

Palimpsest Teaches History, Geography

The exciting article by Reviel Netz on the recently discovered Archimedes Palimpsest (PHYSICS TODAY, June 2000, page 32), reminds us once again about science's ancient legacy, particularly from Greece. I cannot help but think that the way the manuscript was discovered symbolized the fate of a great many ancient scientific achievements and the barrier against them that the Christian church imposed in medieval Europe. That the monks "saved" the manuscript by "recycling" it as a palimpsest reminds me of the story of the fate of Bach's *St. Matthew Passion*, which was rescued from the butcher's hands by Felix Mendelssohn, just as the butcher was about to wrap a piece of meat in the manuscript.

The case of Archimedes illustrates well the modern trend of neglecting Greek antiquity in the hard sciences. Surely, our modern daily experience is far different from ancient times, but we should be aware that what has survived from ancient science must be just the tip of the iceberg, saved for us more by Moslem culture, Arab in particular, than through our Christian ancestors.

I agree that Archimedes' rationale for doing research was essentially to develop powerful argumentation rather than to search for truth. An affinity for competition pervaded the culture of ancient Greece. Although the teachings of Plato, Aristotle, and others did contain teleological aspects, Greeks in general, unlike medieval Christian Europeans, did not live to fulfill a particular aim or purpose, human or divine. Perhaps it was just this absence of an obligation to achieve a prescribed goal that allowed them to achieve so much.

PETAR GRUJIC
(grujic@phy.bg.ac.yu)
Institute of Physics
Belgrade, Serbia, Yugoslavia

Reviel Netz describes the history of the Archimedes Palimpsest, stating that the ex libris "hailed from the Mar Saba monastery near the Dead Sea, in today's Palestine." This statement is surprising and incorrect. There is no such entity as Palestine, and the monastery he refers to is in the Judean Desert. This area was under Jordanian rule until 1967 when, in the Six Day War,

it was captured by Israel; it has been under Israeli jurisdiction ever since.

MICHAEL ROSENBLUH
Bar Ilan University
Ramat Gan, Israel

NETZ RESPONDS TO ROSENBLUH: I am fairly certain that the monastery is under the Palestinian Authority. Whether we wish to refer to the "Palestinian Authority" as Palestine is a delicate question. At any rate, it is not in "today's Israel," since the area never became Israeli territory; it is no longer in "today's Jordan." A case can be made for calling the area simply "the West Bank." But "Palestine" is the standard geographical name, and the monks of Mar Saba certainly consider themselves Palestinian. Of course, the issue is strongly politicized; it's good that we didn't get into the question of whether Archimedes was Greek or Sicilian!

REVIEL NETZ
(netz@stanford.edu)
Stanford University
Stanford, California

Los Alamos Fire Posed Little Radiation Hazard

I was happy to see that PHYSICS TODAY devoted a short column to the impact of fires on Department of Energy (DOE) facilities (October 2000, page 69), since nuclear weapons activities at these sites over the past 50 years have left measurable radionuclide contamination on the ground that could, in principle, pose a public threat when the soil is disturbed. Toni Feder did an admirable job in putting such risks at Los Alamos National Laboratory (LANL) in technical perspective. However, the statement that "there is broad agreement that the threat to the public and the environment would have been much worse had the Cerro Grande fire reached the hundreds of wooden boxes of transuranic waste" is distorted.

I am neither a lab spokesman nor a waste management expert, but I suspect that the purported "broad agreement" is confined to anti-nuclear advocates and is not shared by those who have taken a careful look at the technical details. As it turns out, the "wooden boxes" (actually, fiberglass-reinforced plywood) contain only oversized metal parts that await volume reduction and packaging in 55-gallon steel drums. All flammable waste is

already stored in the same steel drums. Furthermore, the site has standard fire-safety practices: The storage area has been cleared of vegetation, ignition sources are kept at a distance, and fire fighters stand on alert to defend the area.

Trace levels of actinides deposited on metal parts probably can volatilize in wood-borne fires, and such a pathway for broad release of hazardous material should be considered a possible (if improbable) hazard. LANL and DOE have indeed considered such a threat in a recent environmental impact statement and calculated its downwind effects. The associated radiation dose to the public is rather small.¹ Consequently, I remain mystified as to the nature of the "threat to the public and environment" to which Feder refers.

Reference

1. Los Alamos Report LA-UR-00-3471, available at <http://lib-www.lanl.gov/pubs/fire.htm>.

BERNARD R. FOY
(bfoy@lanl.gov)
Los Alamos National Laboratory
Los Alamos, New Mexico

Quantum Mechanics, Born Again

In his Letter (PHYSICS TODAY, April 2001, page 94), Carlos D. Galles noted that a photograph caption in my July 2000 PHYSICS TODAY article on Werner Heisenberg and Albert Einstein (page 39) erroneously credits Heisenberg instead of Max Born with being the first to name the new physics "Quantum Mechanics." For evidence, he referred to an article in Bartel L. van der Waerden's *Sources of Quantum Mechanics* (Dover, New York, 1967).

I thank Galles for his correction. But allow me to add that the photograph and its caption were supplied not by me but by PHYSICS TODAY staff (a staff that I have always found to be helpful to authors, and that rarely, except perhaps at the last minute of production, would make even a small glitch). I also congratulate Galles for reminding readers of the useful book by van der Waerden. I know it well; as it happens, I placed it as volume 5 in the Dover series, *Classics of Science*, when I was the series' editor.

GERALD HOLTON
(holton@physics.harvard.edu)
Harvard University
Cambridge, Massachusetts ■