

Part II: Science, Gaia, & Ethics

Like the “new mechanical philosophy” during the Scientific Revolution, the Gaia Hypothesis draws upon the ecological sciences and has ushered in a new HOLISTIC approach within science that challenges:

- Reductionism
- Individuality
- Simplicity
- Linearity
- Isolation

Part II: Science & Ethics

The Plan:

- Brief overview of Science
- Brief overview of Ethics
- How holism in science might influence ethics.

Science: Facts, Descriptions

- Broadly construed, the practice of science is a method of coming to understand the natural world.
- Science is a way of knowing.
 - *Scientia* = knowledge, understanding.
- Science tells us how things are.
- Science reports and explains facts.
- Scientific inquiries generate descriptions.

Ethics: Values, Prescriptions

- The study of ethics tells us what is good.
- The study of ethics identifies values.
- Ethics reports how things ought to be.
- Ethics reports what I should do (or should not do).
- Ethical inquiries generate prescriptions.

Science & Holism

Metaphysical / Ontological Holism

- recognizes (and studies) various “ecological wholes” (such as species, populations, ecosystems, and biotic communities) that are distinct from (or “greater than”) their individual parts.

Epistemological / Methodological Holism

- develops methods of investigation and testing that results in new understanding of wholes.

Explanatory Holism

- incorporates these wholes into explanations of other facts: explaining why/how things occur, making predictions about what will happen.

Ethics & Gaia Hypothesis

- To the extent that the Gaia Hypothesis introduces new THINGS (systems, biosphere, etc.) and new CONNECTIONS (relationships), this changes our existing ethical obligations.
 - We see that our behaviors (individually and collectively) have wider influence.
- Also, it might alter our fundamental ethical values: that these newly discovered higher-order systems are valuable and deserve to be considered in our ethical evaluations.

There's always a "but"...

- But, it is not clear that the Gaia Hypothesis will simply introduce new ethical obligations.
- Given the holistic, systematic nature of the Earth's systems, we could also conclude:
 - Hey, do whatever you want, Gaia is tough and resilient. Its/Her systems are capable of self-regulation.
 - If our collective behaviors lead to an inhospitable environment for humans, then so be it... perhaps Gaia doesn't want us around anymore!

There's always a "but"... (cont)

- So, recognizing the reality of higher-order self-regulating principles might actually foster complacency or abuse.
- And another worry: the view of Earth as a "bountiful provider" (the mother figure who is an endless resource) might encourage an ethical system focused on taking (rights and privileges), rather than giving (obligations and responsibilities).

The Gaia Hypothesis...

- Questions conventional science:
 - How we investigate the natural world
 - How we understand systems
- Blurs our sense of individuality:
 - Self-Other
 - how we conceive of the world
 - how we relate to it
 - the changes we choose to make to it

The Gaia Hypothesis...

- Requires clarification of concepts:
 - In science: life; evolution
 - In ethics: value; responsibility
- Challenges us to improve:
 - Ourselves,
 - Our social world,
 - Our future...
 - ... and the planet's future.