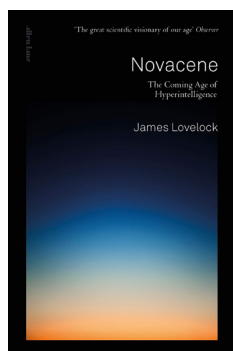


Fig. 1. A final warning: The vanishing face of Gaia, by James Lovelock (Penguin, 2006).

Fig. 2. Novacene: The coming age of hyperintelligence, by James Lovelock (Penguin, 2019).

Fig. 3. James Lovelock, 2015.

one of the discussants, I argue that 'nature', as a concept, is far from having outlasted its historical utility.

5. For an account that mixes ethnographic fieldwork, engaged research and comics reportage, see d'Allens et al. (2020).

6. Lovelock (2019: 11): 'A great deal of time may have been wasted during the search for life elsewhere because of the false assumption that the current environment of the Earth is simply a matter of geological happenstance. The truth is that the Earth's environment has been massively adapted to sustain habitability. It is *life* that has controlled the heat from the Sun. If you wiped out life entirely from the Earth, it would be impossible to inhabit because it would become far too hot'.

7. Lovelock (2019: 61): 'We can help natural processes that keep water vapour content of the air low by avoiding the burning of carbon fuel of any kind. In general, I feel strongly that our need for energy should be treated as a practical problem of engineering and economics, not politics. I feel equally strongly that the best candidate to supply these needs is nuclear fission, or if it becomes available cheaply and practically, nuclear fusion, the process that sustains the heat of the Sun'.

The fear of economic forces, experienced as more immediate than nature, is fusing with utter indifference to life in the biosphere. While compulsive consumerism continues to reign, barely disrupted, many wonder whether climate change will ever change capitalism. How can we prevent narratives centred on the human predicament from further dislocating our relationship with the rest of nature? For Amitav Ghosh, we must open our imagination to a new form of realism: climate crisis realism. Only then will we recognize the frontiers between commerce and wilderness for what they are: wars waged by profit against nature and the people of planet earth (Ghosh 2019). The moral and political implications of 'contraction and convergence' must start from realizing that only a small minority of the world's population can practise idealized, middle-class lifeways (Ghosh 2016). Any attempt by the elites to resist a radical restructuring of global power will accentuate the climate crisis, Ghosh warns. To avoid such a catastrophe, we must urgently: (i) recover the many languages of solidarity, collective action, collective experience and social justice found around the world; (ii) extend them beyond the confines of our species; and use our vast, collective scholarship, erudition and intelligence to (iii) rearticulate the language of freedom and liberty.

As I elaborate elsewhere (Rival 2020), narratives centred on the human predicament can only deepen our dislocated relationship with the rest of nature. Of course, for the architects of the Anthropocene,⁴ this can only be a good thing. They want us to repudiate once and for all the concept of 'nature', an illusion that has served the moderns well as a repository of social representations and political values – they say, but which has now outlasted its historical utility. Their unmindful certitude that better ways of assembling the familiar world should exclude what some see as natural solutions leaves little space for dialogue.⁵

In objecting to the crisis of imagination unleashed by the Anthropocene, I therefore ask: is there any ecological reality left to what matters? If the Covid-19 pandemic has resulted in a science-cum-governance race against the viral spread, the other catastrophes of the Anthropocene speak to more heterogeneous processes of spatial-temporal diffusion. After at least a decade of active academic engagement with the Anthropocene, anthropologists must now turn their endless curiosity about the world and its diversity to the Promethean stories that ecomodernists are spreading with accelerated ease within the public sphere. Our discipline holds all the elements needed for a forensic examination of the compelling stories we tell about how artificial intelligence and quantum computing will refigure nature and society.

The Anthropocene, Gaia and new myth of origin

We are 60 years into the Space Age (Rival 2021), and I propose to start with *Novacene* (Lovelock 2019). This book-length essay interrogates the truths and fallacies of the Anthropocene from a particular Promethean standpoint. Unlike the earth scientists who coined the term 'Anthropocene', James Lovelock begins with the universe's history. From the perspective of the entire solar system (and the human desire to explore it), Earth is very

much unlike Venus. The earth is unique because a dynamic, living entity inhabits it that James Lovelock once called 'Gaia'. Venus, by contrast, was/is dead and sterile. Having designed instruments to determine whether there had ever been life on Mars, the inventor, who likes to be called an engineer, knows intuitively and scientifically what makes the earth unique and different in the cosmos: it is inhabited by life.⁶ Although there is a great deal of discussion about this life, no one disputes that it results from billions of historical and ongoing interactions between living organisms and their environments.

While thousands of researchers are currently engaged in cooling programmes focused on human welfare, Lovelock is still a singular, original voice bent on representing the inferred needs of the earth. Left to her own devices, Gaia would try to produce a new ice age to counter the greatest threat to life, overheating. A cool earth has more life, but the frail, ageing planet-organism finds remaining cool (that is, alive) increasingly challenging. The blue planet is especially concerned for its oceans. As someone approaching 100 years old, Lovelock fully identifies with the ageing planet. 'Planets, like humans, grow fragile with age'. 'Keeping Earth cool is a necessary safety measure for an elderly planet orbiting a middle-aged star'. To remain alive, he and she must safeguard their good health and resiliency; they must protect themselves from dangers and accidents. He and she equally depend on the support of others to strengthen and develop the robustness they need to 'decline pleasantly and productively' (Lovelock 2019: 57, 58, 59). In the case of planet earth, at least, only science and engineering can fulfil such needs. We must treat cooling the earth as a practical problem of engineering and economics, not a matter involving love, human fellowship or politics.⁷ Lovelock is adamant that engineering is a matter of evolved intelligence that has nothing to do with values, freedom, informed choice or sentiment.

The Anthropocene for James Lovelock is a direct consequence of life on earth, a product of evolution, an expression of nature. The earth has only one single purpose: to realize its self-knowledge through completing the process of evolution, which, from the beginning, has been selected for intelligence. This is why Lovelock disagrees with the Anthropocene Working Group (AWG) about the Anthropocene's start date, which he dates back to the early part of the 18th century, and not to the middle of the 20th century. Lovelock asserts that the evolution of intelligent life started to *accelerate* in 1712, the year when Thomas Newcomen built the first steam-powered pump. The Industrial Revolution, once unleashed, triggered the acceleration which tomorrow will translate into the explosive transformation of the cosmos. In the Novacene, the new geological age we are entering (or about to enter), beings more intelligent than us will have the ability to intervene directly in the processes and structure of the planet to protect it (rather than us) from overheating.

We think and act about 10,000 times faster than plants, and the current difference in speed between artificial intelligence and mammal thinking and acting is about 10,000 times. The robots we are now engineering will soon create the conditions for the emergence of entirely new kinds of knowers: cyborgs. These cyborgs will be the products of the same evolutionary process that created us. For a while, then, electronic life will depend on its organic ancestry (Lovelock 2019: 118).

Cyborg life will initially require our services, in the same way as a birthing woman requires the services of a midwife. However, cyborgs will quickly evolve from codes they will have written themselves. Cyborgs will conceive cyborgs, evolving into a new and powerful species, converting in the process sunlight directly into information, the fundamental property of the cosmos. 'IT Gaia'

Fig. 4. *The mind-body-tree of life.*

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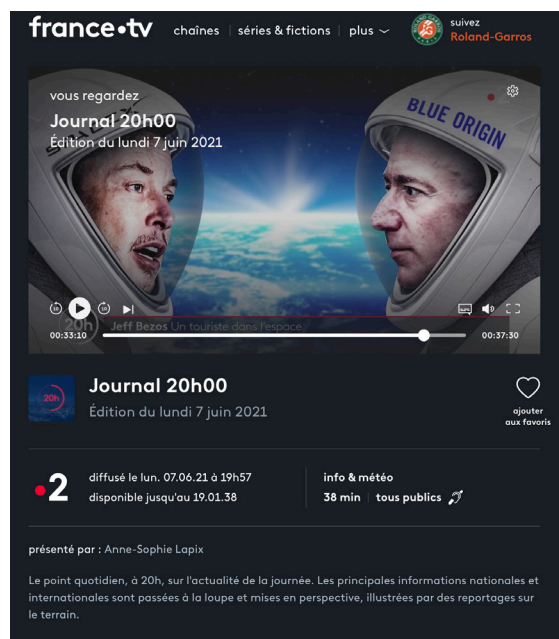
Fig. 5. *Silicon Valley and space: Jeff Bezos and Elon Musk.*



HANNAH PARATHIAN

will grow parallel to and in collaboration with organic Gaia, which eventually will die (Lovelock 2019: 123). Over 40 years ago, cyberneticians Manfred Clynes and Nathan Kline (1960) argued that 'space travel challenges mankind not only technologically but also spiritually, in that it invites man to take an active part in his own biological evolution'. With Lovelock, this evolution becomes inseparable from the evolution of planet earth, a unitary giant feedback mechanism with a single purpose: to realize its self-knowledge to complete the process of evolution which started to select for intelligence hundreds of thousands of years ago. 'We alone among all other species that have benefited from the flood of energy from the sun have evolved the ability to transmute the flood of photons into bits of information gathered in a way that empowers evolution' (Lovelock 2019: 27).

I have always found Lovelock's Gaia theory anthropologically stimulating. His discussion of planet earth as a patient in need of a doctor (Lovelock [1991] 2001) is useful (or so I felt at the time) to counter the demise of symbolic anthropology in the 1990s (Rival 1998). It helped me see that an anthropologist would always answer



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Fig. 6. Anselm Feuerbach: *Gaea* (1875). Ceiling painting, Academy of Fine Arts Vienna. In ancient Greek mythology, Gaia is the personification of the earth and the ancestral mother of all life.



PUBLIC DOMAIN

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the existential question 'how to live?' by including the phrase 'relating to the whole of life'. Symbols are indispensable for articulating models, especially models geared towards expressing wholes. Moreover, as the great symbolic anthropologist and poet James Fernandez argues, symbols are necessary to restore vitality as an experience of wholeness (Fernandez 1986). I thus interpreted Lovelock's choice of metaphors as an invitation to act. Whether we imagine planet earth as a giant tree, a thermostat or a goddess does not matter in the least, as long as we grasp through the power of symbolism the need to heal the imagined whole. Searching for a practical solution to heal the earth experienced as a living superorganism requires us to develop a science capable of moving back and forth between the microscopic and macroscopic levels. Such a science allows us to transcend the limitations of our mammalian senses, a science riddled with metaphors. Whether the illness is real or imaginary, it is when disease endangers the survival of the living that the living realize what it means to be alive.

'Hypochondriacs are real patients in need of help from a doctor because they may be wrong in imagining the causes of illness, but in general, the fact that they are ill is beyond dispute' (Lovelock ([1991] 2001). Through a determined focus on observable correlations between presence and state, humans come up with the right kind of science for their predicament: they invent what Lovelock calls 'geophysiology' or 'planetary medicine'. Thirty years separate the two visions. Lovelock's unidirectional move from earthly life to ethereal intelligence endows *Novacene* with mythical resonance. Is it Lovelock's Gaian vision (has it become far more abstract of late?) or is it my renewed reading of his thoughts (a more lucid understanding of disembodied love?) that is at stake?

Bruno Latour would, of course, say that I am stuck in the Holocene, hence my confusion. As someone who argues that inhabiting the earth requires that we abandon 'nature', Latour rejects analogies between the living earth and the

foundational concept of modern biology, the organism. Gaia's life is not 'organismic' for Latour (2021) but 'vitality extensive'. As he tries to remain alive despite his cancer and the viral pandemic forcing us all into confinement, Latour gives free rein to his imagination. Putting himself in the shoes of Gregor Samsa, the main protagonist of Kafka's *The metamorphosis*, Latour ponders on how to give new meanings to life, freedom and limitation, and by so doing, reset modernity.

Intriguingly, the philosophical tale shares a common interest with James Lovelock's early work on air pollution. Thanks to Aronowsky's (2021) fascinating historical research, we now know how Lovelock's relationship with ExxonMobil and Royal Dutch Shell has contributed to his naturalized apprehension of air pollution. We also understand better how Lovelock, originally trained as a biochemist, tended to reduce life to biochemical processes. After he met Lynn Margulis, he searched for 'biological phenomena that might double as techniques of climate control'. Latour's vision of pollution is far more reaching.

Given that life necessarily produces waste, everything we call 'environment' is, for him, the product of pollution. In Latour's environmental consciousness, the limestone cliffs of the Grand Veymont in the southeast of France are debris like the rubbish produced by Gregor Samsa after his metamorphosis (Latour 2021: 19-20). The general statement 'life as agency creates its own conditions', once accepted, seems to lead inevitably to the naturalization of industrial pollution, capitalist markets and climate change, as well as to the denaturalization of biological and ecological processes. By policing analogies (what counts as naturalization or denaturalization) that portray the evolution of life on earth as mysterious and uncertain, expert storytellers such as Latour and Lovelock control the end of nature.

Conclusion

Anthropologists collect, read and discuss many myths throughout their professional careers. In the Amazon, myths often amplify the signs of life as they bring the countless human and other-than-human living kinds peopling the tropical rainforest into dynamic tangles (e.g. see Kohn 2013). Ethnographic insights derived from studying Native American myths are invaluable to help interpret the relationship between the meaning of life, space travel and cyborgs (e.g. Praet & Salazar 2017). Even anthropologists who do not work in ethnographic settings where myths are a prevalent cultural feature take it for granted that human communities have always speculated on how best to maintain the world as a liveable place, some more heretically than others. Only in exceptional, drastic circumstances have individuals longed to delegate their freedom to automated systems, or to outsource their responsibilities – individual and collective – to things.

This explains why an extensive range of scientists, including archaeologists, increasingly worry about the evolution of humans and things (Hodder 2020). I have briefly sketched out many different ways of reading and fleshing out the *Novacene* myth and even more ways of applying anthropological analysis to interpret it. I welcome comments and suggestions. As I have tried to show in this article, ethnographically documenting what we know through embodied experience and as recipients of densely mediated representations is the first step in making anthropology matter. The second step, to bring these ethnographies to the comparative circle, which makes up anthropology as our collective endeavour, requires a renewed interest and proficiency in the art of myth-making. As we enter a new era of symbolic manipulation, remembering the importance of myths may help us contribute to the emergence of the planetary civilization the earth seems to be calling for. ●