



Mary Midgley

Mary Midgley was a philosopher with a great interest in animals and the natural world. She wrote about the environment, warning about threats to species and ecosystems long before it was front page news.

Mary was interested in Gaia theory, an idea originally developed by the scientists James Lovelock and Lynne Margulis. Gaia theory is the view that the Earth and everything on it work as one connected system, like an animal or plant.

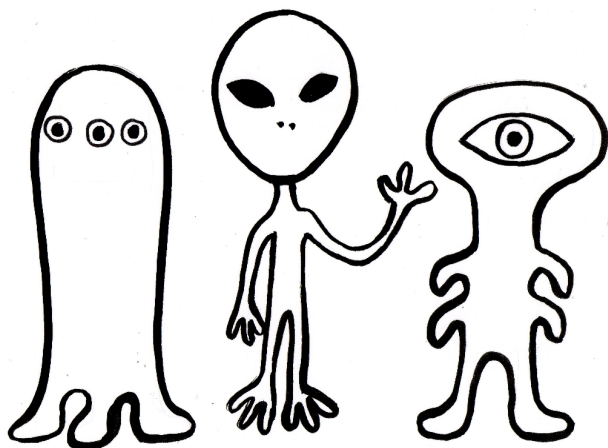


The history and science of Gaia

How did Gaia theory come about? In the 1960s, James Lovelock was employed by NASA to think about how we might detect the existence of alien lifeforms on other planets. Lovelock started by thinking about how a lifeless planet would look different from one that had life like our own.

ACTIVITY 1

Can you think of three ways that we might be able to tell if a planet contains life?



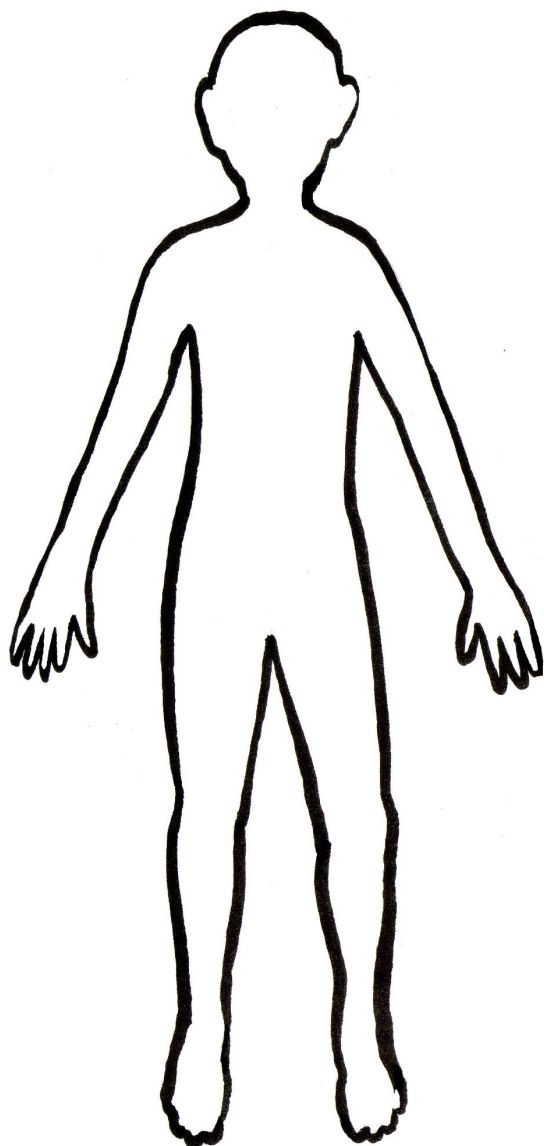
Lovelock thought that we could detect life on other planets by looking at their atmospheres – the layers of gases that surround planets. He found that the atmospheres of Venus and Mars did not change very much and were full of gases that did not easily react with others. Earth's atmosphere is very different from this; it is an unstable cocktail of reactive gases.

Lovelock's idea was that this kind of atmosphere is only possible on a planet with life – life on earth regulates the atmosphere, keeping it safe for humans, and for other plants and animals. In this way, the atmosphere interacts with the plants and animals as parts of one enormous system. The more he looked, the more he found similar systems everywhere on Earth.

Think about your own body: different parts of your body do different jobs, but they are all connected. Your heart is a strong muscle that pumps blood into arteries and then into small blood vessels around your body. The blood delivers oxygen to your muscles. The deoxygenated blood returns to the heart where it picks up oxygen and begins its journey again.

ACTIVITY 2

There are many other systems within your body. For example, the respiratory or digestive system. Pick one, explain it, and illustrate it on this picture.



According to Gaia theory, the earth's plant and animal species - together with the atmosphere, weather systems, oceans, and pretty much everything else – work together like different systems in your body.

You can read more about the science of Gaia theory here: www.academickids.com/encyclopedia/index.php/Gaia_theory_%28science%29

ACTIVITY 3

This piece of music is inspired by Gaia theory. Read the article and listen to the recording: corymbus.co.uk/gaia-theory/

How do you think the music represents the interconnected systems on our planet?

CHALLENGE How would you represent these interconnected systems? You could make music, produce an artwork, write a poem, or choreograph a dance to the piece of music you have just heard.

Why Gaia?

The name Gaia is taken from the name of the ancient Greek goddess representing the Earth. The name was suggested to Lovelock by his friend William Golding, the author who wrote *Lord of the Flies*.

Some people have argued that this imagery has its place in literature, religion and mythology, but doesn't really belong in science.

Read the BBC GCSE Bitesize pages on Science and Religion here: bbc.co.uk/bitesize/guides/zx7634j/revision/1

ACTIVITY 4

Do you think religious ideas or images can be used in science? Give a reason for your answer.



Philosophical Plumbing* and Gaia Theory

***Tip: To help with this section, complete the Philosophical Plumbing worksheet first!**

Today, in the modern world, there is a tendency to think of the earth as a jumble of 'resources' that exist for human beings to use. This idea makes people willing to damage the environment for their own gain and blocks them from caring for the planet.

Mary thought that the idea of Gaia was better because it helps us to think of the earth as an interconnected ecosystem – indeed as a living thing itself! It also helps us to appreciate that we are all living things who are part of a connected world, and not separate beings. Sometimes science encourages the idea that human beings are detached and separate observers of nature. This is an important idea for science, but it can block our thinking if it stops us from understanding ourselves as part of nature. It also makes it very hard to see how we should treat the non-human natural world, and what our responsibilities are. So, Midgley's work on Gaia involves philosophical plumbing.



Midgley thought that the idea of Gaia should replace our idea of the earth as a jumble of resources, ourselves as unconnected to it.

We are used to thinking about the climate crisis as a **physical emergency**, but Midgley thought that it is also a **conceptual emergency**. A conceptual emergency happens when our ideas and images lead us to act in ways that are harmful and dangerous.

When everyone acts in ways that are harmful and dangerous this can create a physical emergency, like the climate crisis. Mary thinks that **conceptual emergencies** can cause **physical emergencies**. If that is right, **philosophical plumbing** has a crucial role to play in addressing the climate crisis.

ACTIVITY 4

Midgley had many reasons for thinking that the image of Gaia could help with the **conceptual emergency** at the heart of the climate crisis.

What do you think about each of the three reasons in the table below?

Do you think Midgley is right or do you disagree?

1. Midgley thought we should have an attitude of wonder, like a religious attitude, towards our planet. She argued that when people don't have this attitude, they are likely to harm the planet.

What do you think?

<p>2. Midgley thought that we always need poetic imagery and metaphors to make sense of anything at all. We can't help thinking using image and metaphor, even when we are doing science. Other images in science are not especially 'scientific' either (e.g. brains as computers, selfish genes). We just notice them less because we are used to them.</p>	<p>What do you think?</p>
<p>3. Midgley thought that if we think of the Earth as a living thing, we will realise that the Earth can be healthy or sick. Understanding this should allow us to respond to the Earth with the care and concern that we show to living things that are unwell.</p>	<p>What do you think?</p>
<p>Can you think of any more ideas or images that might help with the climate emergency?</p>	

CHALLENGE

Write a letter to Gaia. What would you like to say to her? Maybe you would like to say thank you, or sorry. Do you have some promises to make about the future? Can you imagine Gaia's reply?



Did you enjoy learning about Mary Midgley's philosophy? Perhaps her ideas about Gaia have inspired you to new ways of thinking and imagining?

If so, why not become a **Mary Midgley Young Poet**! For information about how to do so go to notesfromabiscuittin.com/young-poets