SCIENCE AND THE DAILY PRESS

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Before the New York *Sun*, the first low-priced, large-circulation newspaper in the United States, was founded in 1833, the nineteenth century had felt the impact of a flood of scientific discovery and invention. John Dalton had announced his atomic theory of chemical action that was to help liberate vast hoarded treasures of nature. Oliver Evans had built the first high-pressure steam engine. Only four years before the founding of the *Sun*, Peter Cooper had begun building his terrifyingly swift Tom Thumb engines for the Baltimore and Ohio. Only two years before, Joseph Henry had designed the first electromagnetic engine.

In the youthful United States, inventions followed scientific discoveries in a giddy whirl, and the large-circulation penny papers, children of invention and the spirit of the lusty age, acted as a catalyst for the creation of still more inventions that followed still more discoveries.

Darwin, Faraday, Kelvin, Mendel, Mendeleef, Pasteur—these are names great among scientists of this zestful age. Some of these names were known to readers of the large circulation papers. Others were not. But if the average reader cared nothing for electro-magnetism of the laboratory, he appreciated the drama of May 24, 1844, when Samuel F. B. Morse sat in the Capitol at Washington and sent impulses along a wire, spelling out "What Hath God Wrought" to Alfred Vail in Baltimore, 40 miles away.

Behind the steam engine, the electric telegraph, and the many other wonders crowding upon the westward sweeping world of the century lay, for the average American news reader, an occult science, a hocus pocus, a mysterious unknown that awed as it excited curiosity. When the *Sun* in 1835 published a series of articles purporting to describe life on the moon, its readers accepted this enormous and cleverly executed hoax as merely another wonder of the modern world. Nothing seemed beyond the ability of man to discover or invent. The pulling power of the hoax in increasing the *Sun's* circulation until it reached the 19,000 mark, then largest in the world, is indicative of the thirst of the nineteenth century newspaper reader for science, or what he mistook for science.

Newspapers alone could not satisfy the avid appetite of the nineteenth century for scientific information. If the news reader could not find in his papers all the science or pseudo-science he required, he turned with eagerness to the world of conjectural science in the novels of Jules Verne. Each year for twenty years following 1862, Hetzel's *Magazin d'Education* published a Jules Verne novel.

Probably most editors of the past century, when they ran science articles in their papers, sincerely hoped for accurate reporting. Dr. J. A. Udden of the University of Texas placed much of the blame for inadequate and inaccurate science reporting as late as 1914 upon an educational system that failed to emphasize science for its prospective reporters.[1] Some editors, however, were less scrupulous and, sensing a circulation builder in the public hunger for science news, resorted to alleged scientific discoveries.

In the course of years, enmity developed between the scientist and the newsman. The newsman is impatient with the scientist's patience. The scientist is impatient only with the newsman's impatience. To the newsman, time is everything. To the scientist, an eon is only another little space of time in the history of the world. Probably the *Sun's* moon hoax did little to bring the scientist and the newsman together at a time when each was becoming convinced that he was the moving force in a world that hourly plunged ahead into new wonders.

After the Twelfth International Geological Congress had met in Toronto in 1913, Dr. Udden made a study of the newspaper coverage of the meeting. Had

[1]Udden, J. A. "Science in Newspapers." Popular Science Monthly 84, p. 483. May, 1914.

the meeting been held in the United States he would presumably have found a similar situation. The six Toronto dailies printed about 55,500 words on the congress. Reports of the proceedings constituted 26 per cent; general information on the congress 19 per cent; social functions 19 per cent; personal notes 12 per cent; interviews 9 per cent; geological excursions, emphasis on the humorous side, 7 per cent; reports of individual papers 6 per cent; editorials 2 per cent; discussion of scientific subjects of popular interest, as the age of the earth, 6 per cent.[2]

"All social functions of the congress were reported with fulness and detail," Dr. Udden commented somewhat sadly.[3]

The date is December 29, 1936. Twenty-three years have passed since the International Geological Congress met in Toronto. The far-flung Scripps-Howard Newspapers have a science editor, a newsman who is so much a scientist that he lectures on general science at Western Reserve University. He is addressing the American Association for the Advancement of Science meeting in Atlantic City. Each day of the meeting, David Dietz tells members of the association, the large metropolitan papers devote one to five columns to the reports of papers presented. "The total amount of space devoted by newspapers of the nation to the meeting is in excess of a thousand columns a day."[4]

In December of the year before Pearl Harbor became a place to remember, the American Association for the Advancement of Science is meeting in Philadelphia. Twenty-seven years have passed since the Toronto congress of geologists. Each of the press associations and several of the large dailies are represented by one or more men trained in science interpretation. If society editors are present, at least their stories do not account for 19 per cent of the coverage.

Science, gleaned from the stodgy verbiage found in individual reports, has become front page stuff in the most important daily in the country.

New Studies Show "Cosmic Phoenix" Operating in Main Sequence Stars

This two-column head is from page 1 of the New York *Times*, December 27, 1940. The story occupies 13 inches on page 1 and 24 inches on page 36. It is by William L. Laurence, a *Times* specialist in science reporting.

In the same issue, the *Times* gives 30 inches on page 36 to a meeting of the State Health and Physical Education Association meeting in Syracuse; 10½ inches to a meeting of boy and girl scientists in New York City; 15 inches to the Archaeological Institute of America meeting in Baltimore. The science news for the day totals 92½ inches, or nearly five columns.

Upper Air is Found To Contain Helium

The *Times* thinks this head and the story below it by Laurence are worthy of 14 inches on the front page, December 29, and 24½ inches on page 22. Other science stories in the same issue are headed "Press Research in Hydrocarbons," from South Hadley, Massachusetts, 13½ inches; "Nuclear Physics studies at Smith," from Northampton, Massachusetts, 10 inches; "Ask Us to Protect Science of World," by Laurence E. Davies, from the American Association for the Advancement of Science meeting in Philadelphia, 37 inches; a short story of 3 inches, also from the Philadelphia meeting; a short story of 4½ inches on the Entomological Society of America, in session in Philadelphia; a story of 15 inches on the American Philological Association, meeting in Baltimore. The day's total of science news is 121½ inches, or over five and one-half columns.

The New York *Times* is not an average or even a typical American newspaper. Nor does the period between Christmas and New Year's Day represent a typical week in the world of science, as most of the scientific meetings are, or were, held at this time of year. But it is significant that a leading newspaper on any two days of the year should devote so much space to scientific news. Still more significant is the treatment of that news. Close to 100 per cent consists of reports of papers presented, written by a skillful interpreter who can read the language of scientists and write the language of breakfast tables and suburban trains.

[2]Udden. *Op. cit.*, p. 484.
[3]Udden. *Op. cit.*, p. 487.
[4]Dietz, David. "Science and the American Press," *Science*, n.s. 85, p. 107.

Other papers across the country carry reports of the Philadelphia meeting, most of them in smaller amounts but not all of them in reduced accuracy.

The improvement in newspaper attitude toward science began with or shortly after the first World War, which was fought with weapons forged by science.

The Boston meeting of the American Association for the Advancement of Science, 1922, "was the first one to be reported in a serious and thorough fashion with a genuine effort to interpret its importance to the public," according to Dietz,[5] who noted in passing that Alva Johnston of the New York *Times* was awarded the Pulitzer prize in journalism for his reporting of this conference.

Founding of the National Association of Science Writers, in 1934, with a membership of 11, represented a sincere effort by the best science newsmen to improve science reporting. The announced purpose was "To foster the dissemination of accurate scientific knowledge by the press of the nation in cooperation with scientific organizations and individual scientists."[6]

The Associated Press has maintained one or more science editors since 1927. In a letter written in 1941, Byron Price, then Executive News Editor of the organization, stated that the Associated Press "has two reporters who devote their entire time to the coverage of science news, particularly to the natural and physical fields. There are several others who might be called specialists in science writing, for although they do not give all their time to it, they are well trained in the handling of science news and are responsible for its coverage in their territories."

Other press associations, the large newspaper chains, and the largest dailies employ writers trained to cover scientific material. Many papers too small to maintain science reporters make liberal use of Science Service, an organization founded by a newsman, E. W. Scripps, to improve the treatment of science by the press.

Although science has failed to bring peace and prosperity to the world, as some persons claimed and some hoped it would do, the public still maintains a notable degree of faith in its potentialities. That the reading public will continue its interest in things scientific there is little doubt. That the public press will continue its attempt to satisfy that interest there is even less doubt.

The World War that began in 1939 is more scientific in character than its predecessor. Will it, like its predecessor, be followed by improvement in science reporting? Scientists hold part of the answer. They should first of all develop a tolerant attitude toward the public with its thirst for science. They should maintain a sympathetic attitude toward the press, attempt to understand some of the difficulties under which news is gathered and distributed, and express themselves so clearly and in such language that they can be misquoted only with difficulty.

Improvement over the past quarter century in the relationship between the newsman and the scientist gives hope for the future. To some extent, each with a contrite heart is willing to admit he has erred in the past. Each now admits, almost freely, that the other is a power in the world. Where mutual forgiveness and mutual admiration prevail, all things are possible, short of absolute perfection.

[5]Dietz. *Op. cit.*, p. 108.
[6]Dietz. *Op. cit.*, p. 109.