Online Ethics Center
FOR ENGINEERING AND SCIENCE

Public Well-Being Subject Aid

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Year

2017

Description

A short guide to some key resources and readings on the topic of public well-being.

Body

Public well-being can be thought to consist of outcomes that promote well-being or benefits for society at large. To better delineate this notion, a useful starting point is the video on the OEC titled "New Tools for Science Policy – Public Value Mapping." This video distinguishes between public values and market values in its criteria for judging outcomes and relationships between them and scientific research. It points out that public values such as good health, clean environment, meaningful jobs, educational equity, friendly communities, human rights, and personal and national security may or may not be promoted when research promotes market values and priorities such as economic strength, income growth, productivity, product innovation, and substitutability of resources. Public and market values do not always proceed in tandem or reinforce each other in positive ways, and the practices and outcomes of scientific research occur in contexts that may advance one set or agglomeration of values and not another. In the case of drug development, for instance, some new drugs may be too costly for all of those in need to have access. To overcome these problems, new policies or policy instruments might be

needed. In a graph plotting public values on a vertical axis and market values on a horizontal axis, the positive alignment of both could be found in the upper right quadrant. For both positive market and public value to be created and sustained, many factors need to combine. By considering those factors, a start at mapping combinations that lead to public value or impede it may be made.

Public wellbeing in relationship to scientific and engineering research practice and research outcomes may be promoted by explicit attention from practice and research to public values, and might benefit from assessment of the research and practice in terms of the factors — processes and outcomes — that enhance or impede public value success.

Some OEC subject aids that relate to public well-being: Public and Community Engagement, Responsible Innovation, Risk, Safety, Social Responsibility, Social Justice, Sustainability (especially Social Sustainability).

Subject Overviews

Sarewitz, Daniel and Barry Bozeman. 2011. "New Tools for Science Policy: PVM video." Consortium for Science, Policy & Outcomes at ASU. Added to OEC May 30, 2014. Viewed December 29, 2016. https://www.youtube.com/watch?v=T0AKKQQw4ts

> This video about Public Value Mapping (PVM) was developed by the Consortium for Science, Policy, & Outcomes (CSPO). It identifies differences between public values and market values and describes criteria for judging outcomes and relationships between them and scientific research.

Bozeman, Barry and Japera Johnson. 2015. "The Political Economy of Public Values: A Case for the Public Sphere and Progressive Opportunity." ***American Review of Public Administration*** **45:1, 61-85. http://journals.sagepub.com/doi/pdf/10.1177/0275074014532826 DOI: 10.1177/0275074014532826**

> The authors discuss the evolution of two approaches to theories of public value, giving particular attention to criteria for "public values failure," a set of ideas juxtaposed against and influenced by market failure criteria. They suggest two

new criteria worth adding to the original Bozeman model. The first of these is related to Moore's work on the "public sphere." They offer a somewhat different definition of "public sphere," one that seems compatible with public values failure criteria. The second criterion pertains to "progressive opportunity," a criterion taking into account the injurious potential of social inequities. The two criteria are especially relevant to the concerns in contemporary political economy disputes and the two criteria reinforce one another.

Matt, Mireilla, Antonin Gaunand, Pierre-Benoit Joly and Laurence Colinet. 2017. Opening the black box of impact – Ideal-type impact pathways in a public agricultural research organization. *Research Policy* 46: 1, 207-218.

This paper develops a renewed research impact assessment approach that goes beyond computing rates of returns to examining impact-generating mechanisms in nonlinear dynamic processes. The work is based on a theory of innovation inspired by Actor Network Theory and a standardized ex-post case study methodology. Standardized case studies allow systematic codification of the variables for each case study, and the building of four ideal-type impact pathways characterized by specific translation mechanisms, critical points, research and adoption networks, research outputs, and impacts. This analytical framework and empirical analysis provide new insights into the contribution of an agricultural Public Research Organization to impact generation, and the role of users and networks in impact pathways.

American Association for the Advancement of Science, Center for Public Engagement with Science and Technology. "Why Public Engagement Matters." Last updated May 16, 2016.

A well-written summary describing public engagement, its importance for society and for scientific progress, and how scientists benefit from being involved in these kinds of projects and outreach.

***Research, Ethics, and Society: Discussion Guide.* Added to the OEC on November 16, 2013. Accessed December 29, 2016. http://www.onlineethics.org/Topics/RespResearch/ResCases/Research_Ethics_and_S**

The Guide contains explanations about why scientists and engineers have social responsibilities and how they can act on them, placing these responsibilities in the systemic contexts in which they arise. Further material

from the NSF supported project on “Research, Ethics, and Society” can be found at http://www.onlineethics.org/Resources/Research_Ethics_and_Society.aspx.

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://www.interacademies.org/33396.aspx

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.

Policy and Guidance

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

American Physical Society. https://nationalethicscenter.org/societies/aps. 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. http://www.onlineethics.org/Community/OrgDirectory/34844.aspx?id=34844&tab=r . 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.

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.

The National Academies of Sciences, Engineering and Medicine. *Engineering, Social Justice, and Sustainable Community Development: Summary of a Workshop.* https://www.nap.edu/read/12887/chapter/1

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.

Bibliography

Hollander, Rachelle, Adjo Amekudzi-Kennedy, Sarah Bell, Frazier Benya, Cliff Davidson, Craig Farkos, David Fasenfest, Regina Guyer, Angelique Hjarding, Michael Lizotte, Dianne Quigley, Diana Watts, and Kate Whitefoot. 2016. Network priorities for social sustainability research and education: Memorandum of the Integrated Network on Social Sustainability Research Group. *Sustainability: Science, Practice & Policy*. 12:1. http://www.tandfonline.com/doi/abs/10.1080/15487733.2016.11908150 . Accessed January 25, 2018.

This report from the Research Agenda working group of the Integrated Network for Social Sustainability (INSS), a research-coordination network supported by the National Science Foundation, provides discussion and extensive references from research and practical projects aimed at promoting social sustainability, as a component of sustainability and sustainable development. This Community Essay shares its members' perspectives about priorities for future research and education on social sustainability, highlighting efforts for greater inclusion of marginalized populations in research.

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Resource Type

Bibliography

Parent Collection

OEC Subject Aids

Topics

Public Well-being

Discipline(s)

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