

**The Future of Sociology:
Taking into Account Nature as Actant
and Time as Condition**

by

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Climate change

1) Human activities unleash new dynamics of nature.

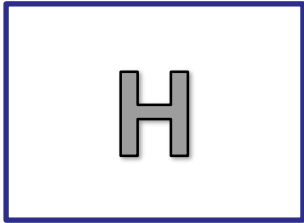
Nature = actant

2) It is the absolute amount of carbon in atmosphere that causes a greenhouse effect. Atmosphere is indifferent to whether this results from much carbon per unit of GDP or many units of GDP.

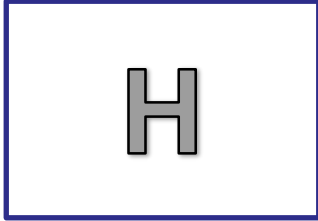
3) Natural environment is a medium by which actions of present generations affect future generations: time.

4) Science versus powerful material and ideal interests.

Climate change constitutes a wicked problem for sociology



SOCIAL
ACTION

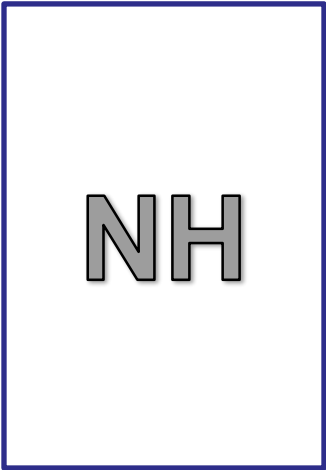


NON SOCIAL ACTION OF HUMANS

NON SOCIAL ACTION OF NON-HUMANS

NON SOCIAL ACTION OF NON-HUMANS

NON SOCIAL ACTION OF HUMANS



**Complementary Metaphors:
Goffman's Drama and
a Dance between Human Actors and Nature's Actants**

- **Expectations of movements by nature's actants shape human actions**

The Future of Sociology

Hypothesis

As modernity recombines nature's dynamics into new technologies, it internalizes dangerous forces of nature into society and unleashes new forces of nature. This intensifies the interaction between social constructions and nature's constructions.

Risk

“amplification of risk”

Risk / risk perceptions, risk discourse

risk = chance of harm

Antonym of risk is safety.

Safety = negligible chance of harm

Safety / discourse proclaiming safety

Generic types of estimates of risk or safety

- a) Routine lay assessments of risk or safety are trial-and-error estimates based on past experience and cultural habitus.**
- b) Scientific calculations of probability of harm are based on attempts to reach a deeper understanding of underlying processes.**

Risk society is a society that constructs new chances of harm.

Risk discourse society is an adjunct to the risk society and must not be mistaken as the risk society itself.

Need to distinguish plausible from accurate estimates of risk and safety.

Retrospective analyses are necessary to determine whether safety or risk assessments were plausible but wrong.

When Science Brings Troubling News: the Case of Global Warming

Lay non-scientific groups (e.g. fossil-fuel industry) refuse to heed science (IPCC, national science academies)

Result = concern about climate change decreases

**“A New Direction for Climate Policy”
= messy solutions**

Mike Hulme 2009 *Why We Disagree About Climate Change*

Gwyn Prius et al. 2010 “*The Hartwell Paper*”

Anthony Giddens 2009 *The Politics of Climate Change*

Inciting Action to Deal with Environmental Problems: Giddens - Dreams Trump Nightmares

Avoiding calamities are weak motivators

Strong motivators = opportunities.

Politics of hope is more motivational than politics of fear.

= part of the truth but oversimplification

- 1) Nightmares are great motivators:
fear of falling dominos into communism - Vietnam;**
- 2) Contradictory dreams compete with one another.**

Under uncertainty, present real-world experiences trump scientific forecasts of risk.

In the absence of complacency-disrupting disasters, predispositions and habitus persist.

Giddens: “countries that are at the top of the league [of the climate change performance index] are there because of a preoccupation with energy security rather than climate change. In this sense, they have arrived where they are by accident”.

Sustainable energy security = increasing energy available through more efficient use, renewable energy, hence and profits.

Three remaining sources of the oil component of energy security:

- i) deep water drilling for oil in the oceans,**
- ii) extracting oil from unconventional deposits like tar sands,**
- iii) drilling in areas opened up by global warming, like the Arctic**

Energy Security Case 1:

“Drill, Baby, Drill” – liability is limited

All star cast for Deepwater Horizon Drilling Rig perceived in 2009:

BP = one of the world’s largest petroleum companies led by celebrated CEO Tony Hayward who promised to focus “like a laser on safe and reliable operations”.

Transoceanic: does half of the world’s deep water drilling.

Its motto = “We’re never out of our depth”

Haliburton: oil services giant

regulated by U.S. Minerals Management Service

BP environmental impact risk assessment, February 2009

Risk judged negligible with this all star cast.

= unperceived risk, failure of foresight, incubation of disaster

BP Deepwater Horizon drilling rig unleashed an underwater oil volcano





Worse than the worst-case scenario

Worst-case scenario = social construct

Worst case = nature's construct unleashed by human constructions

For 85 days, technical solutions to stop runaway deep water oil volcano all failed.

Science is partial and technology is Janus-faced

**Solution = Gulf Burn Box
= a 15 km by 15 km controlled oil burn**



Controlled burn of BP Oil Spill in the Gulf of Mexico



Controlled burn of BP Oil Spill in the Gulf of Mexico



**Hope for the clean-up is found more in nature's dynamics
than in modern messy solutions**

Energy Security Case Study 2: Canadian Tar Sands

Obama Administration proposes a low-carbon fuel standard (LCFS).

Alliance of oil companies lobby against LCFS, claiming that American energy security requires Canadian tar sands oil.

Canadian Boreal Forest



Bitumen Brownfield After Removal of Forest “Overburden”



As oil prices go up, even dirtier oil and oil from more dangerous locations is substituted to achieve energy security. Indirect messy solutions to global warming backfire.

The goals of energy security and mitigating environmental problems thereby diverge.

The dream of energy security is leading to the nightmare of global warming and polluted land and oceans.

Decarbonizing the economy, atmosphere and oceans is a wish. Megacarbonizing them is a fact.

Need to distinguish between sustainable sources of energy security and environmentally harmful sources.

“The Ensuring State” (Giddens)

The state has to act not only as facilitator and enabler, but also “it has to ensure that definite outcomes are achieved – most notably a progressive reduction in carbon emissions”.

Two opposite responses to environmental degradation by tar sands exploitation

1) attenuation of risk = substantive approach

triage of technologies to reduce the absolute amounts of energy use, fresh water use, clear cutting of forests, and GHG emissions to conventional oil levels,

or 2) attenuation of risk perception

- a) hide excess emissions in extraction and upgrading by shifting focus to “full cycle – well to wheels”,**
- b) use “intensity based indicators” showing improvement per barrel to legitimate expansion (more barrels) that increases emissions, Economic growth degrades the environment absolutely even as it improves in intensity, thereby misleading the population into believing there is improvement.**
- c) dumb down to dirtiest common denominator by showing that tar sands oil is not worse than the worst other source: “as [BP] slick spreads, oil sands beckon”.**

**This second response = attenuation of perception of risk of
global warming during the amplification of risk
= construction of new layers of risk and uncertainty in the
risk society**

Methodologies to assess the management of risk under uncertainty

- 1) Mitigation and adaptation discourse.**
- 2) Relative improvements and attempts.**
- 3) Absolute material indicators that the problem is being solved.**

The ensuring state requires methodology 3

**Solutions necessitate interdisciplinary research across the
natural science / social science divide.**

Challenge of climate change for sociology

should incite an expansion of sociological analysis to take into account

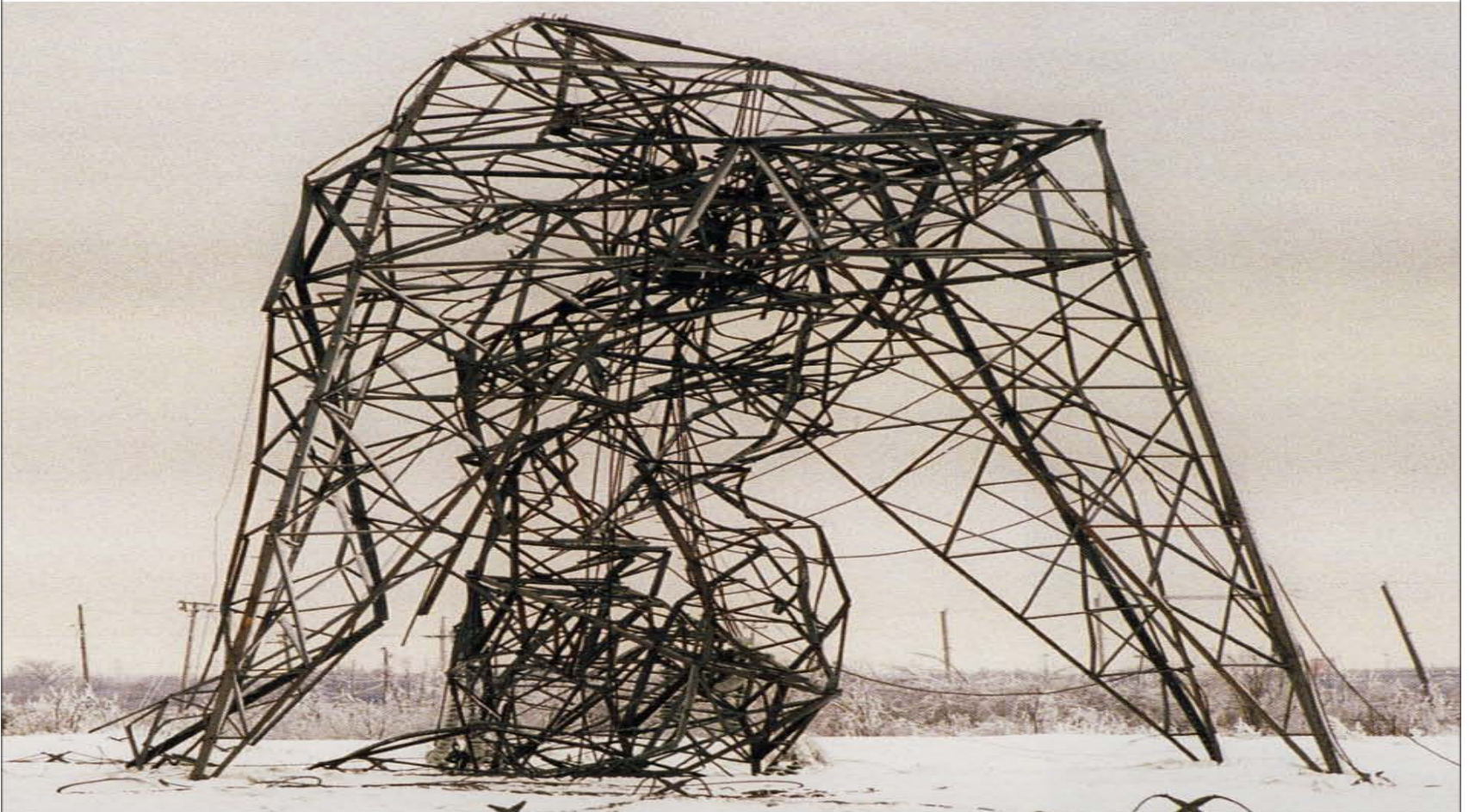
- i) the modern internalization of nature's dynamics into society and the intensification of the interaction between social constructions and nature's constructions,**
- ii) the opposition to science of powerful interest groups when science brings troubling news,**
- iii) the best of natural science conclusions. A throw-away line stating that 'the study does not deny the reality of climate change' is not enough.**

If sociology suspends the best of natural science conclusions, is it any wonder that science and the population suspend sociology?

RAYMOND MURPHY

LEADERSHIP

in Disaster



Learning for a Future with Global Climate Change