Online Ethics Center
FOR ENGINEERING AND SCIENCE

Social Justice Subject Aid

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Description

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

Body

Social justice has been studied by philosophers, social scientists, and historians. The idea has also formed the basis for and underlies many social and political movements. As social movements for human rights and environmental justice indicate, the term can be a rallying cry for recognition of the need for political and economic fairness and the difficulties that lack of political or economic power can pose to realization of these ideals.

Generally, this complex concept concerns or includes both the perception and the achievement of fairness in process and results in and between groups and political entities. Process includes respect for persons and political liberty to participate in government and the establishment and evaluation of social norms. Recognizing liberties requires lack of oppression and coercion. Distributive justice concerns in its most general sense the fair distribution of benefits and burdens – issues of distribution of wealth, opportunities, and privileges as well as their opposites – e.g., poverty, prejudice, and exposure to risk. More recent discussion of social justice

includes concern to promote individual human flourishing on a global and intergenerational scale. Questions central to every determination of social justice include: what constitutes fairness, equity or justice; who decides what is just or unjust; and who benefits and who bears the cost in any given situation.

When considered in relationship to science, engineering, and technology and systems of research, development, testing, innovation, and implementation, questions that arise range from such abstract concerns as the implications of science and technology policy for political liberties and security (and conversely, the impacts of political processes on science and technology) to who is responsible and who should pay for lead exposures in urban water supplies. Questions of who has access to science and technology – who has the power to pose questions, collect and analyze data, draw conclusions, and shape knowledge and reality – are fundamental social justice issues. The power of science, engineering, and technology to change human relationships in time and space – and the ways in which just and unjust human relationships shape the processes and outcomes of science and technology – ensure that these questions will continue to arise.

See also Environmental Justice, Social Responsibility.

Subject Overview

Lubchenco, Jane. 1998. "Entering the century of the environment: a new social contract for science." *Science* 279, no. 5350 (1998): 491-497. http://mobilizingstem.wceruw.org/documents-june/lubchenco%20newsocialcontractforscience.pdf. Accessed July 18, 2016.

> As the magnitude of human impacts on the ecological systems of the planet becomes apparent, there is increased realization of the intimate connections between these systems and human health, the economy, social justice, and national security. The concept of what constitutes “the environment” is changing rapidly. Urgent environmental and social changes challenge scientists to define a new social contract that would commit all scientists to devote their energies and talents to the most pressing problems of the day, in proportion to their importance, in exchange for public funding. The new and unmet needs of society include more comprehensive information, understanding, and

technologies for society to move toward a more sustainable biosphere — one which is ecologically sound, economically feasible, and socially just. New fundamental research, faster and more effective transmission of new and existing knowledge to policy- and decision-makers, and better communication of this knowledge to the public will all be required to meet this challenge.

Riley, Donna. 2008. *Engineering and Social Justice.* Synthesis Lectures on Engineering, Technology, and Society Lecture #7. Synthesis Series Editor Caroline Baillie. Morgan and Claypool Publishers. Available on line; accessed July 18, 2016 at: http://www.morganclaypool.com/doi/abs/10.2200/S00117ED1V01Y200805ETS007 .

The profession of engineering in the United States has historically served military and commercial interests, remaining relatively unresponsive to other public concerns, and without significant pressure for change from within. This book calls upon engineers to cultivate a passion for social justice and peace and to develop the skill and knowledge set needed to take practical action for change within the profession. Many engineers do not receive education and training that support the kinds of critical thinking, reflective decision-making, and effective action necessary to achieve social change. Utilizing techniques from radical pedagogies of liberation and other movements for social justice, this book presents a roadmap for engineers to become empowered and engage one another in a process of learning and action for social justice and peace. It includes discussion of meanings of social justice, mindsets in engineering, how to turn towards a more socially just engineering, and strategies for change.

Brock, Gillian. "Global Justice", *The Stanford Encyclopedia of Philosophy* (Spring 2015 Edition), Edward N. Zalta (ed.) http://plato.stanford.edu/archives/spr2015/entries/justice-global/. Accessed July 15, 2016. First published March 6, 2015.

The last 20 years has seen a marked expansion of the study of justice, or of what are human obligations for fair treatment, to the global sphere. Some such matters – such as justice in warfare – have existed for much of history; other topics like intensified globalization and management of complex, uncertain systems including those involved in potentially catastrophic anthropocentric climate change are much more recent. This article intends to orient readers to

the enormous and rapidly expanding field of global justice, including discussion of core topics as well as new ones, along with some missing context as to how some topics fit together.

Fleurbaey, Marc. 2012, "Economics and Economic Justice." *The Stanford Encyclopedia of Philosophy* (Spring 2015 Edition), Edward N. Zalta (ed.) http://plato.stanford.edu/entries/economic-justice/. Accessed July 15, 2016.

A variety of economic theories and approaches address normative issues in social and economic justice. This contribution addresses the theory of inequality and poverty measurement, welfare economics, the theory of social choice, the theory of bargaining and of cooperative games, and the theory of fair allocation. There has been a good deal of cross-fertilization between these different branches of normative economics and philosophical theories of justice, and many examples of such mutual influences are exhibited in this article.

Barton, Angela Calabrese. 2003. *Teaching Science for Social Justice.* NY: Teachers College Press. Preview available at https://books.google.com/books?id=Vye85VDxDgcC&printsec=frontcover#v=onepa . Accessed December 16, 2016.

Using a combination of in-depth case studies and rigorous theory, this volume provides valuable insight to help teachers work with inner-city youth; explores the importance of inclusiveness, membership rules, and the purposes and goals of good science; and shows how science connects to the lives of youth both in and out of school.

Policy or Guidance

National Academy of Engineering, Advisory Group for Engineering, Ethics, and Society. 2010, *Engineering, Social Justice, and Sustainable Community Development: Summary of a workshop*. Washington D.C.: National Academies Press. Also available through the OEC at http://www.onlineethics.org/Resources/34339.aspx

This workshop summary addresses conflicting positive goals for engineering projects in impoverished areas and areas in crisis. These conflicts arise

domestically as well as in international arenas. The goals of project sponsors and participants, which are often implicit, include protecting human welfare, ensuring social justice, and striving for environmental sustainability alongside the more often explicit goal of economic development or progress. The workshop 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.
- Involve professional societies in these efforts.

The National Academies of Science, Engineering and Medicine. 2012. "Front Matter," *The Case for International Sharing of Scientific Data: A Focus on Developing Countries: Proceedings of a Symposium.* Washington, DC: The National Academies Press. https://www.nap.edu/catalog/17019/the-case-for-international-sharing-of-scientific-data-a-focus

An ad hoc committee of the Board on International Scientific Organizations (BISO) and the Board on Research Data and Information (BRDI), in consultation with the Committee on Freedom and Responsibility in the Conduct of Science (CFRS) of the International Council for Science (ICSU), organized a 2-day international symposium in Washington, D.C., on April 18–19, 2011. The main objective was to gain better understanding of the data access and sharing situation in the developing world, with a focus on barriers, opportunities, and future actions. Part One of the proceedings addresses the importance of the international sharing of publicly funded scientific data, especially for development. Part Two provides an overview of the status of public data access internationally, particularly in developing countries. Part Three explores the principal barriers and limits to sharing public data across borders. Finally, Part Four discusses the rights and responsibilities of scientists and research organizations in providing and getting access to publicly funded scientific data. It also provides some insights on how international scientific organizations, government agencies, and scientists can more successfully improve sharing of publicly funded data to address global challenges, particularly in less economically developed countries. The proceedings is intended primarily for government policy makers, researchers in the developing world, and managers in public and private institutions that fund research and development activities

in developing countries.

The National Academies of Science, Engineering and Medicine. 2010. "Summary." ***Conducting Biosocial Surveys: Collecting, Storing, Accessing, and Protecting Biospecimens and Biodata.*** **1-6*.* Washington, DC: National Academies Press. http://www.nap.edu/read/12942/chapter/2#4**

> This report is intended to address the special and specific concerns posed by biosocial surveys, in which biological information about survey participants is collected. The panel believes that its recommendations should reconcile improved access to research data without compromise to appropriate protection for research participants. This protection should include plans to report any findings of medical relevance to survey participants, information about processes for participant approval of use in future studies, protections for special populations as appropriate, confidentiality, etc.

See also additional policy and guidance entries in the subject aid collection for Environmental Justice.

Bibliography

Social Justice, Climate Change & Engineering Education Bibliography (UVa)

> Researchers at the University of Virginia Science, Technology, and Society program compiled this bibliography about social justice, climate change, and engineering education as part of an NSF supported Climate Change Educational Partnership planning project. It has many entries and most are annotated. It was compiled in 2012 and added to the OEC in 2014. Accessed July 11, 2016.

See also other bibliographic entries in the subject aid collection for Environmental Justice.

Rights

Resource Type

Bibliography

Parent Collection

OEC Subject Aids

Topics

Social Justice

Discipline(s)

Research Ethics
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Computer, Math, and Physical Sciences
Life and Environmental Sciences
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