

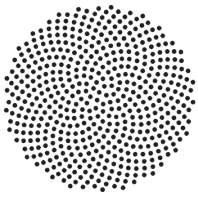
## **Gaia, the Urgency to Think (and Feel)**

Isabelle Stengers

A thousand names for Gaia. Not a thousand translations for what would be the same, nameless event : the announcement that a global climate change is on its way.

Naming is a serious, that is, a pragmatic business, when it means giving to what is named the power to induce thinking and feeling in a particular way. The name Gaia clearly alludes to the daring proposition of James Lovelock and Lynn Margulis to consider the earth as a an individual quasi-living existent, gifted with its own way to answer what affects it, an existent which they characterized as a self-regulating, complex system that maintains the optimal conditions for life on the planet.

The definition twist that has turned Gaia into a touchy, ticklish, being, liable to global mutations, is typical in the history of science. Not only we still name atoms – which means impossible to divide – what physicists discovered as quite divisible, but it is this discovery which marked their recognition as true scientific beings. In the same way Gaia stopped being Lovelock’s hypothesis and began her scientific career when the assemblage of non linearly coupled processes, which Lovelock had characterized as stable, optimal for life, lost this reassuring property. This happened in the late eighties, when the old idea of a progressive warming of the earth climate, due to the emission of greenhouse gas, was developed through more and more powerful computer simulations together with more and more new observational data. Possibilities typical of the behaviour of nonlinear systems, such as thresholds, abrupt changes, tipping points, self-amplified runaway



## THE THOUSAND NAMES OF GAIA

from the Anthropocene to the Age of the Earth

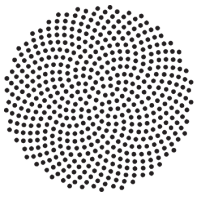
evolution, entered the scene, together with a new feeling of urgency, of the brevity of the time remaining to avoid a brutal climate change.

This threatening Gaia is thus not just another name for the earth, be it considered as a resource to be exploited, hopefully in a sustainable way, or as a vulnerable and unique wonder to be respected. It is the name of what a new scientific field addresses, a being the past of which is reconstructed in order to learn about its present and future behaviour. What threatens us has no face but a complex interrelated set of models and data.

But Gaia is also associated with a new figure of science, divorcing from that of the provider of new possibilities of action at the service of so-called human interests. The attack upon climate science was symptomatic. For the usual allies of science, climate scientists who are sounding the alarm were betrayers, siding with those “back to the cave” people who contest progress and development. It was like a knife in the back... probably obeying a hidden ideological agenda.

However, what then of the thousand names of Gaia? Because of models running on more and more powerful computers and observational data the production of which was not possible before, the many diverse disruptions already witnessed, be them by Inuits, Amazonians or fishermen of Capetown, are now to be recognized as having nothing transitory about them, as referring to a same ongoing global process, a process bound to affect all and every people on this earth, human and non-human. Is not Gaia, then, the unifying objective truth of what is happening? Are not her thousand names, which induce thinking and feeling, to be tolerated as mere cultural interpretations of one and the same natural, scientifically deciphered phenomenon? An anthropogenic, phenomenon, to be sure, but the role of Anthropos is defined by the models in the only terms of the quantity of greenhouse gas emitted, whatever the way or the reason of their production.

It could be said that this definition is, at least, pointing towards the smoking gun, in contrast with the highly questionable anthropocene. That Gaia seems to verify the



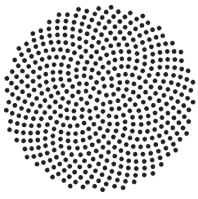
one nature/many cultures divide would be a concern only for grumbling anthropologists and frustrated cultural deconstructionists.

I wish to show that it is possible to share this concern without contesting the awesome power of Gaia as deciphered by the specialists gathered in Working Group I of the IPCC.

Indeed these specialists may well conclude that Gaia is a global threat, but “global” in their case is no triumph: it is simply the only scale at which their models have a meaning and it does not give them the power to derive local consequences. Their leading and very specific questions rather concern the reliability of their working abstractions, given all what these abstractions abstract from. Their models are ceaselessly reworked in order to test the stability of the outcome if the role of this or that intervening process is taken into account and incorporated. But their Gaia is definitively mute for what concerns the answer to be given to the question she imposes on us. She has no unifying power other than to authorize sounding the alarm.

However it is not sufficient to emphasize that Gaia, as defined by climate scientists, has no unifying power. It is the case *only as long as none is added*, typically by those who will refer to her in order to define what “really matters”. Such added power is the usual way for scientific claims to get out the lab, for the better some say, for the worse also. In our case we should in particular keep in mind that there are three working groups in the IPCC, and that the third one is busy converting Gaia’s mute question into a problem formulated for policy makers, that is, in terms that conform to the socio-economic parameters they consider relevant.

Ten years ago, when Bruno Latour asked “Why has critique run out of steam?”, he invoked the example of the critical, deconstructivist argument being hijacked by those whom we now call “merchants of doubt”. And he wondered: “Can we devise another powerful descriptive tool that deals this time with matters of concern and whose import then will no longer be to debunk but to protect and care, as Donna Haraway would put it? Is it really possible to transform the critical urge in the ethos of someone who *adds* reality



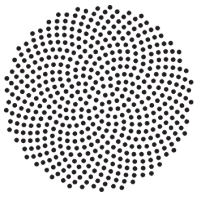
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to matters of fact and not *subtract* reality?" (Latour 2004 232). Following him, I would claim that, accepting that scientists have successfully turned Gaia into a matter of fact, the urgent, critical matter of concern is the reality which will be added to it, what will be defined as mattering.

This is why we should certainly not assimilate under the same name, "objective science", all what the IPCC is producing. While group I experts get nightmares when they obtain a new understanding of the intricate dynamics of the ice sheets, group III experts tell no such stories about the protagonists of their scenarios. They tell no stories at all but envisage the costs and benefices of measures to be taken by benevolent states respecting the functioning of the market. When the failure of this business-as-usual approach will be recognized, we may anticipate that it is also among those experts that the possibility of a "good anthropocene" will take its official roots. It will be claimed that there is no choice but to try and tame Gaia. Geoengineering will be presented as a logical accomplishment in the great history of human emancipation and mastery – and those who resist will be accused of betraying our destiny. The script is already written.

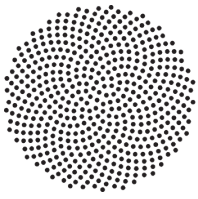
Which tools are we able to devise however? In December 2012, geophysicist and complex systems specialist Brad Werner presented to a meeting of the American Geophysical Union a talk the title of which was: "Is Earth F\*\*ked? Dynamical Futility of Global Environmental Management and Possibilities for Sustainability via Direct Action Activism" (Werner 2012). Speaking as a geophysicist, in the name of a model he was constructing, he remarked that the problem "cannot be left just to the social scientists or the humanities." He found no role for them in his model, while the influence of "Direct Action Activism" – that is, "indigenous peoples, workers, anarchists and other activist groups" – had such a role, as they might disseminate the feeling that it is possible to resist "capitalist culture". We may feel Werner's position a typical example of "objective science" imperialism. But let us now imagine him suddenly turning towards critical thinkers with a "Hey guys, the situation is *really, objectively*, a fucked up mess. Can you help?" This is my concern. Is the knowledge we produce able to add reality to, rather than to subtract reality from, the urgency to think and feel, with our own means, the mute urgency whose name is Gaia, to think and feel with the thousand names of Gaia?



The question I imagined Werner asking us may be felt as intrusive – and I mean it as such. Among the thousand names of matter-of-fact Gaia, Gaia may also name a matter of concern. For those who I will now call “us”, who belong, whether we like it or not, to the world which has both provoked this intrusion and produced the means to understand that it is not a transitory crisis, she may figure as an intruder, the protagonist who enters a scene where she was not anticipated and screws all established relations up, undermining what these relations were all taking for granted, including the quasi ritual modern antagonist relation between critical thought and the scientific claim to access reality

The name Gaia, taken as “the one who intrudes” is then not only the name for a mute question, but maybe also an adequate, provocative name for the challenge specifically addressed to us. Naming Gaia what is, as a matter of fact, bound to remain an insistent and always threatening part of any eventual future is then adding to this matter of fact the scandalous character of the event for us, who equated human emancipation with the denial of any transcendence. That beyond Lovelock, her name would refer to an archaic Greek divinity, indifferent to reason and the politics of the city, is then welcome. Gaia, the one who intrudes, the one whose patience can no longer be taken for granted, is not what should unite the Peoples of the Earth. But her blind and implacable transcendence is what specifically questions our own tales and refrains. Our world, which retroactively presupposed she would remain the stable support for the Olympian Gods, and for the Humans who expelled those Gods from the scene, is already part of the past, even if we do not know what it means. There is only one real mystery at stake, for us: it is the answer which we, meaning those who belong to this history, may be able to create as we face the consequences of what we have provoked.

Eduardo Viveiros de Castro vigorously emphasizes that many other peoples and societies have undergone such a world destroying intrusion. Learning what it may mean to give intrusive Gaia the power to have us thinking and feeling may also mean learning to think and feel in their presence, but, I would add, without playing the ventriloquists – we have done that too much, taking all the room, attributing to others a



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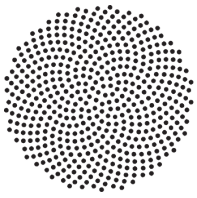
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role on our own conflicting scripts. Rather we have to learn how to give them the power to situate us.

As a European modern philosopher, I try to think as situated by the world destroying process which started on European grounds, with enclosures, the destruction of the commons, the burning of the witches. But what makes me think is not guilt, which again takes all the room. It may well be shame if, as Gilles Deleuze wrote, shame is a powerful motif for thinking. It is first of all the commitment to resist all great philosophical tales which, often without a second thought, ratify this destruction in the name of reason or progress – the commitment to think and feel what we call reason and progress together with devastation and expropriation.

When facing the intrusion of Gaia, this is the commitment which has made it impossible for me to associate the event with some kind of mythical justice, with some bifurcation deciding the fate of humanity between salvation and hell. Instead what did strike me is that in spite of all our sophisticated thought and technology, we have seen, and still see today, the systematic destruction, through an ever growing variety of enclosures, of the difference we know people may create when they resist the hot or cold panic of the “everyone for themselves”, or the resentful passivity of the “what are the authorities doing?” – when they trust each other enough to give a situation the power of having them thinking and acting together. We have thus been largely deprived of the capacity to avoid the most probable answer to the intrusion of Gaia. This answer is what may be called barbarity, be it the sheer barbarity of the “vae victis” which is already the refrain of neo-liberalism, or some blind managerial bureaucracy ruling in the name of matter-of-fact Gaia.

Collectively reclaiming this capacity is, I believe, the common name of the game for those “Direct Action activists” who Brad Werner recognized as the only factor in his model liable to resist the coming barbarity. Contemporary activism does not indeed only mean challenging authorities but also, and without contradiction, endeavouring to reclaim the practices associated with the commons. “No commons without commoning”, it is said, no common good or resource without the social ongoing crafty creation needed to



“make it common”, something which it is much easier to destroy or poison than to obtain and nurture.

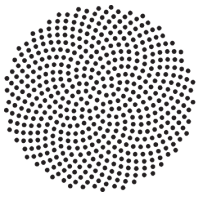
This is why “thinking like a commoner”, as David Bollier says, is no innocent thinking, no goodwill dream of going back to an innocent, idealized past. This is a pragmatic challenge, entailing no fairy tales, no wishful thinking but an ongoing care and concern for the fragility of the assemblage, for the maintenance of what is always a more than human interdependence.

Can you help?, I imagined Brad Werner asking us, academics, Certainly not, can you guide us? Rather can you add reality to, not subtract reality from, what tries to make a difference? I can understand his scepticism. There was no worse enemy for the eco-feminist reclaiming adventure of the eighties than the feminist academics hunting down the dubious spirituality of this movement, disserting about the need to subtract from it any shade of essentialism, and in particular to subtract the so compromising, insufferable Goddess – the Goddess, who may well, notwithstanding, be one of the thousand names for matter-of-fact Gaia.

The reclaiming movement of the neo-pagan witches, which survived the attack together with other activists, has learned a lot since, but it was certainly not helped by frowning and pouting academics. The witch Starhawk had some reason to write that “The smoke of the burned witches still hangs in our nostrils”. In our academic nostrils it hangs with the obsessive fear to be accused of being dupe, of having forgotten that the academic first duty is to debunk belief, that is, to honour a truth the first attribute of which is to hurt.

Can we help? Such a question, then, may well entail that researchers themselves reclaim their own capacity to think and feel, become aware, not reflexively or theoretically but affectively, of the seemingly insuperable dilemmas which strangle us, leave us free to denounce and debunk, certainly, but not to add reality, not to sustain what may be possible against sad probabilities. We ourselves, if we wish to help, need help. We need to learn telling other tales, neither apocalyptic nor messianic ones, tales that rather





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entail what Donna Haraway calls respons-ability: accepting that what we add makes a difference in the world and becoming able to answer for the manner of this difference, for the manner we, so doing, cast our lot for some ways of living and dying and not others. Tales that, together with Haraway, I would call SF tales.

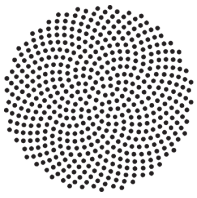
Many of us know Haraway's jubilatory reading of SF: String Figures, Science Fact, Speculative Fabulation, Science Fiction, Speculative Feminism, So Far.

Cat cradling, when different hands relay each others for the ongoing weaving of a string figure may be an important image for the kind of help we need to learn giving and receiving. It is a figure of distributed agency, with no finality, only opportunity and the special unsecured temporality of the So Far. It should be obvious that belonging to a weaving process does not exclude formulating matters of critical concern, but the concern must be such that it is liable to be shared with the concerned people, to be relayed by other hands, liable to add new dimensions and opportunities to what is woven.

But science fiction and speculative fabulation is what I wish to conclude with. Maybe they are the myths of today, exploring our capacity to experiment with "the ideas we use to think other ideas with", the question Haraway learned from anthropologist Marilyn Strathern. As a philosopher, I am indebted to authors like Ursula Le Guin and Marion Zimmer Bradley, with whom I learned, well before I read contemporary anthropology, never to explain others in terms of beliefs, and never to associate truth with the polemical power to debunk illusion. Quite a program for a philosopher, which also entailed the question: what did happen to humanities and socio-anthropological sciences?

It may indeed be said that such SF authors are practising thought experiments. Those experiments were and are the inventive, adventurous strength of physics and other experimental sciences, a true art of consequences. But this strength cannot be simply reproduced by socio-anthropological sciences, because it implies the freedom to imagine a rarefied fictional world, bound to dramatise the direct consequences of a particular hypothesis. In contrast, SF novels explore a world that cannot be so rarefied, a world dense with the many repercussions and consequences of the author's hypothesis, a world the inhabitants of which live with opportunities, problems, dilemmas, habits, hopes and





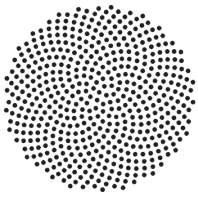
fears which are consistent with this fictional hypothesis, but which never follow from it as their direct consequences.

What if SF novels were the missing thought experiments, the missing art of consequences which socio-anthropological sciences have renounced, rather obeying a model of objectivity which has nothing to do with the kind of objectivity achieved by experimental sciences? What if such novels were exploring, and experimenting with, the settled, authoritative distribution between the possible and the impossible, the acceptable and the unacceptable? What if they enacted what scientific imagination demands: that our world does not need to be what it is, does not need to be thought and felt as it seems to authoritatively demand? What if they were crafting tales that disclose their epoch's capacity to feel that there are other possible ways for a world to consist?

Today, as I try to give Gaia the power to have me thinking and feeling, I am indebted to another SF author, David Brin, and to the non-apocalyptic reality he is inventing in his novel published two years ago, *Existence*. Brin powerfully reminds us that what we face is not some mythical sudden end of the world, as in Lars von Trier's *Melancholia*. It is a long process and our children and the children of our children will have to go along and live in the technologically sophisticated ruins of our dreams.

The 2050 world, when David Brin's story begins, is both ours and not ours. Nothing has been resolved. The climate change has not been avoided. We learn incidentally that the United States are no longer united, that a terrorist "Awful day" has happened and that social unrest has been temporarily tamed by the definition of the respective rights and duties of ten shareholding "estates", the very, very rich at the top, the people at the bottom. And it is also a world peopled by billions of now hyperconnected humans. They form an unstable, discordant, simmering mass – a turbulent ocean where great opinion waves are clashing, measured in real time.

A question is curiously haunting David Brin's anxious world, that of the Great Silence. "Where are the others?" If John von Neumann was right about exponentially self-replicating robotic explorers, why did nobody ever come in order, we hope, to say hello? Is



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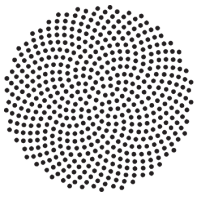
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there a “filter”? The reassuring hypothesis would that the filter is situated in the past – intelligent races would be very few in fact. But the growing suspicion is that the filter is situated in the future, that for any technologically advanced civilisation, existence is a minefield. Any such species would then be doomed to make one of the many then possible “big blunders”, to provoke the explosion of a mine filtering it away from existence.

David Brin is a researcher, casting his lot with a way of living and dying. No tale of salvation for him, and most of all no providential hero or saviour bringing the masses to the light. No massive conversion to wisdom. More challengingly, no renunciation either of the “can do” US mentality: renouncing, for Brin, would be renouncing to a world whose true achievement is that billions are now able to read, dissent and wonder. This is what those who denounce this world forget: that they benefit a freedom to denounce which is an exception in the history of humanity. For Brin the true lesson of 9/11 was given by the passengers of flight 93, ordinary people who were able to act and make a difference without waiting for an authority to tell them. They were able to do so because they had the means to know, understand and think the situation they were in. This is what Brin casts his lot with. Messy, chaotic, undependable as people may be, he will resist any nostalgia or wish for a wise authority which would lead them back to a trusting, obedient position. Only they can make the difference we need.

The descendants of the 9/11 passengers exist in the novel through smart mobs, anonymous active mobs self-organizing through the web around a hot question or when a whistle blower has triggered their collective attention. Their many skills have turned the web into an efficient tool for inquiring, discovering and collecting data, crossing them, identifying lies, resisting propaganda. What difference however can they make in a time of crisis?

*Existence* is a thought experiment about this question, dramatised by the fictional hypothesis that we are not alone indeed. The chance discovery of an ovoid crystal inhabited by a disparate set of virtual aliens seems to fulfil our dreams, as they bring the offer: “join us”. An offer? Or rather an enticing trap? I will not tell the story, just emphasize the testing character of the hypothesis it unfolds: ours is not only a messy world but a messy, dangerous universe. What Von Neumann had forgotten *for instance* is that a

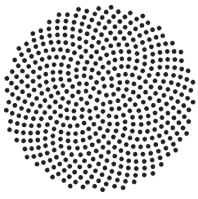


proliferation of self-replicating artificial intelligence critters may also mean Darwinian evolution at its “worst”, the selection of those who will behave like viruses invading their prey and turning it into a mean for their own proliferation. From now on humankind will indeed have to unceasingly resist always more clever “attacks” by “alien viruses” who learn how to overcome or turn our defences, with the only aim to lure our species into turning their planet into a crystals fabricating factory. Join us then means “Upload immortal virtual versions of yourselves in as many copies of our crystal as you can produce and let us together propagate the infection elsewhere.” Join us, and leave behind you an exhausted dying planet.

And here is David Brin’s speculative proposition. If we have a chance to survive the enticing “join us” offer it is because the virtual aliens lure was selected in terms of its efficacy on the ruling elite of (usual) authoritarian societies. Surprise, surprise, they have to deal in our case with an unruly society, with billions people listening, speculating about the meaning of the offer and strongly disagreeing about the answer to be given. Time has been won to speculate, inquire and resist panic; to produce a collective, precarious learning of the aliens’ tricks; and to thwart those for whom getting immortality is an obvious right.

At the end of the novel, what has been learned is that discordant diversity is our only robust, resilient defence. The definition of humankind has changed. It now includes artificial intelligence critters, autistic people recognized as true others, (uplifted) dolphins, but also Von Neumannian robots of a previous exploration wave, which were found stranded, lurking in the asteroid belt, and even biotechnologically revived Neanderthals. No clever trick will seduce in one stroke their diverging intelligences.

David Brin’s work is all about the danger of unspoken dreams of elitist monoculture and secure leadership, a choice for a way of living and dying which resounds at the end of the book: his own version of SF – So Far, just going on and maybe learning, but without the fixed star of a saving ideal : “We are still tottering along (...) uncovering failure modes, just in time. Sometimes gaining a little breathing room and confidence. At other times barely avoiding panic. Doing some repair. Staving off tyrants and demagogues.



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Coping with both would-be godmakers and fanatical nostalgia junkies. Gradually learning to benefit from our multiplicity.”

I will stop here. A fiction is not an argument. It is not meant to defend itself against critique or to demand adhesion. Between Le Guin, Zimmer Bradley, Brin and others, no choice is to be made, not more than between the thousand names of Gaia. The thought experiments they are crafting are catalyzing, or snaking into, the imagination of thousands unknown readers. They do not propose those readers an evasion into some utopian dream but nourish a speculative appetite for what may be possible. In order to reclaim and cultivate respons-ability, the ability to respond to the call “can you help us?”, it may well be that we, academics, need their help, need accepting them as cat cradling partners. But this requires feeling the smoke of the burned witches still hanging in our nostrils, and also the presence inside us of the witch hunter, often called today a referee.