

William Nierenberg

From Wikipedia, the free encyclopedia

William Aaron Nierenberg (February 13, 1919 – September 10, 2000) was an American physicist who worked on the Manhattan Project and was director of the Scripps Institution of Oceanography from 1965 through 1986.^[1] He was a co-founder of the George C. Marshall Institute in 1984.

Contents

- 1 Background
- 2 Career
- 3 Advisory boards
- 4 Climate
- 5 Marshall Institute
- 6 Legacy
- 7 See also
- 8 Notes
- 9 References
- 10 External links



William A. Nierenberg

Background

Nierenberg was born on February 13, 1919, at 213 E. 13th Street, on the Lower East Side of New York, the son of very poor Jewish immigrants from Austro-Hungary.^[2] He went to Townsend Harris High School and then the City College of New York (CCNY), where he won a scholarship to spend his junior year abroad in France at the University of Paris.^[2] In 1939 he participated in research at Columbia University, where he took a course in statistical mechanics from his future mentor, I. I. Rabi.^[3] He went on to graduate work at Columbia, but from 1941 spent the war years seconded to the Manhattan Project, working on isotope separation,^[2] before returning to Columbia to complete his PhD.

Career

In 1948 Nierenberg took up his first academic staff position, as Assistant Professor of Physics at the University of Michigan. From 1950 to 1965 he was Associate and then Professor of Physics at the University of California, Berkeley, where he had a very large and productive low energy nuclear physics laboratory, graduating 40 PhD's during this time and publishing about 100 papers. He was responsible for the determination of more nuclear moments than any other single individual. This work was cited when he was elected to the National Academy of Sciences in 1971.^[3]

During this period, in 1953, Nierenberg took a one-year leave to serve as the director of the Columbia University Hudson Laboratories, working on naval warfare problems.^[1] Later, he oversaw the design and construction of the “new” physics building at Berkeley. Much later (1960–1962) he took leave once again as Assistant Secretary General of the North Atlantic Treaty Organization (NATO) in charge of scientific affairs, where he oversaw many international studies on physics and advanced defense technologies.

In 1965 Nierenberg was asked to run one of the most prestigious oceanographic institutions in the world, the Scripps Institution of Oceanography (SIO). His background in sonar research and other naval-related science, and his knowledge of and interest in geophysics dating from his college times, made him intellectually and professionally eager to go. Nierenberg was director of SIO for 21 years, the longest serving director to date.

During his tenure, five modern research vessels joined the Scripps fleet and the institution's budget increased fivefold.^[3] He oversaw the Deep Sea Drilling Project (1966–1986), which produced scientific advances such as the discovery of deep-sea hydrocarbons, the finding that the Mediterranean Sea had once been a closed basin and even a dry seabed, and confirmation that present ocean basins are young. The project became the first multi-institutional, international collaboration in science and a model for later projects.^[3]

Nierenberg gained national recognition for his contributions to science. He was elected to the National Academy of Sciences in 1971 and to the governing Council of the Academy in 1979. He was also elected to the American Academy of Arts and Sciences in 1965^[4] and the National Academy of Engineering in 1983.^[5] In 1981, Nierenberg became a founding member of the World Cultural Council.^[6] In 1987 he was awarded the Delmer S. Fahrney Medal from the Franklin Institute for outstanding leadership in science.^[7]

Advisory boards

Nierenberg served on a large number of panels and advisory committees, primarily after he returned from NATO. In 1971 he was appointed chairman of the National Academy of Sciences National Advisory Committee on Oceans and Atmosphere and served on this committee until 1977. He served on various panels of the President's Science Advisory Committee. He was a member of the National Science Board from 1972 to 1978 and was appointed for another term from November 1982 to May 1988.^[8]

Nierenberg was a consultant to the National Security Agency, and served on many military-related panels. In 1976 he was appointed one of two senior consultants to the newly formed White House Office of Science and Technology Policy (OSTP). He was a member of the National Aeronautics and Space Administration's (NASA) Advisory Council from 1978 to 1982 and served as its first chairman.^[8] He was Chairman of the OSTP Acid Rain Peer Review Panel, whose report "Acid Rain" was published in 1984. The report encouraged the administration to curb acid rain emissions.

Climate

Nierenberg took a strong interest in the problem of global warming. Under his predecessor at Scripps, Roger Revelle, Scripps had begun a program of monitoring CO₂ and other greenhouse gases. Nierenberg supported this work and intervened personally when research funds for the program were threatened.^[3]

In October 1980, during the Carter presidency, an Act of Congress was passed requesting the National Academy of Science to review what was known about climate change. Nierenberg was appointed by the Academy to chair the committee to produce this report. The committee was made up of prominent physical scientists and two economists, William Nordhaus of Yale and Thomas Schelling of Harvard. Schelling and many of the scientists had served on committees for two previous reports for the Carter administration, which had highlighted global warming as a potentially major problem, and Nordhaus was developing a new model for growth in CO₂ emissions, the first which did not assume linear extrapolations.^[9]

The scientific facts of the resulting *Changing Climate* report were largely in line with the previous reports. Its key points were:

- The most probable date of CO₂ "doubling" (to 600 ppm) was 2065 (page 21)
- Global warming due to doubling CO₂ is likely to be between 1-5-4.5 °C, as suggested by the Charney report. Careful review of dissenting inferences suggesting negligible CO₂-induced climate change shows these to be based on misleading analysis (page 28)
- Warming at equilibrium would be 2-3 times as great over the polar regions as over the tropics; and probably greater over the arctic (page 30)
- Sea level might rise 70 cm over a century from thermal expansion, and melting of alpine glaciers. There was great uncertainty of the fate of the West Antarctic Ice Sheet; disintegration could lead to sea-level rise of 5 to 6m over several hundred years (page 42)

The report also contained policy recommendations:

- CO₂ is a cause for concern but not panic; a program of action without a program for learning would be costly and ineffective (page 61)
- A careful, well-designed program of monitoring and analysis is needed to detect the CO₂ signal on climate (page 76)

The policy recommendations have proved controversial. Oreskes and Conway contend that the chapters written by the economists differ from those written by the scientists, that the policy recommendations reflect mainly the views of the economists, and that Nierenberg, the committee chairman, personally rejected an emerging consensus view on global warming among climate scientists, and "in doing so arguably launched the climate change debate, transforming the issue from one of scientific concern to one of political controversy."^[10] In a 2010 paper, Nierenberg's son Nicolas disputes each of these points, arguing that the scientific conclusions of the report reflected the current consensus and pointing out that other climate reports from the time also stopped short of recommending near-term energy-policy changes.^[11]

Marshall Institute

Nierenberg subsequently became a co-founder of the George C. Marshall Institute,^[12] and a critic of some of the scientific conclusions of various research papers.

Legacy

A building on the campus of the Scripps Institution of Oceanography is named for him and the Nierenberg Prize for Science in the Public Interest has been started. Some recipients have been E. O. Wilson, Walter Cronkite, Jane Lubchenco, David Attenborough, Jane Goodall, Craig Venter, Gordon Moore, James E. Hansen and Richard Dawkins.

See also

- *Merchants of Doubt*
- Nierenberg Prize

Notes

1. Townes, Charles; Munk, Walter (June 2001). "Obituary: William Aaron Nierenberg" (<http://scitation.aip.org/content/aip/magazine/physicstoday/article/54/6/10.1063/1.1387603>). *Physics Today*. **54** (6): 74–75. Bibcode:2001PhT....54f..74T (<http://adsabs.harvard.edu/abs/2001PhT....54f..74T>). doi:10.1063/1.1387603 (<https://doi.org/10.1063%2F1.1387603>).
2. Oral History interview transcript with William Nierenberg (http://www.aip.org/history/ohilist/4797_1.html), American Institute of Physics, Niels Bohr Library and Archives, 6 February 1986
3. William Nierenberg (<http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/nierenberg-william.pdf>) — *Biographical Memoirs* of the National Academy of Sciences
4. "Book of Members: N" (<https://www.amacad.org/multimedia/pdfs/publications/bookofmembers/ChapterN.pdf>) (PDF). American Academy of Arts & Sciences. Retrieved 2014-07-20.
5. "NAE Members" (http://www.nae.edu/MembersSection/Directory20412/37926.aspx?PTF_FNfilterPerson=WILLIAM&PTF_LNfilterPerson=NIERENBERG). National Academy of Engineering. Retrieved 2014-07-21.
6. "About Us" (<http://www.consejoculturalmundial.org/about-us/>). World Cultural Council. Retrieved November 8, 2016.
7. Detjen, Jim. "Institute Will Honor 10 Scientists" (http://articles.philly.com/1987-05-07/news/26164232_1_optical-computers-atomic-structure-heinrich-rohrer). *philly.com*. Retrieved 2014-07-21.

15.8.2017

William Nierenberg - Wikipedia

8. "In Memoriam: William A. Nierenberg" (<http://adminrecords.ucsd.edu/Notices/2000/2000-09-26-1.html>). University of California, San Diego. Retrieved 2014-07-21.

9. Oreskes (2008) p. 139, Nierenberg (2010), p. 336

10. Oreskes (2008) p. 113

11. Nierenberg (2010) p. 345

12. "Remembering Bill Nierenberg" (<https://web.archive.org/web/20021203050006/http://www.marshall.org/article.php?id=35>). Marshall Institute. September 12, 2000. Archived from the original (<http://www.marshall.org/article.php?id=35>) on 2002-12-03.

References

- *Changing Climate: Report of the Carbon Dioxide Assessment Committee* (http://www.nap.edu/openbook.php?record_id=18714&page=R1). Washington, D.C.: National Academy Press. 1983. (The full text (http://archive.org/stream/changingclimate018865mbp/changingclimate018865mbp_djvu.txt) is also available at the Internet Archive.)
- Oreskes, Naomi; Conway, Erik M.; Shindell, Matthew (2008). "From Chicken Little to Dr. Pangloss: William Nierenberg, Global Warming, and the Social Deconstruction of Scientific Knowledge" (http://history.ucsd.edu/_files/base-folder1/From%20Chicken%20Little%20to%20Dr.%20Pangloss.pdf) (PDF). *Historical Studies in the Natural Sciences*. University of California Press. **38** (1): 109–152. doi:10.1525/hsns.2008.38.1.109 (<https://doi.org/10.1525%2Fhsns.2008.38.1.109>). Retrieved 29 March 2012.
- Nierenberg, Nicolas; Tschinkel, Walter R.; Tschinkel, Victoria J. (2010). "Early Climate Change Consensus at the National Academy: The Origins and Making of *Changing Climate*" (http://scilib.ucsd.edu/sio/hist/nierenberg_early-climate-change-consensus.pdf) (PDF). *Historical Studies in the Natural Sciences*. University of California Press. **40** (3): 318–349. doi:10.1525/hsns.2010.40.3.318 (<https://doi.org/10.1525%2Fhsns.2010.40.3.318>). Retrieved 29 March 2012.

External links

- Obituary (<http://www.telegraph.co.uk/news/obituaries/1355320/Professor-William-Nierenberg.html>), *Daily Telegraph*, August 23, 2001
- New York Times Obituary (<http://query.nytimes.com/gst/fullpage.html?res=9B03E2D71738F930A2575AC0A9669C8B63&scp=20&sq=Nierenberg&st=cse>)

Government offices		
Preceded by Roger Revelle	Director of Scripps Institution of Oceanography 1965–1986	Succeeded by Edward A. Frieman

Retrieved from "https://en.wikipedia.org/w/index.php?title=William_Nierenberg&oldid=795505448"

- This page was last edited on 14 August 2017, at 17:34.
- Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy. Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.