

article series

Evolutionists Say Amazing Things

The Nature of Science

Mark Bergemann

Our feature article taught us much about dinosaurs, but its primary theme was not dinosaurs. Its theme was the nature of science. Part I ends with these words,

Science does not generate truth, but rather, useful explanations. Our students need to know about how science works. Dinosaur science is typical science which shows how mankind creates explanations and picks and organizes facts to fit the current situation.¹

You may be surprised to learn that many evolutionists talk in similar ways about science. The *LSI Journal* article series, “Evolutionists Say Amazing Things,” usually presents one short quote. This time we will examine several quotes. Some quotes are rather lengthy to give you a fuller picture of what these evolutionists are saying. Keep the above dinosaur article quote in mind as you read how evolutionists describe science in similar ways.

Bias in Science

A professor of physics at the University of California writes about the bias in science,

No one is immune from confirmation bias. And scientists, despite what you may think, are rarely mere gatherers of facts, dispassionately following data wherever it may lead. Scientists are human, often too human. When desire and data are in collision, evidence sometimes loses out to emotion.²

¹ Paul R. Boehlke, “Dinosaurs, God’s Creatures,” *LSI Journal*, 32, no. 4 (fall 2018): 12.

² Brian Keating, *Losing the Nobel Prize -a story of cosmology, ambition, and the perils of science’s highest honor* (New York: Norton & Company, 2018) 5.

A recent cover story in *Scientific American* relates how scientists work to prop up failing theories such as inflationary models of the Big Bang. The italics below is in the original,

Inflationary cosmology, as we currently understand it, cannot be evaluated using the scientific method. ...Some scientists accept that inflation is untestable but refuse to abandon it. ...A common misconception is that experiments can be used to *falsify* a theory. In practice, a failing theory gets increasingly immunized against experiment by attempts to patch it. The theory becomes more highly tuned and arcane to fit new observations until it reaches a state where its explanatory power diminishes to the point that it is no longer pursued. The explanatory power of a theory is measured by the set of possibilities it excludes. More immunization means less exclusion and less power.³

Two leading archaeologists, the Curator of Anthropology at the American Museum of Natural History in New York, and a past president of the Society of American Archaeology, wrote a college textbook on archaeology. They describe how science is a biased, subjective process that may not result in final truth about anything [emphasis in original],

Science is unavoidably embedded in the scientist's culture and hardly free of cultural biases. The social, cultural, and political context of archaeology influences its theories. ...Science offers no ironclad assurance that application of its methods will *necessarily* result in the absolute, final truth about anything; rather, scientists claim only that scientific methods provide a means to determine, more or less, whether the evidence favors the validity of a hypothesis. ...But archaeologists are not emotionally or politically neutral data-gathering machines. ...In this section we will see why most archaeologists are both scientists and humanists. The primary distinction between scientific and humanistic approaches occurs over the issue of **objectivity**. If you believe that archaeology is "mostly objective," then you probably lean toward the scientific side. ...But if you think that archaeology is "mostly subjective," then you are likely more comfortable with

³ Anna Ijjas, Paul J. Steinhardt, Abraham Loeb, "Pop Goes the Universe, *Scientific American*, Feb 2017, 39.

humanistic perspectives, which emphasize that the observer and the observed can never really be separated, that our knowledge of the past mostly depends on who is doing the observing. You probably mistrust conventional science and feel more comfortable with an ideational perspective.⁴

Evolution is a “Historical Narrative” Written Without Using “Laws or Experiments”

Ernst Mayr was a professor of zoology at Harvard. Scientific American calls him “one of the towering figures in the history of evolutionary biology.”⁵ Mayer writes that evolutionary biology is unlike other fields of science. Other fields of science are based on laws and experiments. The methodology of evolutionary science is to construct “competing historical narratives” based on “concepts.” Mayr writes,

Darwin founded a new branch of life science, evolutionary biology. ...Darwin introduced historicity into science. Evolutionary biology, in contrast with physics and chemistry, is a historical science—the evolutionist attempts to explain events and processes that have already taken place. Laws and experiments are inappropriate techniques for the explication of such events and processes. Instead one constructs a historical narrative, consisting of a tentative reconstruction of the particular scenario that led to the events one is trying to explain. ...Another aspect of the new philosophy of biology concerns the role of laws. Laws give way to concepts in Darwinism. In the physical sciences, as a rule, theories are based on laws; for example, the laws of motion led to the theory of gravitation. In evolutionary

4 David Hurst Thomas and Robert L. Kelly, *Archaeology*, 4th ed., (Belmont, CA: Thompson, 2006), 42-43. Author bio on back cover.

5 Ernst Mayr, “Darwin’s Influence on Modern Thought,” *Scientific American* website, November 24, 2009. (accessed 9-25-18)

<https://www.scientificamerican.com/article/darwins-influence-on-modern-thought/>
Mayr died in 2005. SA notes about this 2009 article: “This story, originally published in the July 2000 issue of Scientific American, is being made available due to the 150th anniversary of Charles Darwin’s On the Origin of the Species. This article is based on the September 23, 1999, lecture that Mayr delivered in Stockholm on receiving the Crafoord Prize from the Royal Swedish Academy of Science.”

biology, however, theories are largely based on concepts such as competition, female choice, selection, succession and dominance. These biological concepts, and the theories based on them, cannot be reduced to the laws and theories of the physical sciences. Darwin himself never stated this idea plainly. My assertion of Darwin's importance to modern thought is the result of an analysis of Darwinian theory over the past century. During this period, a pronounced change in the methodology of biology took place. This transformation was not caused exclusively by Darwin, but it was greatly strengthened by developments in evolutionary biology. Observation, comparison and classification, as well as the testing of competing historical narratives, became the methods of evolutionary biology, outweighing experimentation.⁶

Jerry A. Coyne is an evolutionary biologist who wrote the 2009 NY Times best seller, *Why Evolution is True*. In a 2003 book he describes evolution as a "soft science." He places evolution as "closer to phrenology than to physics." Phrenology relates skull shape with mental abilities and character traits. Phrenology was long ago discredited and rejected by the scientific community.

In science's pecking order, evolutionary biology lurks somewhere near the bottom, far closer to phrenology than to physics. For evolutionary biology is a historical science, laden with history's inevitable imponderables. We evolutionarily biologists cannot generate a Cretaceous Park to observe exactly what killed the dinosaurs; and, unlike "harder" scientists, we usually cannot resolve issues with a simple experiment, such as adding tube A to tube B and noting the color of the mixture. The latest dead weight dragging us closer to phrenology is "evolutionary psychology," or the science formerly known as sociobiology, which studies the evolutionary origin of human behavior. ...Unfortunately, evolutionary psychologists routinely confuse theory with idle speculation. ...If evolutionary biology is a soft science, then evolutionary psychology is its flabby underbelly.⁷

⁶ Mayr.

⁷ Jerry A. Coyne, "Of Vice and Men: A Case Study in Evolutionary Psychology," in *Evolution, Gender, and Rape*, ed. Cheryl Brown Travis (Cambridge MS:

A college textbook on evolution also explains how evolutionary biology brings “historicity into science” and rejects the scientific method of experimentation. Below we read these amazing words, “Biologists continue to undertake evolutionary investigations ...whether the methodology is philosophically correct or not.”

One philosophical criticism is that evolutionary explanations (hypotheses) cannot be tested and supported as hypotheses in physics and chemistry. ...Further objections to evolution are that many studies in this area cannot be properly evaluated by scientific method. That is, acceptance or rejection of a scientific hypothesis is generally based on whether events relating to (“testing”) that hypotheses refute it or not. Hypotheses constructed so that they can never be refuted (“falsified” according to philosopher Karl Popper) are not considered scientific.

...Nevertheless, crucial as these philosophical objections appear, they have not much influenced the practice of evolutionists. Like studies in geology and astronomy, biologists continue to undertake evolutionary investigations and continue to propose hypotheses despite these objections. Part of the reason for this is simply the profound recognition by “curious” humans that the past has influenced the present, and that an understanding of the past is a highly desirable and satisfying goal, whether the methodology is philosophically correct or not.⁸

While the general public often thinks of science as an unbiased producer of truth, prominent scientists know this is not the case, and they are willing to say so in writing.

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MIT Press, 2003), 171.

⁸ Monroe W. Strickberger, *Evolution*, 2nd ed. (London: Jones and Bartlett Publishers, 1996), 16-17.



Milwaukee Public Museum Diorama

credit: photo 2016 by Mark Bergemann

Our front cover photo is a close-up of this diorama. The museum sign shown on the bottom left of the photo states,

In this life-size recreation of a lowland forest floodplain, *Tyrannosaurus* feeds upon a dead three-horned *Triceratops*. Three small *Dromaeosaurus* dinosaurs wait patiently nearby to scavenge their share.

***Tyrannosaurus rex* “King Tyrant Lizard”**

The largest land-dwelling lizard of all time, *Tyrannosaurus* depends on its powerful hind legs and massive jaws to kill and devour prey. Its forelegs appear too small for weapons, too short to bring food to its mouth. The purpose they serve is unknown.

***Triceratops* “Three-Horned Face”**

This ponderous plant-eater lived in herds and had three sharp horns adapted for defending against predators. *Triceratops* was one of the most numerous of dinosaurs and among the last to become extinct.

