

Environment, Technology and Society

NEWSLETTER OF THE SECTION ON ENVIRONMENT AND TECHNOLOGY OF THE AMERICAN SOCIOLOGICAL ASSOCIATION

Summer 2010

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The Gulf Spill and the Hobson's Choice of Oil Production

by Thomas D. Beamish
UC Davis

The Gulf oil spill has the potential to be horrifically destructive. In the coming weeks, literally hundreds of thousands, perhaps millions of gallons of crude may wash ashore, coating shorelines, marshes, estuaries, and shallow bays. It may foul an extremely fragile biome that is home to innumerable fish species and endangered marsh plants and an important flyway for migrating birds. This is a natural treasure, not only for the wildlife it supports but for its social and economic importance to the region: fishing, tourism, and oil. The spewing oil has thrown these into stark relief. Yet we confront a "Hobson's choice." We are free to choose one option: in the rhetoric of the last election and as evidenced in the recent energy agenda of the Obama administration, it's "drill, baby, drill." Yet even if oil production is currently our only choice—something I do not believe it need be—it must be done differently, and indeed must be done better.

My interest in oil spills began with my study of another spill documented in the book, *Silent Spill* (MIT Press). That disaster involved slow leaks and frequent spills at an isolated oil field on the coast of central California that, over a period of 38 years, became the nation's largest on record (20 million gallons versus the Exxon Valdez's 11 million). And while very different than the Gulf's Heritage Platform spill, it is comparable to the current disaster

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Sections Awards!

*by Richard York
University of Oregon*

Congratulations to Dorceta Taylor of the University of Michigan, who received the Outstanding Publication Award for her book *The Environment and the People in American Cities, 1600s-1900s: Disorder, Inequality, and Social Change* (Duke University Press 2009).

Likewise, congratulations to KuoRay Mao of the University of Kansas, who received the Marvin E. Olsen Student Paper Award for "The Neoliberal Conundrum: The Western Development Policies, Migration, and Environmental Degradation in Northwestern China."

The Gulf Spill (continued from page 1)

insofar as they involve similar casts of characters, accident routines, and industrial regulations. Response to the Gulf spill also coheres with lessons learned from other "man made disasters." In what follows I explore three issues exposed by the current oil spill catastrophe that are remarkable in their similarities to previous events. These include delayed response, industry priorities, and normal accidents.

Oil spill response: slow, halting, and secretive

As is typical of the government and industry, crises spawn post-hoc reaction in a way that symptoms of a crisis seldom do. Yet it is in attending to the symptoms that a crisis may be averted, mitigated, or at the very least eased. I do not mean this to be a superficial remark: the emphasis on reaction— and delayed reaction at that — rather than proaction is reflected in the law and oil regulation as it currently exists.

I don't mean to imply the Gulf spill was caused by government regulations, but the nature of our current system of industrial self-regulation, coupled with the punitive form post accident response takes, engenders unanticipated consequences. Primary among them: very slow, guarded, and secretive response to signs of crisis.

Why? In part because of the structure of regulation itself. Unlike conventionally conceived forms of law enforcement that are predicated on a belief that violators will do everything within their power to avoid getting caught, oil industry regulators — such as the Minerals Management Service (MMS) and the Coast

Guard — are almost completely dependant on the violator — or, in this instance, the oil operator — to self report. This is partly a matter of expertise, but it is also codified in laws such as the Oil Pollution Act of 1990 that stipulates self-regulation and self-reporting as the trigger for emergency response. When any entity, from a mom and pop gas station to a multi-national corporation, spills more than a barrel of petroleum (about 42 gallons), the onus is on them to report that spillage before it damages a waterway or significant resource. Only when spillage is known to exceed 10,000 gallons (about 240 barrels of oil) can the authorities legally set up an incident command structure, abrogate private property, and compel the offending operator to respond. As I noted in *Silent Spill*, "Perhaps punishment [for violations] coupled with self-reporting [requirements] represents the worst of [all regulatory] worlds" (p. 77). It certainly does not grease the wheels for a quick and cooperative response.

This painfully protracted response characterized the Gulf spill, which is now two weeks in the making. The explosion occurred on April 20. On April 22, BP Inc. claimed the oil on the ocean's surface to be "residual oil" from the explosion, fire, and sinking of the offshore rig. Over the next week, BP expressed confidence that they had everything under control. In all of this, the Coast Guard and MMS, while initially sending three coast guard cutters, four helicopters, and one spotter plane to rescue injured workers, remained totally dependant on BP and its subcontractors—Transoceanic, Haliburton, and Cameron—for information, technology, and advanced planning — and thus response. Not until the scope of the leaks had been ascertained and BP asked for assistance did regulators step in and step up their response. (It should be noted that the term "leak" is misleading: Oil is currently spewing forth from a 5"-6" diameter pipe at an incredible rate in excess of 200,000 gallons a day and may get much larger if the ocean floor wellhead fails.)

Industry priorities exposed

The lack of a coherent response plan and the post-hoc manner of response are also revealing. The response to the Gulf spill exposes a set of industry priorities— those of the oil producers but also those of the regulators and lawmakers who propose, create, and enforce regulations. While it may come as no surprise that the industry's and Mineral Management Service's main priorities lie with greater levels of oil production, that concern does not presuppose a de-emphasis on safety and environmental compliance or accident preparation.

Some numbers might clarify my point. While BP has spent heavily on PR to rebrand itself as the “green energy company” (\$200 million in 2000 on rebranding campaign), and grossed some \$47.7 billion in 2009, \$57.7 billion in 2008, and \$52.92 billion in 2007 actual human and environmental safety seems to be a low priority, as reflected in their track record over the past half-decade. In 2005, their Texas City Refinery disaster claimed 15 workers who died in an explosion that was the culmination of a series of smaller accidents. In 2006, the Prudhoe Bay shutdown, reflecting poor infrastructural maintenance and pipeline corrosion, resulted in an estimated 267,000 US gallons spilled. And in 2007 the Prudhoe Bay toxic spill involved some 2000 gallons of methanol. All of these incidences, upon further investigation, have been attributed directly or indirectly to BP’s cost-saving measures such as cutting back on maintenance and safety costs to improve the company’s bottom line.

And while I’m unwilling to say that the blowout in the Gulf was itself the result of this ethic, I am of the mind that spill response has been heavily influenced by a set of priorities BP shares with other industry producers. The oil industry has a dismal track record: according to the MMS, there were 1400 offshore oil drilling accidents between 2001-07. Health, safety, the environment, and emergency preparedness are simply not priorities. This point is also born out by recent media reports claiming that BP is currently constructing “containment chambers” to put over leaking the wellhead and pipes on the sea floor that won’t be finished for weeks, and that the drilling of a “relief well” could take months.

Spills like this, while infrequent, are not unknown to the industry, and, given their magnitude and destructive power, require focal prioritization. Indeed, lessons from the 1979 blowout of IXTOC I rig in the Gulf off the coast of Mexico could have promoted such preparedness. It clearly did not. Questions along these lines — Why weren’t containment chambers on shore and ready for deployment? Why weren’t fire retardants and suppressants at the ready and extensively used, rather than see water, to stop the fire on the Heritage Rig so that it would not sink? Why weren’t containment crews, booms, and skimmers immediately and proactively deployed at the start of the crisis? In short, why hasn’t investment in prevention and preparedness kept pace with the billions spent on state of the art drilling technologies — are not difficult to answer. They are a matter of industry priority, not technological capacity.

Oil spills are “Normal Accidents”

My final point involves what in the opening I referred to as a Hobson’s choice. That is, we approach questions about oil drilling, production, and consumption as if they were the only choice available to us. And the industry and its advocates repeatedly proclaim that oil production, with its current technology—such as the Heritage Platform in the Gulf—is safe, will have little impact, and can be pursued without environmental or safety concerns. They tell us — tipping their hats to the Santa Barbara, Exxon Valdez, and Amoco Cadiz, among a long list — that such disasters cannot happen again. Yet, the very nature of petroleum and the complex, tightly coupled systems required to produce it mean that gushers and spills will undoubtedly be part of our future. While they are an infrequent occurrence, they are a “normal,” if catastrophic, part of production.

Armed with that knowledge, if we decide as a society that we must continue to “drill, baby drill,” we should require oil producers to step up, fund research, fund environmental and safety equipment, fund accident preparation, and ensure against catastrophic occurrences in advance. We should stop treating petroleum as a Hobson’s choice. The cost of planning and preparing are indeed high, but as the Gulf spill so tellingly reveals, so too are the costs of pretending we only have one choice: petroleum without accidents.

Thomas D. Beamish is Associate Professor of Sociology at University of California-Davis. Professor Beamish’s research interests include organizations and the economy; technology, hazards, and risk; and social and community movements. Dr. Beamish’s publications in these areas include a book, “Silent Spill: The Organization of an Industrial Crisis (MIT Press, February 2002), chapters in edited volumes, and journal articles that have appeared in the Journal of Social Problems, the Annual Review of Sociology, and Organization and Environment among others.

Hurricane Katrina Research Bibliography

*by Lori Peek
Colorado State University*

With the approaching five year anniversary of Hurricane Katrina, section members may be interested in the following resource. Created and maintained by Kai Erikson, Yale University, and Lori Peek, Colorado State University, the Hurricane Katrina Research Bibliography is available in PDF format and updated monthly. It includes reference

information for reports, journal articles, book chapters, and books that explore the human effects of Hurricane Katrina. Citations are organized according to the following subject areas: children and schools; culture, tradition, and history; displaced persons; economic effects and employment; elderly; emergency preparedness, evacuation, and response; environmental effects; gender; health and health care; housing; media; post-disaster recovery; race and class; and research methods and ethical issues. The bibliography also includes authored books that discuss Katrina in general, edited books that cover a range of subjects related to the storm, reviews of books and films, special issues of scholarly journals, documentary films, and websites dedicated to Katrina.

Available at:

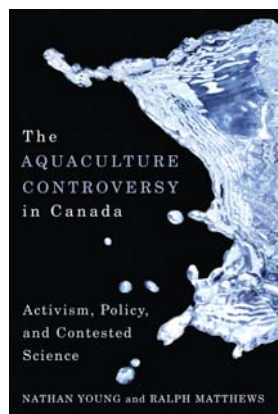
<http://katrinaresearchhub.ssrc.org/KatrinaBibliography.pdf>

Publications

Books

The Aquaculture Controversy in Canada: Activism, Policy, and Contested Science

Nathan Young and Ralph Matthews
2010



Aquaculture -- the farming of aquatic organisms -- is one of the most promising but controversial new industries in Canada. Advocates believe aquaculture has the potential to solve serious environmental and food supply problems due to global overfishing. Critics argue that industrial-scale aquaculture poses unacceptable threats to human health, local communities, and the environment.

The Aquaculture Controversy in Canada is not about the techniques and methods of aquaculture, but it is an examination of the controversy itself. Rather than picking sides, Nathan Young and Ralph Matthews draw on extensive research to determine why the issue has been the centre of intense debate in Canada. They argue that the conflict is both unique, reflecting the specific history of coastal and resource development in Canada, and rooted in major unresolved questions confronting democratic societies around the world: the environment, rights, knowledge, development, and governance. The

inability of the industry and its advocates to address the complexities of the controversy, they argue, has given a powerful advantage to aquaculture's opponents and fuelled the debate.

Comprehensive and balanced, this book explores the issues at the heart of the aquaculture controversy -- the relationship between humanity and the environment, notions of rights and justice, and the rise of intense local-global interactions and conflicts. It will appeal to anyone interested in environmental controversies, public policy, natural resources, or coastal issues.

Reviews

"The Aquaculture Controversy in Canada successfully negotiates the minefield of partisan positions and provides a clear way to grasp the multidimensional character of the aquaculture controversy."

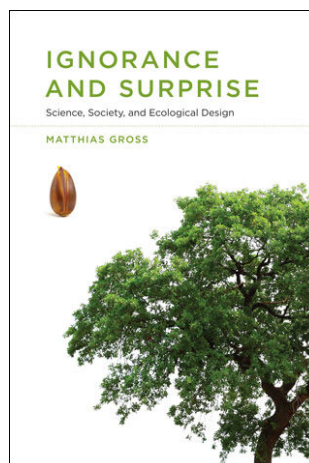
--Jeremy Rayner, Political Science, University of Regina

"The authors have done an excellent job of presenting the aquaculture story in Canada, especially in BC. They provide an enormous amount of basic information and analysis that permits readers to evaluate key issues such as the extent to which the social and environmental impacts of aquaculture should lead to its expansion or demise."

-- Peter Sinclair, Sociology, Memorial University of Newfoundland

Ignorance and Surprise: Science, Society, and Ecological Design

Matthias Gross
2010



Ignorance and surprise belong together: surprises can make people aware of their own ignorance. And yet, perhaps paradoxically, a surprising event in scientific research—one that defies prediction or risk assessment—is often a window to new and unexpected knowledge. In this book, Matthias Gross examines the relationship between ignorance and surprise, proposing a conceptual framework for handling the unexpected and offering case studies of ecological design that demonstrate the advantages of allowing for surprises and including ignorance in the design and negotiation processes.

Gross draws on classical and contemporary

sociological accounts of ignorance and surprise in science and ecology and integrates these with the idea of experiment in society. He develops a notion of how unexpected occurrences can be incorporated into a model of scientific and technological development that includes the experimental handling of surprises. Gross discusses different projects in ecological design, including Chicago's restoration of the shoreline of Lake Michigan and Germany's revitalization of brownfields near Leipzig. These cases show how ignorance and surprise can successfully play out in ecological design projects, and how the acknowledgment of the unknown can become a part of decision making. The appropriation of surprises can lead to robust design strategies. Ecological design, Gross argues, is neither a linear process of master planning nor a process of trial and error but a carefully coordinated process of dealing with unexpected turns by means of experimental practice.

Reviews

"Matthias Gross is in the business of rewriting modernity. Far from being a prescription for paralysis, not knowing becomes, in his telling, a springboard for wider participation, experimentation, and creativity. Part science studies and part environmental sociology, this is a hugely optimistic and intelligent book for anyone who finds the contemporary world too complex to govern."

—Sheila Jasanoff, Pforzheimer Professor of Science and Technology Studies, Kennedy School of Government, Harvard University

Environmental Movements and Waste Infrastructure

Christopher Rootes and Liam Leonard (eds.)
2010

As rates of consumption grow, the problem of waste management has increased significantly. National and local waste authorities seek to manage such problems through the implementation of state regulation and construction of waste infrastructure, including landfills and incinerators. These, however, are undertaken in a context of increasing supra-state regulatory frameworks and directives on waste management, and of increasing activity by multi-national corporations, and are increasingly contested by activists in the affected communities. *Environmental Movements and Waste Infrastructure* sheds new light on the structures of political opportunity that confront environmental movements that challenge the state or corporate sector. A series of case studies on collective action campaigns from the EU, US and Asia is elaborated in order to illuminate the similarities and differences between anti-incinerator protests within different states. Several contributions share a concern about cross-border or transnational waste flows. Each case study looks beyond

its initial local frame of reference and goes on to interrogate assumptions about NIMBYism or localism, demonstrating the wider linkages and networks established by both grassroots campaigns and state and multinational agencies

Contents:

1. Environmental Movements, Waste and Waste Infrastructure: An Introduction by Christopher Rootes
2. Environmental Movements and Campaigns against Waste Infrastructure in the United States by Christopher Rootes and Liam Leonard
3. When Time is on Their Side: Determinants of Outcomes in New Siting and Existing Contamination Cases in Louisiana by Melissa Kemberling and J. Timmons Roberts
4. More Acted upon than Acting? Campaigns against Waste Incinerators in England by Christopher Rootes
5. A Burning Issue? Governance and Anti-Incinerator Campaigns in Ireland, North and South by Liam Leonard, Peter Doran and Honor Fagan
6. Wasting Energy? Campaigns against Waste-to-Energy Sites in France by Darren McCauley
7. Grassroots Mobilisations against Waste Disposal Sites in Greece by Iosif Botetzagias and John Karamichas
8. Movements, Mobilities and the Politics of Hazardous Waste by Su-Ming Khoo and Henrike Rau

This book was previously published as a special issue of *Environmental Politics*.

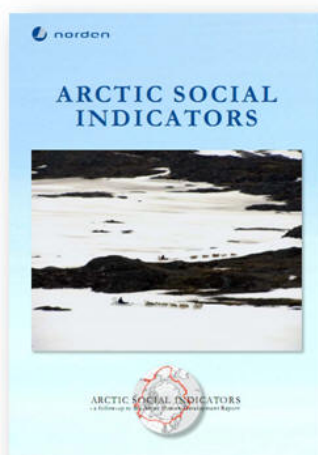
Arctic Social Indicators

J.N. Larsen, P. Schweitze and G. Fondahl (eds.)
2010.

<http://www.svs.is/ASI/Report%20Chapters/Report%20Chapters.htm>

A follow-up activity to the Arctic Human Development Report (AHDR) which was launched at the Ministerial meeting of the Arctic Council in November 2004. The (AHDR) presents a broad overview of the state of human development or social well-being in the circumpolar Arctic as of the early years of the 21st century. It is unique in the sense that it treats the Arctic as a single, integrated region, despite the fact that this region encompasses lands and marine areas under the jurisdiction of eight states as well as marine areas that extend beyond the jurisdiction of any individual state. The result is a profile of the Arctic as a distinct region that makes it possible to compare and contrast the Arctic and other regions in terms of a host of factors ranging from demographic conditions through cultural, economic, political, and legal systems and on to matters of education, human health, and gender. The scope and significance of this achievement have been recognized and widely praised both among those concerned with

Arctic affairs and among those who deal with human development in the world at large.



The current publication is an attempt to devise a limited set of indicators that reflect key aspects of human development in the Arctic, that are tractable in terms of measurement, and that can be monitored over time at a reasonable cost in terms of labor and material resources. The

pursuit of this goal will encompass several distinct steps, starting with a workshop focusing on the design of indicators suitable for use in the Arctic and moving on to the development of procedures needed to measure and monitor these indicators on a regular basis.

Articles

Of special note:

The latest issue of ***Theory, Culture & Society*** was devoted to the politics and perception of climate change. Click [here](#) to view the TOC of that issue. Congratulations to Bronislaw Szerszynski and John Urry, who edited the volume and penned its introduction.

A special issue of ***International Journal of Sociology*** entitled "Environmental Change in a Global Perspective: A Collection of Cross-National Analyses" has also come out. Click [here](#) to view the TOC of that issue. Please contact John Shandra at the State University of New York at Stony Brook, the editor of that volume, for further information or comments. Congratulations to John on this fine volume.



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McCright, Aaron M. and Riley E. Dunlap. 2010. "Anti-Reflexivity: The American Conservative Movement's Success in Undermining Climate Science and Policy." *Theory, Culture and Society* 26:100-133.

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Stern, Paul C., Gerald T Gardner, Michael P Vandenberg, Thomas Dietz, and Jonathan M Gilligan. 2010. ["Design Principles for Carbon Emissions Reduction Programs."](#) *Environmental Science and Technology* 44(13): 4847-4848. (see

Vandenberg, Michael P., Paul C. Stern, Gerald T. Gardner, Thomas Dietz, and Jonathan M. Gilligan. 2010. ["Implementing the Behavioral Wedge: Designing and Adopting Effective Carbon Emissions Reduction Programs."](#) *Environmental Law Review* 40:10547-10554.

Member News

Gene Rosa

Gene Rosa, Washington State, has been appointed a Visiting Fellow at the Woods Institute for the Environment at Stanford University. The Ward W. and Priscilla B. Woods Institute for the Environment at Stanford University harnesses the expertise and imagination of leading academics and decision-makers to create practical solutions for people and the planet. In the same spirit that inspired Stanford's role in Silicon Valley's high-tech revolution, the Woods Institute is pioneering innovative approaches to meet the environmental challenges of the 21st century - from climate change to sustainable food supplies to ocean conservation.

The Woods Institute carries out its mission by: Sponsoring research that leads to new solutions to global environmental sustainability issues. Infusing science into policies and practices of the business, government, and NGO communities. Developing strong environmental leaders for today and the future. Serving as a catalyst and a hub for the university's interdisciplinary work in environmental research, education, and action.

Research at Woods focuses on five core areas:

- climate and energy
- land use and conservation
- oceans and estuaries
- freshwater
- sustainable built environment