### **What We Do**

The Institute for the Study of Nature is an intellectual agora, a locus of discussion, debate, and cooperation for reconsidering the question, "What is Nature?" We seek to open a space for scholars who appreciate the value of this question to discuss and to advance their research. We also seek to restore to science essential ideas lost over the years by equipping the rising generation of scientists to ask the foundational questions too often taken for granted.



Hans Jonas, 20th-century philosopher of nature.

## **Some Questions about Nature**

- Are natural wholes real? Do the structural principles that unify them make them more than the sum of their parts?
- Is there a reasonable sense in which natural things move toward goals?
- Do natural kinds have any basis in objective reality? Is there any way that science can operate
  without a grasp of universal properties and essences of things of a given kind?
- Is classical hierarchy of being (inanimate, plant, animal, and rational) defensible?
- How complete are the mathematical and mechanical models of nature used by modern science?
- What is the relationship between the classical and modern modes of understanding nature?
   Can the classical modes be modified, purified, and updated to complement modern knowledge?
   What do they uniquely contribute?

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Partial Answers

Are Not Enough

# Exploring the Cosmos





Institute for the Study of Nature www.isnature.org

# What Is Nature?

The modern conception of the universe was born with Newton's mechanical physics. He decomposed the physical world into the simple interactions of otherwise inert parts. This triumph suggested that the universe was a great clock, fully understandable by mechanical principles: the artificial and the natural became fatally confused, with natural things treated as if human-built machines, like the mechanical duck pictured below.

Why is mechanism a fatal confusion? An artifact is so understandable, because we *make* it. But this "whole" is really only the sum of its parts; we *impose* its only purposes. Are *natural* things also purposeless? Are they merely mechanical, lacking inner purpose?

The natural wholes we encounter daily appear directed to preserving themselves. Is this perception a naïve illusion, like ascribing inten-



The Duck of Vaucanson, inspired by the Cartesian conception of animals as machines. But are they really?

tion to a clock's motions? Is a duck just a machine, an assemblage of independent parts with no unified ordering principle in itself?

A duck hungers for food to sustain itself, whereas its atoms have no such need. If atoms are all that's truly real, then hunger is an illusion. But so is the duck: it *appears* to be a living, unified, selfdirected whole, but really, its "life" is a mere byproduct of its atoms.

Our natural perceptions are enough to tell us that neither hunger nor ducks are illusions.

Modern science—despite the power of mathematical laws and mechanical causes—cannot by itself tell us what we know by other means. Further, modern science is ill-equipped for foundational questions, such as the basis of its own effectiveness, the limits of



**Aristotle** 

its methodologies, and the definition of nature.

The Institute for the Study of Nature (ISN) was founded to provide a forum for discussing and debating fundamental questions like "What is Nature?" in ways that bring together science, human experience, rational inquiry, and neoclassical philosophy. You can learn more from our website www.isnature.org. Visit the "About" pages, and, for a better idea of the range of issues addressed by the ISN, review our "Articles, essays, etc." page.

# History

The ISN was founded in 2007 by Mark Ryland, with the encouragement and support of a circle of scientists, philosophers, and theologians. They urged him to found the ISN because they agreed with him that the current "religion and science" debates, and the contentious public arguments about Darwinian evolution and

"Intelligent Design" had reached impasse.

#### **Activities**

The premier event of ISN is its annual Summer Seminar and Conference in June at MIT. The Seminar, attended mainly by students who have been appointed the Institute's "Summer Fellows," consists of four days of talks and discussions of classic and modern texts, on a general theme at the intersection of science and philosophy. In the Conference, which follows the Seminar, leading scholars and scientists, presenting papers, continue the discussion.

The proceedings of our 2008 conference are being published in what we believe will be the first contribution in an important and influential series.

Other events planned include independent talks by our regular Fellows, and a series of conferences in Europe.

# **Long-term Goals**

The ISN believes it can achieve maximum impact by evolving into a degree-granting graduate school. We plan to develop a comprehensive high school curriculum for teaching science, mathematics, and philosophy of nature in an innovative, exciting, and integrated way.



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