Science Loses Some Friends

Francis Crick, Thomas Gold, and Philip Abelson

By Iain Murray

The scientific world lost three important figures in recent weeks, as Francis Crick, Thomas Gold, and Philip Abelson have all passed away. In their careers, each demonstrated the best that science has to offer humanity. Their loss illustrates how much worse off the state of science is today than during their glory years.

Philip Abelson

Philip Abelson was a scientist of truly broad talents. One of America's first nuclear physicists, he discovered the element Neptunium and designed the nation's first nuclear submarine. Later in his career, he pioneered research into the *e. coli* bacterium. His research endeavors spanned the fields of chemistry, physics, biology, biochemistry, and engineering; but when in 1959 he was elected to the National Academy of Sciences he chose to be recognized as a geologist.

It was as editor of *Science* that Abelson became most widely known, taking the helm of the influential journal in 1962 and steering it through a course in which its circulation doubled by the time he finally relinquished control in 1984. He remained associated with the magazine, and his strict adherence to scientific principles led him to be an early questioner of the case for global warming alarmism. In a lead editorial in the magazine dated March 31, 1990, he wrote, "[I]f the [global warming] situation is analyzed applying the customary standards of scientific inquiry one must conclude that there has been more hype than solid fact."

Yet Abelson was no mere conservative refusing to accept new ideas. Under his editorship, *Science* published most of the groundbreaking papers establishing the idea of plate tectonics. As he himself said, "Within the scientific enterprise, there are always new developments." Throughout his career, Abelson used scientific principles to determine genuine new developments from hype and publicity stunts (he was famously dismissive of the scientific value of the race to the moon). In that, he should prove a role model for true scientists.

Thomas Gold

Astronomer Thomas Gold had an equally distinguished career, in fields as diverse as engineering, physiology, and cosmology; and he was never afraid of being called a maverick. A fellow of both the Royal Society and the National Academy of Sciences, Gold received honorary degrees from both Cambridge and Harvard and founded the Cornell Center for Radiophysics and Space Research.

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Despite being interned for his Austrian birth during World War II, Gold ended up becoming Chief Scientific Adviser to the British Ministry of Defense, where he was assigned to undertake secret research on radar issues following his release. Working at the Admiralty with fellow former internee Herman Bondi and a young scientist named Fred Hoyle, Gold and his colleagues extrapolated from the electron dynamics of the radar's magnetron to cosmological principles. Together, the three propounded the "steady state" theory of the universe, which suggests that the universe and the laws of physics have always existed in the same, steady state. This has since been supplanted as the dominant cosmological paradigm by the Big Bang theory.

After working at the Royal Greenwich Observatory, Gold moved to the United States to become Professor of Astronomy at Harvard. From there he moved to Cornell, where he demonstrated that the newly discovered "pulsar" phenomenon must contain a rotating neutron star (a star more massive than the sun but just 10 km in diameter). As one obituarist pointed out, this "opened the door for [Stephen] Hawking," since it is just a short step from accepting neutron stars to accepting black holes.

Later in his career, during the energy crisis of the 70s, Gold advanced another controversial theory, that of the "abiotic" origin of oil. Based on Russian theories from the 1950s, Gold argued that hydrocarbons are not the remnants of dead animal life, but the product of high temperatures and pressures during the Earth's formation. Detailed in his book, *The Deep Hot Biosphere*, the theory answered several puzzles, such as why biologically inert helium is always present in petroleum deposits. His theory received some validation when a Swedish exploration found oil in non-sedimentary rock, where it would have been impossible for plant or animal remains to have settled. Nevertheless, the theory remains controversial today.

Like Abelson, Gold was personally skeptical of global warming alarmism, warning of the "herd instinct of science," something that those who advance the "scientific consensus" argument in its favor would do well to remember.

Francis Crick

Francis Crick, co-discoverer of the structure of DNA with James Watson,

was by far the most famous of the three. Before he met Watson, his scientific career was undistinguished, but following their research, Crick was able to turn to Watson in The Eagle pub in Cambridge, England on February 28, 1953, and say, "We've found the secret of life."

Crick moved from genetics to neuroscience, in which field he published two important works, *What Mad Pursuit* and *The Astonishing Hypothesis*. Like Gold, Crick was not afraid to embrace controversial theories, being a leading proponent of the theory of panspermia, which suggests that life originated in space. Unlike Abelson and Gold, however, Crick did believe that global warming posed a serious problem for the world.

Crick's career is interesting not just for his monumental discoveries, but also for the way in which he conducted his research. When he met Watson, he was supposed to be researching various minor matters concerning fluid viscosity—so, despite being paid to do what is now called "basic research," his most important research came as a result of his own interest. Later, as a result of his fame, Crick turned to neuroscience in order to provide scientific answers to questions more usually thought of as religious. He was not beholden to public funds, and so could tackle questions that public funding would shy away from—a lesson that advocates of greater government involvement in scientific research should keep in mind.

With the death of three scientists happy to plough their own furrows rather than follow the "herd" Gold identified, science becomes a little poorer. Similar towering intellects with the courage to stand up for science, like Freeman Dyson, are aging. It is hard to see from where their successors will come. The world will be diminished if the dominant scientific figures in the coming years fit the mold of Sir David King, Tony Blair's heavily politicized Chief Scientific Adviser, than the sadly broken mold of Abelson, Gold, and Crick.

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Meet CEI's Experts
John Berlau

John Berlau, CEI's 2004-2005 Warren Brookes Journalism Fellow, comes to CEI from Insight *magazine, where he was an investigative reporter. He graduated from the University of Missouri in 1994, with a double major in journalism and economics. He recently told* Monthly Planet *about himself.*

What's the most memorable story you've done?

There are two that stand out. The first was my interview with the late Ray Charles. In addition to his great talent as a musician, he was a great—and thrifty—businessman, negotiating all his contracts to his advantage. I found out he also had a couple of things in common with Milton Friedman—both were innovators at the top of their fields, and both called reporters collect.

The other was a bit scarier. In the midst of investigating the financial dealings of Clinton IRS Commissioner Charles Rossotti, the IRS chief of media relations sent out an email—which I got hold of through sources I can't disclose—that called me a "very persistent, very aggressive, very nasty reporter." I had doggedly and aggressively pursued the story, though I was always polite and never nasty. Hearing that there was an email about me going through the IRS pipelines was a bit frightening, but I kept at the story and eventually won an award for investigative reporting.

What areas would you like to cover as a Warren Brookes Fellow?

I would like to focus on the increasing regulation of the stock market, particularly its effect on new and emerging companies. Several companies, including Microsoft and Home Depot, started out as small firms and employed innovative methods to become leaders in their fields because they were able to go public and raise capital with relative ease. Unfortunately, it has become harder to raise the capital needed to innovate, with the imposition of Clinton-era regulations, the reversal of deregulatory measures of the Reagan years, and the Sarbanes-Oxley bill passed in the wake of Enron.

What is the most important lesson you've learned as a journalist?

If you don't understand, ask. Because if you don't understand, chances are, your readers won't either. Often when you ask basic questions, you can get intriguing insight for a story.

Any other interests?

I have long had an interest in music. Along with Ray Charles, I have interviewed such greats as the late Lionel Hampton, Diana Krall, the late Chet Atkins, and many others; and I have made road trips to see several of my favorites—most recently rockabilly pioneer Wanda Jackson.