

The Role of Social Responsibility in Leading Nano-scientists' Perceptions about Nanotech Research and Regulation

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Abstract

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The lack of a clear consensus about the risks and benefits of nanotechnology, as well as the ongoing regulatory gaps for the technology, means that scientists are playing an increasingly important role in nanotechnology governance and regulatory agenda-setting. However, there is little empirical research that explores how scientists view their participation in this type of policy-making process, including their views on their sense of responsibility for policies and public safety. In this paper, we explore these perceptions by analyzing data from a 2011 national mail survey with 444 of the leading U.S. nano-scientists. First, we investigate whether leading U.S. nano-scientists feel responsible for the use or misuse of their discoveries, which we identify as their sense of “social responsibility.” Next, using hierarchical OLS regression analysis, we explore how nano-scientists’ perceptions about the general public, politics, scientific ethics, and societal ethics are related to their sense of “social responsibility” for their nanotechnology research. Since we expect that scientists who feel a stronger sense of “social responsibility” for their research will be more likely to engage in regulatory discussions about their disciplinary fields, these relationships are particularly relevant for the nanotechnology policy-making process. Therefore, we conclude the article with some policy implications for the inclusion of nano-scientists in the policy-making process. The survey data used in this article were collected with funding from the NSF-funded Center for Nanotechnology in Society at ASU (CNS-ASU), the Lincoln Center for Applied Ethics at ASU, and the John E. Ross Chair in Science Communication at the University of Wisconsin.