Presidents Who Value Science

THE OPENING DAY, 12 FEBRUARY, OF THE 2009 ANNUAL MEETING OF THE AMERICAN ASSOCIATION for the Advancement of Science (AAAS) in Chicago is by coincidence the 200th anniversary of the births of Charles Darwin and Abraham Lincoln. New understanding of the underlying processes and mechanisms that fascinated Darwin continues to be the focus of intense research, and many of the papers and symposia prepared for this meeting will celebrate the enduring legacy of Darwin’s thesis. It is noteworthy that this meeting is being convened in the land of Lincoln and within a month of the inauguration of another son of Illinois, Barack Obama, as president of the United States.

President Obama assumes his office at a time when exceptional leadership is desperately needed to address urgent domestic and international problems. Unfortunately, the urgency of these and other national priorities does not allow for sequential planning and action, with an expectation that some can be put off for a later time. Over the past few years, scientists have expressed dismay at the lack of opportunity to bring the very best science into the decision-making processes of the U.S. government. The government’s scientific integrity was publicly called into question. But the good news is that as the Obama administration coalesces, there are signs of a dramatic shift in the position of science advice. Much like Lincoln, President Obama exhibits intense curiosity and a willingness to listen. Perhaps never before has a president successfully recruited so many scientific stars to his cabinet and other executive positions. We can now hope that their energy and talents will be applied effectively to matters relating to national security and nuclear proliferation, energy security and greenhouse gas reductions, medical research and health care delivery, and more.

Lincoln’s presidency was so dominated by the Civil War that his accomplishments in promoting science and advancing the findings of science for the betterment of society are sometimes overlooked. Some of his interest in technology was related to the improvement of weaponry, but his fascination with science and technology had deep roots. In 1849, for example, he patented an invention to lift riverboats over shoals. In 1858, he gave a lecture on discoveries and inventions in which he pondered greater use of wind power, predicting that “quite possibly one of the greatest discoveries hereafter to be made, will be the taming, and harnessing of the wind.”* He also brought the telegraph into the White House and became the first national leader to have nearly instantaneous communication with his field commanders.

Lincoln was also keenly interested in improving the efficiency of agriculture and knew that in addition to mechanized systems for planting and harvesting, a better understanding of what we today refer to as soil science and plant ecology was also essential. He developed these ideas in a long address to the Wisconsin State Agricultural Society a year before he was elected president. Recognizing that agricultural productivity could be enhanced by research and wide dissemination of this knowledge, he signed into law a bill creating the Department of Agriculture in 1862. At that time, German scientists were leaders in the study of crop nutrition, and the first scientist hired at the new department was a student of the German school. That same year, Lincoln also signed into law the Land Grant College Act, intended to bring research and teaching on agriculture into colleges. It is also noteworthy that Lincoln’s signature created the National Academy of Sciences in 1863, only hours after Congress voted in favor of the bill.

President Lincoln presided over this nation during its worst period of internal turmoil. But this did not distract him from promoting the pursuit of science and from using this knowledge in forming national policy. We can hope that when history is written for the current era, the Obama presidency will be noted as another period of great advancement for “science, engineering, and innovation throughout the world for the benefit of all people.”**

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