

Study shows increased education on nanotech, human enhancement increases public concerns

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Educating the public about nanotechnology and other complex but emerging technologies causes people to become more "worried and cautious" about the new technologies' prospective benefits, according to a recent study by researchers at North Carolina State University.

A new study by researchers at North Carolina State University on public attitudes towards nanotechnology, artificial intelligence and other emerging technologies shows that educating people about the new technologies results in those people becoming more concerned about the potential impact of the technologies.

The researchers, Dr. Michael D. Cobb, assistant professor of political science, and Dr. Patrick Hamlett, associate professor of science, technology and society and political science, gave questionnaires to study participants around the country to determine their position on emerging technologies with "human enhancement" applications – such as using nanotechnology to improve therapies for injuries and degenerative diseases. Nanotechnology is generally defined as technology that uses substances having a size of 100 nanometers or less (thousands of times thinner than a human hair), and is expected to have widespread uses in medicine, consumer products and industrial processes.

Cobb and Hamlett then put the participants through a deliberative forum in March 2008 that provided structured discussions and educational



background on the technologies. The participants were then asked to fill out the same questionnaire they had been given before the deliberative forum and asked to provide policy recommendations on how to handle the emerging science.

In a recent presentation to the 10th Conference on Public Communication of Science, in Malmo, Sweden, Cobb noted that, compared to their pre-deliberation opinions, panelists "became more worried and cautious about the prospective benefits" of the human enhancement technologies. Prior to the deliberation, 82 percent of the participants were at least somewhat certain that the benefits of the technologies outweighed the risks – but that number dropped to 66 percent after the deliberation.

Cobb and Hamlett conducted the study, called the 2008 National Citizens' Forum on Human Enhancement, under a subcontract from the Center for Nanotechnology in Society at Arizona State University. The study was conducted at sites in Arizona, California, Colorado, Georgia, New Hampshire and Wisconsin.

Cobb says the study is also important because it shows that deliberative forums are a viable tool for encouraging informed public engagement in the development of governmental policies. This is significant because there have been questions in the past about whether "ordinary citizens" are able to engage in useful deliberation – or whether collective opinions developed during group deliberation are worse than if the deliberation had never taken place.

The driver for the study was to develop a format for informed interaction about the trajectories of science and technology policies as those policies are being developed, Cobb says, so that the public's concerns are incorporated into the policy development process.



Source: North Carolina State University

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