



INTERNALIZING INDIA AND IT'S AIR



SOCIOLOGY AND POLLUTION

Environmental Sociology	Medical Sociology	Theoretical Sociology
Social and Democratic processes vs Dangerous Technologies	Social Determinants of Health model – Epidemiology	Concept of Risk
Social Inequalities and Exposure	Exposure and Socioeconomic Inequalities and Health	Giddens' Danger to Risk Shift
Consequences of pollution in the Work Space	Consequences of pollution in the Work Space	Ulrich Beck's "democratizing" nature of certain risks and the Boomerang effect

SOCIAL FRAMING OF AIR POLLUTION

OUT DOOR AND INDOOR	VISABILITY AND INVISABILITY
<p>Major Outdoor Sources – vehicles, factories, power generation (smoke stacks)</p> <p>Major Indoor- inefficient fuel combustion (cooking, heating, lighting), radon, chemical pollutants (building materials, cleaning products)</p>	<p><u>Awareness</u> linked to visibility and odor.</p> <p>More worried by the short-term consequences of pollution</p>
<p>HEALTH RISKS OVERLAP- Especially harmful in poor areas (combustion of solid fuels and biomass)</p>	<p>‘Annoyance’ is key in shaping perception.</p> <p>This intern is shaped by pollution exposure relation to social factors such as: Age, Sex, Class, Prior Exposer.</p>
<p>Industry and automobiles 1st and 2nd causes respectively (local variations of intensity) Economic growth and consumption major factors.</p>	
<p>However, Car owners not primary victims (India WHO example)</p>	

SOCIOLOGICAL THEORIES AND POLLUTION

In sociological scholarship, the interaction between individuals and environment has been studied from three theoretical perspectives:

1. Functionalism
2. Conflict Theory
3. Social Construction Theory.

Functionalism	Conflict Theory (Most Prominent)	Social Construction Theory
<p>Emile Durkheim- Talcott Parsons- Robert K. Merton- <u>Niklas Luhmann</u></p>	<p>Marx- Critical Theory (Criticisms - utopian aspects and economic determinism)</p>	<p>Berger and Luckmann - Mayer</p>
<p><u>Luhmann's</u> "Cynical" Functionalism- pollution is a problem only when "perceived" by the <u>political system</u>.</p>	<p>Capitalism and Neoliberalism cause of environmental deterioration. State and political institutions compromised as they are instrument of the economic power. A profound reorganization of society only answer.</p>	<p>1. The scientific authority for the validation of claims. 2. the existence of "popularisers" who package the "problem" to opinion makers 3. media attention 4. dramatization of the problem in symbolic or visual terms 5. visible economic incentives 6. emergence of an institutional sponsor who ensure continuity.</p>
	<p>Critical consumption - consume according to anti- neoliberalistic values.</p>	<p>Provides a solid methodological basis for empirical investigations</p>
	<p>Degrowth Theory- paradigm shift away from neoliberalism. Serge Latouche.</p>	<p>This is both its strength and its weakness.</p>
	<p>Environmental justice perspective-</p>	

RISK APPROACHES TO AIR POLLUTION

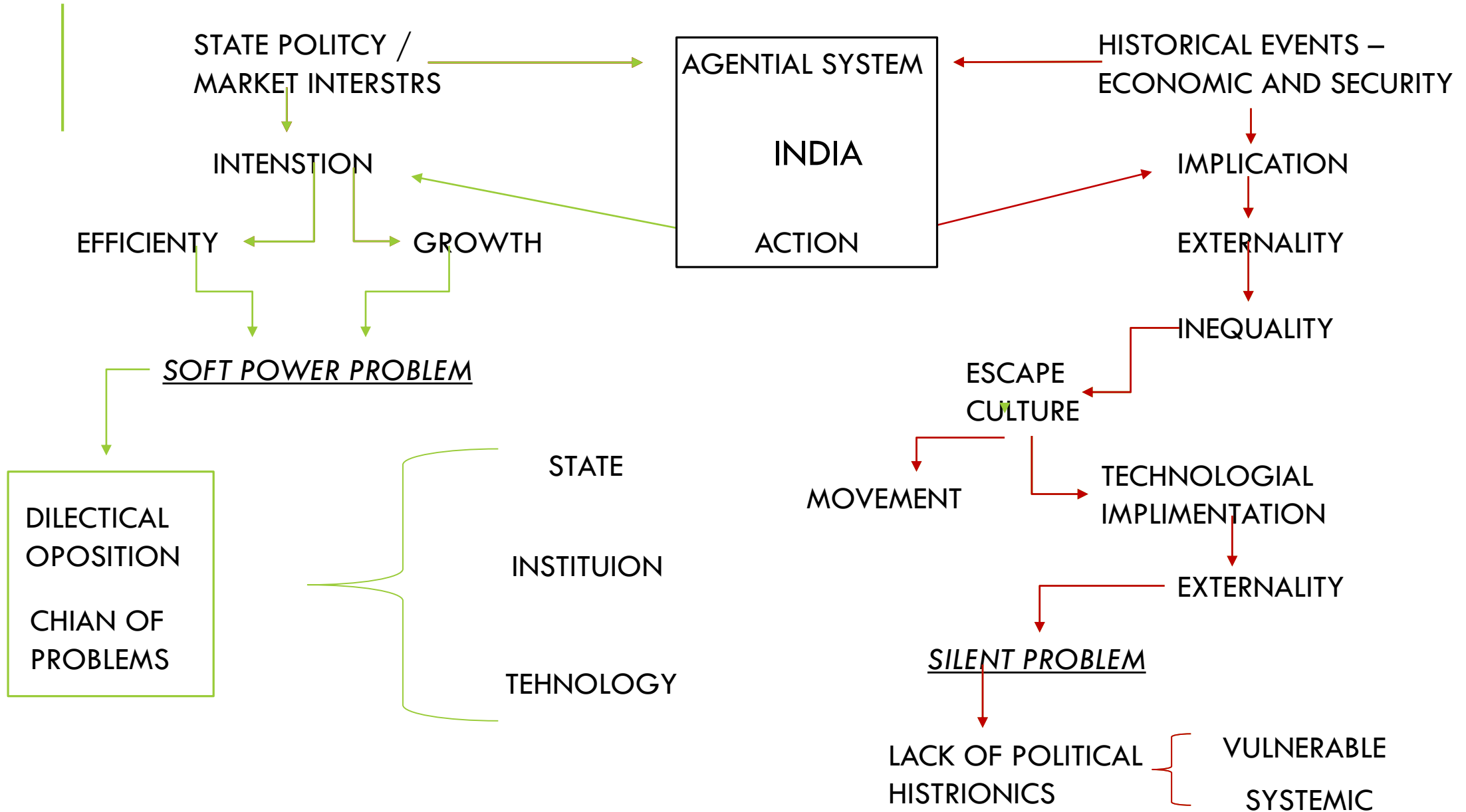
- Concept of risk has only recently entered the field of Sociology.
- Rapidly become a pillar of Sociological Theory and Empirical Studies.
- Risks are a product of human ability.
- Concert with the harmful phenomena that occur in our natural and social environments.
- Arise from Technological and Scientific development.
- Risk is future-oriented and therefore decisions taken today will produce effects tomorrow.
- Yet, anticipation becomes increasingly difficult with the complex and interdependent technocracies.
- 'Perceived' risks has increased due to numerous set of scientific tools that analyze reality today.

RISK SOCIEY	Environmental (In)Justice	Urban Vulnerability As Impact
Ulrich Beck – Giddens	Bauman's <i>Liquid Fear</i>	Between Beck's theory and the critical theory
Accelerated technological development + irresponsible form of capitalism = increase in the number of risks. i.e Growth of wealth \approx Increase in Risk	Information – Response capability Deliberate location – Proximity Economic position – Exposure	More of a research hypothesis than a theoretical framework.
Giddens “manufactured uncertainty”- technological products inserted into the ecology of life, begin to interact with their networked environments, after which scientists and engineers lose control.	Minorities – Environmental Racism Risk - Outdoor exposure and Indoor dependence. Relation between: Technology, and User Knowledge vs Behavior, and Access	Urban - steady growth in the number of urban residents, home to a large proportion of the world's population, economic activity, and physical infrastructures. developing countries- “urbanization of poverty”
Becks' “democratizing” element. (Hunger or literacy vs smog) “boomerang effect”.	technology, user knowledge and behavior, and access	Vulnerability- a social system, the attribute of concern, temporal reference. (Downing Patwardhan)
Beck on pollution risks become “visible”—and therefore gains social existence*	“Action-research” challenges	natural vulnerability (positive exposer) and socioeconomic vulnerability(inability to respond)

ENVIRONMENTAL JUSTICE AND AIR POLLUTION

Community level	Health	Information
Interventions focused on emissions reductions.	Physical activity reduces the risk of cardiovascular diseases and diabetes, conditions susceptible to air pollution	Time/Durational effects of Exposure (Short and Long).
<ol style="list-style-type: none"> 1.Source substitution 2.Urban/transportation planning 3.Technology upgrades 	Activity in pollution however leads to asthma and must be avoided.	Locational exposure (Outdoor and Indoor pollutants).
These actions require legal restrictions.	Changes in nutrition can play a significant role in decreasing harm. Studies show the body's anti-oxidant defenses as potential interventions to ameliorate the negative health impacts of pollution exposure	Responsibility and Consequence (critical consumption and neoliberal positions)
		Problematizing the "normalized" idea of air pollution risk.

THE GREAT SMOG OF INDIA INITIAL



SILENT PROBLEM SOFT POWER PROBLEM

1. The scientific authority for and validation of claims.
 2. The existence of “popularisers” who package the “problem” to opinion makers.
 3. Media attention.
 4. Visible economic incentives.
 5. Dramatization of the problem in symbolic or visual terms.
 6. Emergence of an institutional sponsor who ensure continuity.
- ❖ Externexternalities of Capitalism.

ROBUST CLAIMS

- ❖ Scientifically rigorous
- ❖ Stakeholders part of the decision making process are more accepting of a scientifically determined outcome
- ❖ Prioritizes cost-effective measures
- ❖ Easier to implement - because the systematic approach helps us identify exactly what is needed, and how much
- ❖ Leads to more effective outcomes and easier monitoring of progress

AIR POLLUTION MONITORING

- ❑ Monitoring is an exercise to measure ambient levels of air pollution in an area. The results of which indicate the status of quality of air we breathe.
- ❑ Long term, is especially useful as it allows us to tease out patterns that help support air pollution control policy.
- ❑ These patterns include:
 - spatial differences in pollution (which areas of the city are more polluted)
 - temporal differences (is there a pattern of pollution levels during a day and/or a year).
- ❑ It is because monitoring informs air pollution policy, that it is often cited as an integral part (if not the key measure) of a pollution control strategy by policy makers, and by extension, the media.

MONITORING DATA

Type of Monitoring	Focus area	Usage
Ambient monitoring	The whole city or state or country	Data is used for long-term spatial and temporal trend analysis; can be used to determine the merits and the de-merits of an intervention over time
On-road (mobile) monitoring	Confined to roads and their immediate vicinity	Data is used for understanding pollution exposure during commute; specially to understand the acute health impacts of being exposed to augmented pollution levels on the roads
Satellite monitoring	the whole city or state or country	Data is used mostly for annual scale pollution trend analysis
Emissions monitoring	A Specific source	Data is used to establish the emission rate by source, by fuel, by technology, and by usage

Aspects of Mapping

1. Area of City
2. Population
3. Meteorological Data
4. Geographic Terrain
5. Type of Industry
6. Approximate Location
7. Energy Consumption
8. No of Vehicles
9. Past Studies

Qualities of a Model

1. Representation of a system
2. Used to make predictions.
3. Tool that aids in analysis and decision making
4. Easy to use
5. Scientifically robust
6. Transparent
7. Comprehensive
8. As good as the Data given

ECONOMIC PHENOMENON

BIOLOGICAL MATERIAL
FACTOR

EXPERT SYSTEMS

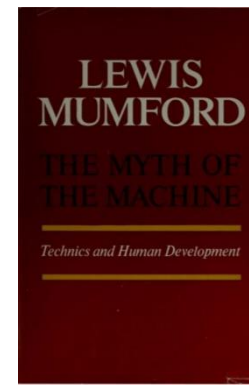
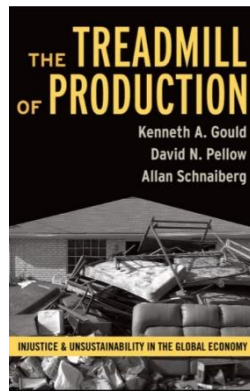
EXTERNALITIES

EXPERT PROCESSES

INSTITUTIONALIZED POLICY

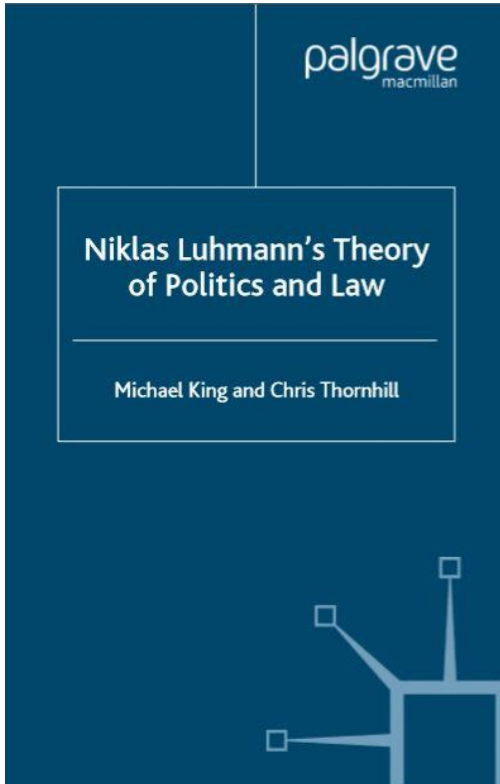
SCIENTIFIC FINDING

Ecological
Treadmill



Organic
Humanism

EXTERNEXTERNALITIES

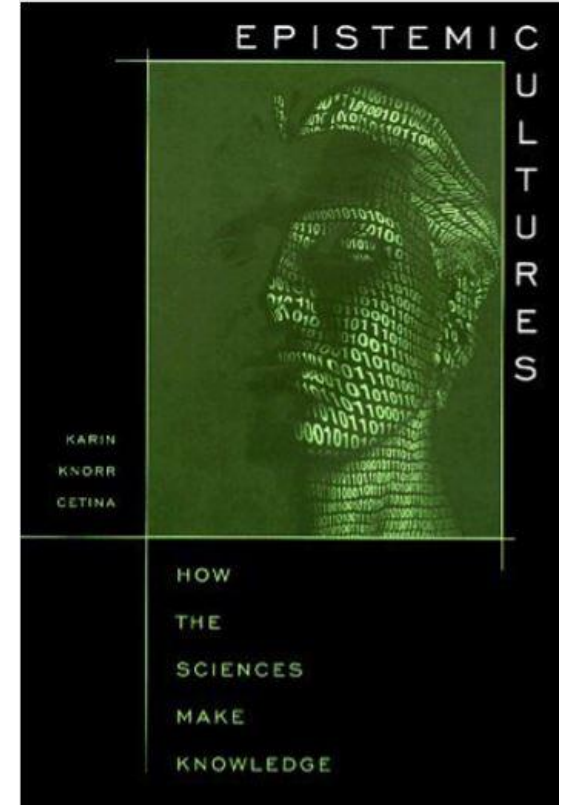


Communication Systems

Epistemic Cultures

Self-referential
Autopoietic systems

Knowing
Machineries



Knowledge Perception

SOCIETY

Knowledge Production