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Cover: Views of the human heart have undergone many revisions throughout history. This Olmec clay vessel, crafted 2,900 to 3,200 years ago in what is now Mexico, mistakenly depicts the heart with two chambers. Now, scientists have data that could force a revision of the modern theory underpinning heart disease and lead to a simple blood test that foretells risk years in advance. (Photo: ©Justin Kern)



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Letters

Value of reanalyzing data

Michael Turner's suggestion ("Does the Cosmos Have a Direction?" SN: 4/26/97, p. 252) that astronomical observations cannot be used for theoretical purposes for which they were not intended is not entirely true.

The earliest example I can think of is Hipparchos' discovery of precession through analysis of ancient Babylonian astrological measurements. Herschel's discovery of Uranus, leading to reanalysis of previous sightings which ultimately resulted in the discovery of Neptune, is another prominent example. And then there is Einstein's reanalysis of Galileo's measurements of falling bodies, leading to the equivalence principle and general relativity.

Every experiment results in a variety of data being collected, from which the experimenter selects what is believed to be important. Another observer, seeing the same data, can conceivably see something else important,

something that may have been missed by the original worker.

This is how science gains a Darwin and loses a Lamarck—probably a good thing.

*Paul J. Camp
Assistant Professor of Physics
Coastal Carolina University
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Zippering along in a cold cloud

There is one important omission from your article "Speed of sound in frigid sodium cloud" (SN: 5/3/97, p. 279)—the speed of sound in a frigid sodium cloud.

*Eugene E. Jarva
Huntington Station, N.Y.*

The speed of sound in a Bose-Einstein condensate of sodium atoms increases as the density of the condensate increases. In the MIT experiments, the measured speed ranged from 4 to 10 millimeters per second. —I. Peterson

High cost of vaccine?

Bladder infections are distressing and surprisingly painful for the patient, but in my experience physicians are typically not concerned with prevention, even when infections recur ("Sticky solution to bladder infections?" SN: 4/26/97, p. 255). Therefore, it is not surprising that Calvin Kunin of the Ohio State University School of Medicine dismisses the notion of vaccines as not "relevant to the clinical setting."

He then notes that such infections can be managed with antibiotics. Well, yes. One might rather cynically suggest that it is very much in the medical practitioner's interest to resist long-term solutions that might allow patients to avoid an office visit.

As pointed out earlier in the article, bladder infections generate an estimated \$1 billion in medical costs in the United States.

*Marilyn E. Morgan
Pasadena, Calif.*