John Marburger
(1941–2011)

Physicist and longest-serving US presidential science adviser.

Physicist, university president and science adviser to former US president George W. Bush, John H. Marburger III often placed himself at the centre of difficult situations. He won widespread respect and admiration for his cool temperament, fairness and humanity. A colleague characterized him as "one of the most effective and farsighted scientific administrators of the postwar period". Marburger also faced intense criticism.

Marburger, who died on 28 July 2011 aged 70, was born on Staten Island, New York, and grew up in Severna Park, Maryland. In 1962, he completed a bachelor's degree in physics at Princeton University, New Jersey, going on to earn a PhD in applied physics at Stanford University in Palo Alto, California, in 1967. He joined the faculty of the University of Southern California in Los Angeles, where his research focused on non-linear and quantum optics, but he soon began to take on a series of challenging administrative posts.

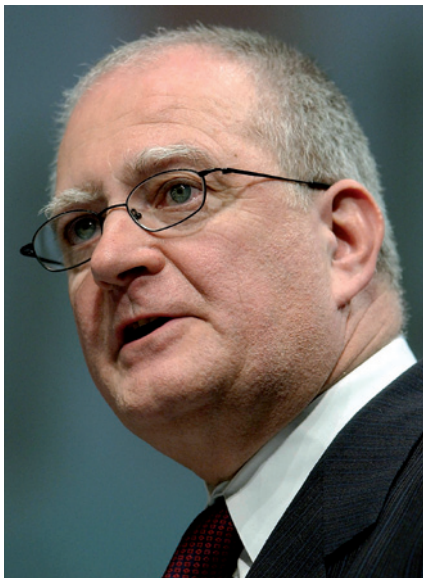
In 1972, he became chair of the physics department and four years later was appointed dean. In 1980, at the age of 39, he was made president of Stony Brook University in New York. Not long after, Mario Cuomo, the state governor, asked Marburger to chair a commission to give scientific advice on the future of the Shoreham nuclear power facility, then under construction but with an uncertain future due to technical problems, cost overruns and public opposition.

Marburger's experiences on the Shoreham commission shaped his thinking about the role of science in society and scientific advice in politics. Through interacting with the public, he quickly realized that decision-making involving nuclear power went beyond technical questions or whether facts were right or wrong. "There's a lot of sociology involved," he said. "If it governs the way people behave, then the factual becomes almost irrelevant."

Despite winning approval for his even-handedness, some criticized him for allowing too much public input into the process. Countering that "there were democratic considerations", Marburger argued that this commission was an opportunity for the public to feel that they were being heard.

After stepping down as president at Stony Brook, Marburger returned to research. Just four years later, in 1998, he became director of Brookhaven National Laboratory in Upton, New York, then engulfed by public criticism following a release of radioactive tritium. Marburger took on the job of rebuilding public trust in the institution through openness and transparency. He invited external regulators to sample the water and declared that no data would be withheld. "We can't stonewall," he said.

Marburger turned around Brookhaven's reputation, receiving accolades from environmental groups long critical of the lab. His commitment to public engagement was central to his management approach. When the UK newspaper *The Sunday Times* hyped the new Relativistic Heavy Ion Collider at Brookhaven with the headline "Big Bang machine could destroy Earth", Marburger formed an expert commission to allay public concern and foster public interest.



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THE BUSH YEARS

With his demonstrated flair for science, management and public engagement in highly politicized settings, his appointment as science adviser to Bush seemed a natural career step, and one that would be welcomed by the scientific community. Yet, from the first hints that Marburger was being considered for the position, he faced criticism from scientists for his defences of (or for being a part of) the Republican Bush administration.

Unlike previous science advisers but consistent with his commitment to transparency, Marburger declared his political affiliation as a Democrat. Under Bush, he was a consummate public servant, working behind the scenes from 2001 to 2009 as the longest-serving US science adviser. He briefed the president and agencies following the September 2001 terrorist attacks and anthrax scares, and helped to orient US research and development programmes in the nascent Department of Homeland Security. He also oversaw a massive increase in medical-research spending and the response to the loss of space shuttle *Columbia* in 2003.

During a public interview in 2005, I pressed Marburger to react to allegations that there was a systematic effort under way at the administration to undermine scientific integrity across the government. Marburger responded that such allegations — summarized at the time in reports by the Union of Concerned Scientists and Congressman Henry Waxman (Democrat, California) — amounted to little more than a conspiracy theory. "I don't give a lot of mental space to it," he said, "I don't think that it is seriously affecting science in the United States."

Although partisans continue to argue over the Bush administration's legacy, time has shown Marburger's judgement to be correct on at least two counts. First, US science remains strong. During his tenure, federal research budgets grew by the largest amount in a generation. Second, after his departure, issues of scientific integrity continue to be problematic under the administration of President Barack Obama, and remain beyond the scope of the science adviser's office.

In conversations I had with him over the past six years, as a subject of my research and later as a collaborator, Marburger never expressed resentment towards his critics. Earlier in his career he explained that "anger is not a useful reaction except symbolically, in a public-relations sense". How did he keep so calm? In his own words, he was an "incurable optimist" who found solace in science: "physics has been the main stabilizer of my life." In the last weeks of his life, Marburger finished a book on quantum physics, *Constructing Reality* which will be published by Cambridge University Press in September. ■

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