BOOKS & ARTS

One long argument

Revisiting ancient Greek debates about the natural world should broaden biologists' horizons.

Creationism and its Critics in Antiquity

by David Sedley

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Evolutionary biologists are — as modern scientists go — a historically minded lot. All of us acknowledge the greatness of Charles Darwin and some have even read *On the Origin of Species*. A few speak of Geoffroy Saint-Hilaire, Lamarck or Goethe. Yet our historical horizon is actually very near. The pre-1859 theoretical landscape is shrouded in a Judeo-Christian gloom that reaches without interruption to the dawn of recorded time, where it dissolves into the Stygian darkness of pagan creation myth.

David Sedley's book will change that view. He argues that, for the philosophers of ancient Greece, the central cosmological question was this: is the world, and all that it contains, the handiwork of an intelligent designer? Between 500 and 300 BC, about a dozen major thinkers essayed answers that are bewildering in their variety and ingenuity. Some were as creationist as a Christian. Others appealed to more remote forces such as love. Others again were ardent materialists and thought the world just self-assembled. From the presocratics to Galen, the Creator advances, retreats or sometimes just curls up and contemplates himself. At times — although it's hard to tell when — God becomes a metaphor.

The pivotal figure in Sedley's story is Socrates. It seems an odd choice. The issue is the origin of the world, about which Socrates had little to say because he thought science was a waste of time. For him, knowledge came from debating questions such as 'what is good?' Yet Sedley credits him with one of the most potent arguments in the history of cosmology: the argument from design. That argument became the centrepiece of the cosmology that Socrates' pupil, Plato, sketched in the *Timaeus* and thence, by descent, the source of the extraordinary teleological account that Aristotle, Plato's pupil, gave of the natural world.

Sedley's argument is subtle and expert; he is the Laurence Professor of Ancient Philosophy at the University of Cambridge, UK. But it won't wash. To elevate Socrates he diminishes Aristotle to the position of Plato's epigone. But how different the thinkers are. Plato's god is a

In Plato (left) one hears a poet; in Aristotle (right), a colleague — albeit one with some cranky views.

cosmic craftsman; Aristotle's god just thinks. Plato's world has a beginning; Aristotle's is eternal. Plato's animals get their form from the mind of god; Aristotle's are formed from information in the seminal fluid of their parents.

It's not just the ideas that differ, it's also the style. The *Timaeus* is a drawing-room monologue in the form of a myth: one rich in zoological weirdness but devoid of scholarly citation, empirical evidence or even much reasoned argument. Aristotle's works are a relentless, reasoned assault on reality that, in modern print, run to thousands of pages. They are an exhaustive and exhausting analysis of what his predecessors thought about the causes and structure of the natural world, why they are (more often than not) wrong, and the empirical evidence for thinking so.

For a modern scientist, if not for a philosopher, the difference could not be greater. Listen to Plato and one hears a poet or, at best, a moralist; listen to Aristotle and one hears a colleague — albeit one with some cranky views. In a piquant preface, Sedley tells us that the dining room of his Cambridge college displays the portraits of two of its alumni, the Christian philosopher William Paley and Darwin. The parallel with

fourth century Athens is exact. As a student, Darwin read and enjoyed Paley's *Natural Theology*, and may have even acquired from it his keen sense of the exquisite design displayed by living things. Yet who would call Darwin a paleyite? It would be the equivalent of calling Aristotle a platonist.

And that's absurd. Or is it? The brilliance of this book is that Sedley lets the Greeks talk to us and, surprisingly, we can understand what they're saying. Listen to Empedocles describing a time when the world was filled with a diversity of creatures with improbable combinations of features, most of which were then winnowed out, and you hear the late Stephen Jay Gould illuminating the body plans of the Burgess Shale fossils. Listen to Aristotle heaping scorn on Democritus for supposing that living things self-assemble from accidental combinations of atoms, and you hear Fred Hoyle's gambit that "a tornado sweeping through a junkyard might assemble a Boeing 747 from the materials therein". Truly it has been, as Darwin said, just "one long argument".

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