

The Gaia Alarm

Let's not fool ourselves, the covid-19 global pandemic and the ever increasing threat from climate change have been brought on by ourselves. We have ignored the way 'nature' works for too long and now the Gaia alarm is sounding. If we act quickly there is still the chance we can change our ways, and in the process create a more exciting and fulfilling way of organising our lives, but the action needs to be nothing short of revolutionary.

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The historian Yuval Noah Harari explains that humans 'rule the world' because we are the only species that can co-operate flexibly and in large numbers, which, coupled with our use of language and imagination, gives us the ability to create 'fictional realities', like religions, politics, money, economics, education and nation states.

There is nothing wrong with fictional realities in themselves, they are useful ways of organising societies, but when the fictions don't adequately take into account the natural systems that provide all the raw materials and the waste management feedback loops, not to mention the air we breathe and the very functioning of our bodies, then at some point you can expect trouble. Beyond the heady world of human fictions there is a 'real reality' running the planet, as described by the 'natural world' systems view of Gaia science.

First glimpsed by James Lovelock in the 1960s and further revealed in collaboration with Lynn Margulis, the Gaia planetary system is not a fictional reality created by humans; on the contrary, after 3,600 million years of evolution, starting with the simplest living bacterial cell, it was the Gaia system which brought humans about:

'There is no evidence that human beings are the supreme stewards of life on Earth. But there is evidence to show that we are recombined from powerful bacterial communities with a multi-billion-year-old history. We are part of an intricate network that comes from the original bacterial takeover of the Earth' Lynn Margulis and Dorion Sagan : 'Microcosmos' p36

But for some reason, during the last 400 years or so, we decided we were somehow separate from, and superior to, 'Gaia nature'. Our fictional realities became riddled with this illusion, and since the industrial revolution our 'species specific arrogance' has known no bounds. As the Gaia alarm sounds, James Lovelock lays out the simple choice facing us:

'In Gaia we are just another species, neither the owners nor the stewards of this planet. Our future depends much more upon a right relationship with Gaia than with the never-ending drama of human interest'
James Lovelock : 'The Ages of Gaia' p14

We are so obsessed with the 'never-ending drama of human interest' that even the call to 'build back better' after the covid pandemic is mostly focused on minor changes to the same old script rather than a serious consideration of the tantalising question 'What is a right relationship with Gaia?'. We can throw some light on this question by looking at some examples of where the 'fictional' and 'real' realities don't match up. Let's start with our approach to climate change.

A vital feature of the 'natural world' Gaia operating system is 'emergence', the continual, flexible adaptation between organisms and their environment. Global heating and its effects on the climate are a 'real reality', emergent property of Gaia nature, but the heads of state, politicians and business people who come together at meetings such as COP26 to look for a solution are representatives of fictional realities, such as nation states, corporations or the UN. For these fictional realities to maintain themselves they have rules and regulations and dogmas, and so any attempt to come up with a solution has always to

be processed through these fictional procedures, and this lack of flexibility to adapt and resistance to change too often blocks real progress. It's interesting to note that not only are we as a species 'in Gaia', but as organisms, as holobionts, Gaia is also 'in us', so the dilemma for those negotiating is heightened because on one level there is a natural, personal, Gaian response to the urgency of the climate change challenge which then conflicts with the inflexibility of the fictional rules and dogmas of the 'never-ending drama of human interest'. So agreements are drawn up, but very little happens.

Another example of the disjunction between the two realities can be seen in the growing concern with the amount of inequality and poverty that exists at a global level. A basic characteristic of the 'natural world' Gaia operating system is that all organisms are equally evolved. As Margulis and Sagan explain:

'From the paramecium to the human race, all life forms are meticulously organised, sophisticated aggregates of evolving microbial life. Having survived in an unbroken line from the beginnings of life, all organisms today are equally evolved.' *Microcosmos* p28

By contrast, our current fictional economic system sees some people as 'worth more' than others - Adam Smith actually built poverty and inequality into his economic fantasy. This in-built inequality is further compounded with scale. Margulis and Sagan again:

'An organelle inside an amoeba within the intestinal tract of a mammal in the forest on this planet lives in a world within many worlds. Each provides it's own frame of reference and it's own reality.' *'Microcosmos'* p126

There is no suggestion within the Gaia system that any scale, any frame of reference, is any more or less important for the functioning of the whole system than any other. It would be hard to make the case that your brain or your heart was more important than your digestive system in keeping you alive. The fictional realities of economics and politics, however, are largely based on hierarchies, where some parts of the system are considered to be more valuable than others and where certain activities are seen as more important for the functioning of the whole. This means that any attempt to address inequality by tweaking the fictional reality itself will never address the fact that inequality is purely a human invention and has no place in Gaia nature. As the covid pandemic demonstrated, in the proper functioning of a healthy system, all workers are key workers.

The paradigm shift which the Gaia operating system view provides releases us from the deep rooted concept within the 'never ending drama of human interest' that we are somehow separate from, and superior to, the rest of the natural world. *'We need to be freed from our species specific arrogance'* declare Margulis and Sagan, and point to something much more inclusive, powerful and creative:

'Human beings are not particularly special, apart or alone. A biological extension of the Copernican view that we are not at the centre of the Universe deprives us of our place as the dominant form of life on the planet. It may be a blow to our collective ego, but we are not masters of life perched on the final rung of the evolutionary ladder. Ours is a permutation of the wisdom of the biosphere.' *'Microcosmos'* p195

As a product of 3,600 million years of evolution, we have inherited an intuitive understanding of what makes Earth system sense and this can inform the shift of imagination needed to begin to devise 'Gaia-wise' solutions to the current problems we are facing, by designing human systems which are not insensitive to the dynamics of Gaia nature. What's more, as 'permutations of the wisdom of the biosphere', each of us will have something unique to offer to the process of discovering and nurturing our 'right relationship with Gaia'. In effect, we have a vast, untapped creative potential to 'come of age' and bring about a human renaissance as a truly Gaia-wise species. For, as Lynn Margulis observes:

'Gaia, in all her symbiogenetic glory, is inherently expansive, subtle, aesthetic, ancient, and exquisitely resilient.' 'Symbiotic Planet' p160

...and so, inherently, are we.

It's time to promote a Gaia-Wise Global Co-operation Initiative which focuses on:

- creating a network of organisations, groups and individuals at all scales who are already addressing problems through actions that make Earth System sense, and publicising and sharing their experiences
- popularising a Gaia-wise vocabulary which explains the features, processes and dynamics of the Earth Systems view in an accessible way, including:
 - the dynamics of emergence, spontaneity and change in evolving systems
 - the role of symbiosis, co-operation and competition in evolution
 - the equal importance of all parts of a system in the functioning of that system
 - the fundamental role of recycling at all scales within the global system
 - the deeply interwoven relationship between an organism and its environment
- highlighting the incongruity between the 'fictional reality' basis of current political, social, cultural and economic structures and behaviour patterns and the 'real reality' of Gaia nature and proposing Gaia-inspired ways of re-organising the structures and behaviour patterns so they make Earth System sense. Examples include:
 - taking the supply of essential services, such as electricity, out of the competitive market system and installing local community based systems
 - recycling the accumulated global wealth currently in the hands of a minority into a 'common wealth' resource to alleviate the problems caused by the creation of the wealth, such as poverty, environmental degradation and climate change
 - creating local communities which are directly connected to natural processes

The Gaia world view has been in the public domain since the 1980s and is now well accepted and researched within the scientific community. The covid 19 pandemic and the increasing uncertainty of the effects of climate change are now sounding the Gaia alarm loud enough for everyone to hear. This is nothing less than an existential challenge for humanity, but there is hope. We urgently need to expose the limitations of the fictional realities which are dictating our current behaviour and shift to basing our actions on the dynamics which have been driving the Gaia planetary system for 3,600 million years. We need to build resilience into the cyclical evolution of our social, economic and political systems by empowering people to design and create networks of local scale regenerative communities which are largely self-reliant in energy production, waste management, food supply, health care and education. We need a global wealth recycling scheme which provides everybody in the community with a more than adequate living income for their contribution to the community, whatever that may be, cleaning, cooking, bringing up and educating the young, providing health care, looking after the old, building and maintaining local infrastructure such as housing, energy supply, waste recycling and management systems, and tending to gardens, growing spaces and recreation facilities.

In short, we need to create Gaia-wise communities where people can lead naturally healthy lives with dignity and self-respect and where, in a deep way, they know they belong. And we need to start now.

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gaiascompanyco@gmail.com