


Stone

policy.png

Problems : Numbers

Describing with numbers

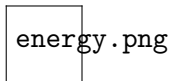
 unemployment_2.png

- How many public water systems are there in the US?
- Public water system: ≥ 15 service connections or service to an average of ≥ 25 people for ≥ 60 days a year;
- With this definition, over 148k;
 - Community Water System;
 - Non-Transient Non-Community Water System;
 - Transient Non-Community Water System.

- “As answers to policy problems, the resolution numbers offer is nothing more than a human decision about how to count as” (i.e. numbers = metaphors);
- Wrongful exclusion:
 - Assertion of a likeness where measurement assigns a difference;
 - Examples: unemployed, homelessness, grades, excess mortality during war;
- Wrongful inclusion:
 - Assertion of a difference where measurement assigns a likeness;
 - Example: excess mortality during war (Iraq war deaths);

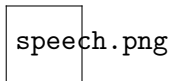
Artifacts and dangers...

- Numbers can reduce conflicts to a single dimension;
 - e.g., if we only considered the energy density of fuel sources (versus cost or safety), we might draft policy to build more nuclear power plants...
- Numbers legitimize political decisions;
 - ...and sometimes mask the political nature of a decision;
 - For example, numbers suggest that safety can be defined through science (but recall the complexity and subjective nature of “Security”);
 - Back to Egan: What is a “safe number of organisms that could be discharged per cubic meter of water?”



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Observer Effects

- In science (especially social science), we confront observer effects—the fact that things, and especially people, behave differently when observed;
 - Physics: uncertainty (Heisenberg) and its generalizations;
 - Social science: poll responses;
- Can interact with counting – by counting people as part of a group, a policy may induce them to act as a group (statistical community becomes a natural community). Group theories of politics (e.g., pluralism) tell us to expect these groups to then advocate for resources, privileges, or protection in future policy processes.
- Question: if the Department of Justice Antitrust Division measures market concentration to decide whether to permit corporate mergers and acquisitions, how do you think this might affect how large companies lobby regarding the definition of their “market”?

Why should we care?

The power to measure is the power to control. Measurers have a lot of discretion in their choice of what and how to measure.

Problems : Causes

How the world works

To Know the Causes of Things

- **Causality:** necessary and sufficient conditions;
 - Very difficult;
 - Absolutely crucial for effective problem solving;
- Ideal: causes are objective and can be identified by scientific analysis;
- Stone: causal analysis has prescriptive power:
 - Like numbers, causes highlight some aspects of a problem and ignore others;
 - Causal chains are stories that define problems and assign blame;
 - Because they have this power there are incentives to use them strategically.

Typology of causal theories (Table 9.1)

- Unguided actions/Intended consequences – **mechanical cause**:
 - Machines that perform to spec but cause harm;
 - Rigid bureaucratic routines;
- Unguided actions/unintended consequences – **accidental cause**:
 - Natural disasters;
 - Fate/bad luck;
- Guided actions/Intended consequences – **intentional cause**:
 - Oppression;
 - Conspiracy;
 - Known but ignored harms;
 - Victim blaming;
- Guided actions/unintended consequences – **inadvertent cause**:
 - unintended side effects;
 - Victim blaming.

Complexity

- Many policy problems—such as toxic hazards, global warming, oil spills, and food safety—require a more **complex model of cause**... can shift problems to appear accidental or unintended;
- Complex systems:
 - Social systems necessary to solve modern problems are inherently complex;
 - Multiple actors + complex feedback loops = certain but impossible to anticipate failure;
- Institutional complexity:
 - Social problems caused by webs of large organizations with built-in incentive structures and patterns of behavior;
 - e.g. US government procurement;
- Historical complexity:
 - Decisions in one period determine the choices available in future periods;
 - Path dependence – e.g. QWERTY keyboards.

Why should we care?

The role of causality is why good research and understanding of legal authority are so important for writing policy memos. Without evidence and authority that your audience sees as legitimate, they will not take your recommendations seriously.

Causal theories are efforts to control interpretations and images of problems, to describe harms and difficulties, to attribute them to actions of actors, and thereby to allocate government power to stop the harm.