

UCSD Historian Of Science, Naomi Oreskes, Presents AAAS Award Lecture On Topic Of Proof And Consensus In Science

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In an address at a convocation of leading scientists, the University of California, San Diego historian Naomi Oreskes argues that although science cannot offer absolute proof it, nevertheless, can provide a sufficient basis for action.

In delivering the George Sarton Award Lecture in the History and Philosophy of Science at the annual meeting of the American Association for the Advancement of Science, Feb. 13 in Seattle, Oreskes will speak on the topic, *Consensus in Science: How Do We Know We Are Not Wrong?*. In her remarks the director of the Science Studies Program at UCSD presents historical examples suggesting that a consensus of views in scientific conclusions might be still be invalid. She urges that researchers take pains to look for alternative models that might NOT have been considered.

Among case studies on which she focuses are the history and theory of continental drift and the issue of global warming. Regarding continental drift Oreskes discusses various theories held by scientists in Europe during much of the last century and demonstrates that there was a very different understanding in the United States in the same period. As the author of *The Rejection of Continental Drift, Theory and Method in American Earth Science*, Oreskes explains how American earth scientists were united in their opposition to the, then, radical notion of continental drift. Today this explanation for the shifting of the continents is accepted as a scientific fact. Why was it rejected in the United States and accepted 50 years earlier in Europe?

One reason why researchers resisted continental drift was because American earth scientists had adopted a certain model of the Earth's crust which worked so well that it came to be viewed as fact although this model also made the theory of floating continents an impossibility. Americans stuck to their model which resulted in an invalid rejection of drifting continents.

Regarding global warming, Oreskes argues that the models and explanations in the case of climate change already hold up and therefore, while subject to change, are sufficient for a basis of action.

Oreskes, who earned her history Ph.D at Stanford, started her professional career as a field geologist, but her current research focuses on the development of knowledge, methods and practices in earth and environmental sciences. Her most recent book is *Plate Tectonics: An Insider's History of the Modern Theory of the Earth*. She is currently completing *Science on a Mission: American Oceanography in the Cold War and Beyond* to be published by the University of Chicago Press.

The George Sarton Award Lecture is named for the founder of the discipline of the history of science and features an annual talk on the history and philosophy of Science at the AAAS meeting.

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