



Online Ethics Center
FOR ENGINEERING AND SCIENCE

Social Responsibility Subject Aid

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Description

A short guide to some key resources and readings on the topic of social responsibility.

Body

In general, when people ask whether a person, group, or organization has acted in a socially responsible manner, they are asking whether it has met expectations for behavior that will benefit society at large. The phrase “social responsibility” holds individuals, social groups or societies to account for whether they act in ways that could be expected to fulfill their responsibilities, so far as reasonably possible and independent of the success of their endeavors. Note that the standards to which these beings hold themselves, or to which they are held, may and do change over time; what counts as appropriate behavior is not static. Those holding others (or themselves) to account recognize that the hoped-for results may not be achieved, but believe that the expectation of both good faith and qualified effort should be honored.

Responsibility *simpliciter* is a complex concept with both non-moral and moral meanings, and at least forward- and back-looking forms. The moral and forward-

looking sense of responsibility is the sense in which one is responsible for achieving (or maintaining) a good result in some matter. The idea is that one is entrusted with achieving or maintaining this outcome, and expected to both have relevant knowledge and skills, and to make a conscientious effort. However, despite one's best efforts, the result may not be achieved. For example, patients of responsible physicians may die, and the work of a responsible scientist or engineer may have negative results that might be unforeseeable or deemed acceptable in the circumstances, because it was not possible to compensate for the factors causing those consequences, or because others were unwilling to heed the scientist or engineer's warnings. The moral and backward-looking sense of responsibility is that in which a person, group or organization deserves ethical evaluation for some act or outcome; that is, it deserves moral praise for a good outcome or blame for a bad one.

In their expert endeavors and as agents of innovation, individual scientists and engineers, the organizations in which they work, and the scientific and engineering societies to which they belong are held, and often hold themselves, accountable for behaving in a socially responsible manner. In engineering, codes of ethics incorporate the professions' views about the nature of their responsibilities. In science, the discussion of social responsibility often references a social contract between scientists and society.

The social responsibilities asked of scientific and engineering disciplines and their professional organizations by themselves and the public change over time. For many years, engineering codes of ethics focused primarily on the responsibilities engineers owed to each other and their clients, but now the primary responsibility in those codes is to the public, to assure health, safety, and welfare. Some engineering codes now add sustainability, sustainable development or environmental health to this paramount principle. Implicit in the primary responsibility that these codes identify is the requirement to report to appropriate authorities or persons at risk when these assurances are not met.

In recent years and as problems of scientific misconduct became public and policy concerns, scientific societies have developed written codes of ethics. Scientists and scientific organizations often focus on social responsibilities in the contexts of planning and performing research as well as in documenting and reporting untoward results and preventing misuses of research. Laws and regulations as well as international declarations encode requirements for socially responsible research.

Examples of these include regulations for laboratory and environmental safety, protecting the human and animal subjects of research, and bioprospecting and biodiversity research. An arena of considerable debate concerns privacy breaches of protections for individual data, where different political jurisdictions may have different requirements.

Now more and more research requires scientists and engineers from a variety of disciplines to work together, and research and innovation transcends political boundaries, adding complexity to views about the social responsibilities of science and engineering. More and more scientists and engineers see part of their responsibilities as advising and communicating with public and private organizations and policymakers about new developments in science, engineering, and technology that have policy implications or raise public concerns.

The moral sense of responsibility should not be confused with the causal sense of responsibility for some existing or past state of affairs. For example, when we say “the storm was responsible for three deaths and heavy property damage,” meaning that it caused these outcomes, we do not mean to attribute moral responsibility to the storm. Storms do not have moral responsibilities, and are neither responsible nor irresponsible in the moral sense. However, when a moral agent has caused some outcome that is a reason to think that the agent is morally responsible for it. Causal responsibility is not conclusive evidence of moral responsibility, however. If one’s actions cause a terrible outcome only because of bad moral luck in the form of a freak or unforeseeable accident, then one is not morally responsible for the outcome.

This discussion includes material from Chapter 5, 2016, InterAcademy Partnership, cited below, and from the Online Ethics Center for Engineering and Science Glossary under “Responsibility.” Contributed 1/31/2006 OEC Accessed: Wednesday, May 11, 2016.
<www.onlineethics.org/glossary.aspx>

Subject Overviews

Chameau, Jean-Lou, William F. Ballhaus, and Herbert S. Lin, Editors. 2014. Appendix D.2 “Codes of Ethics and Social Responsibility in Medicine, Engineering, and Science,” in *Emerging and Readily Available Technologies*

and National Security - A Framework for Addressing Ethical, Legal, and Societal Issues. 309-316. Washington, DC: National Academies Press. <http://www.nap.edu/catalog/18512/emerging-and-readily-available-technologies-and-national-security-a-framework>.

Appendix D.2 provides a summary of the different historical approaches that scientific and engineering fields have taken to questions of social responsibility, touching on medicine as well.

Interacademy Partnership. 2016. Chapter 5: The Researcher's Responsibility to Society. *Doing Global Science: A Guide to Responsible Conduct in the Global Research Enterprise.* 47-58. Princeton, NJ: Princeton University Press. <http://interacademycouncil.com/File.aspx?id=29431> Accessed May 11, 2016.

This introductory guide explains the values that should inform the responsible conduct of scientific research in today's global setting, placing special emphasis on the international and highly networked environment in which modern research is done. It discusses researchers' responsibilities to society using current case examples in international contexts.

Committee on Science Engineering and Public Policy. National Academies of Sciences, Engineering, and Medicine. 2009. "The Researcher in Society," in *On Being A Scientist: a guide to responsible conduct in research.* 3rd ed. 48-50. Washington, D.C.: National Academies Press. <http://www.nap.edu/read/12192/chapter/14>. Accessed May 11, 2016.

The third edition of this publication is designed to supplement the informal lessons in ethics provided by research supervisors and mentors. The book describes the ethical foundations of scientific practices and some of the personal and professional issues that researchers encounter in their work. It applies to all forms of research--whether in academic, industrial, or governmental settings--and to all scientific disciplines. The brief chapter on social responsibility contains one case example.

Policy and Guidance

American Chemical Society. <https://nationalethicscenter.org/societies/acs>.
Accessed on Ethics CORE May 11, 2016

EthicsCORE contains links to collections of material from these two scientific societies, including sections on social responsibility. For ACS, the most relevant section is the society's statement on Scientific Integrity in Public Policy. In the APS section, the Policy Statements contain positions about social responsibility affirmed by the Society.

Engineers Forum on Sustainability. <http://www.aiche.org/efs>. **Accessed May 11, 2016.**

Many engineering societies have codes of ethics referencing social responsibility. One interesting element emphasizes engineering responsibilities for sustainability. This is an example of cooperation among many engineering societies to promote sustainability, undertaken through the American Association of Engineering Societies Engineers Forum on Sustainability.

The Scientific Responsibility, Human Rights, and Law Program. American Association for the Advancement of Science. .
<https://www.aaas.org/program/scientific-responsibility-human-rights-law>
Accessed June 13, 2016.

This longstanding program focuses attention and efforts on promoting the goals of scientific integrity and human rights. It publishes two newsletters and reports on professional ethics and science and human rights issues.

Bibliography

Baille, Caroline. 2006. *Engineers within a Local and Global Society*. San Rafael: Morgan and Claypool Publishers.

Chapter 1, Choices as an Engineer; Chapter 2, How Responsible Is Engineering?

Government, University, Industry Roundtable, The National Academies of Science, Engineering and Medicine 2011. *Examining Core Elements of*

International Research Collaboration. <http://www.nap.edu/catalog/13192/>

See chapters 3 and 4: Cultural Differences and Nuance, and Ethics.

Government, University, Industry Roundtable, The National Academies of Science, Engineering and Medicine 2014. *Culture Matters: International Research Collaboration in a Changing World.*

<http://www.nap.edu/read/18849/>.

See especially Chapter 3, pages 15-20 for discussion of special ethical issues arising in collaborative research between partners in developed and developing countries.

Kline, Ronald R. 2013. "Balancing priorities: Social responsibility in teaching responsible conduct of research." in *Practical Guidance on Science and Engineering Ethics Education for Instructors and Administrators: Papers and Summary from a Workshop 17-25.* Edited by Frazier Benya, Cameron Fletcher, and Rachelle Hollander. Accessed May 11, 2016. <http://www.nap.edu/read/18519/chapter/5#19>

This workshop convened in December 2012 to consider best practices for ethics education programs in science and engineering. This chapter draws on the history of engineering and research ethics to argue for placing the responsibility to society of science and engineering at the center of teaching research ethics.

The National Academies of Sciences, Engineering, and Medicine. *Engineering, Social Justice, and Sustainable Community Development: Summary of a Workshop.* <https://www.nap.edu/catalog/12887/engineering-social-justice-and-sustainable-community-development-summary-of-a#:~:text=Engineering%2C%20Social%20Justice%2C%20and%20Sustainable%20Co>

The workshop summarized in this volume discussed how to achieve the following: Improve research in engineering ethics; improve engineering practice in situations of crisis and conflict; improve engineering education in ethics and social issues; and involve professional societies in these efforts.

The National Academies of Sciences, Engineering and Medicine. 2002. *Research Ethics in Complex Humanitarian Emergencies: Summary of a*

Workshop. <https://www.nap.edu/catalog/10481/research-ethics-in-complex-humanitarian-emergencies-summary-of-a-workshop>

This brief report considers issues of social responsibility in situations involving conflict and forced migrations.

Notes

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Use of Materials on the OEC

Resource Type

Bibliography

Parent Collection

OEC Subject Aids

Topics

Social Responsibility

Discipline(s)

Social and Behavioral Sciences

Life and Environmental Sciences

Computer, Math, and Physical Sciences

Engineering

Research Ethics

Authoring Institution

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