Legal Aspects of Using Models in Regulation

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Presentation to the National Research Council
Board of Mathematical Sciences
April 23, 2013
Regulation, Risk, Complexity

Explosion of Deepwater Horizon, April 2010

Photo source: US Coast Guard
Two Types of Regulatory Decisions

• **Rule**: “An agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy.”

• **Order**: Regulatory disposition directed at an individual regulated entity; anything other than making a rule, including licensing and enforcement.

Administrative Procedure Act, 5 USC 551
Example 1: Models & Enforcement

**Problem:** How to target the entities most likely to be violating law.

- Inter-American Tropical Tuna Commission enforces dolphin-safe tuna fishing rules
- Observers on each boat, but corruption
- Forecasting model of expected dolphin by-catch, based on observables such as wind speed, currents, and amount of time at sea
- If observer’s reports at variance with model’s expectations, further investigation
- “The approach was validated with earlier data on observers who were identified as corrupt using other, investigative means. The statistical procedures correctly found most of those individuals – after the fact – with very few false positives.”

Richard Berk, “Forecasting Consumer Safety Violations and Violators”
Example 2: Models & Rules

Circus Circus Enterprises proposed a new 30-story hotel and casino with a pyramidal shape and large internal atrium.

- Existing prescriptive code provisions on ventilation were inapplicable given the unique building design.
- Under performance-based equivalency clause, Burden of proof was on Circus Circus.
- “Proof” consisted of extensive computer simulation, third party testing, and ultimate testing with theatrical smoke.
- Multiple reviews by County officials.

Luxor Hotel & Casino
(Clark County, Nevada)
Legal Aspects of Regulation

- U.S. Constitution
- Administrative Procedure Act
- Other procedural statutes
- Authorizing/substantive statutes
- Court decisions
- Executive orders (for executive branch agencies)
- Agency’s own standing procedures
The Rudiments of Rulemaking

Notice → Comment → Final Rule

Administrative Procedure Act, 5 U.S.C. § 553
The Reality of Rulemaking

Source: Coglianese (2002)
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Heckler v. Chaney (U.S. 1985)

“This Court has recognized on several occasions over many years that an agency’s decision not to prosecute or enforce, whether through civil or criminal process, is a decision generally committed to an agency’s absolute discretion.”
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The Reality of Rulemaking
Executive Orders 12,866 & 13,563

• Requirements apply to “significant” rules
  – Annual effect of $100 million/yr or more
  – Inconsistency or interference with another agency
  – Major budgetary effects for entitlement, grants, etc
  – Raise novel legal or policy issues

• Agencies must submit to OMB’s Office of Information and Regulatory Affairs (OIRA)
  – Semiannual plans of potential new rules
  – Regulatory impact analyses (RIAs) pre-NPRM & pre-Final Rule (following economic analysis guidelines)

• No judicial review of application of order
OMB Circular A-4

• “In cases of particular complexity or novelty, the agency should consider subjecting its analytic models to peer review.”

• “The agency should clearly document all of the assumptions and methods used in the analysis, discuss the uncertainties associates with estimates, and publicly provide the supporting data and underlying analysis ...., so that a qualified third party reading the analysis could understand and reproduce the analysis.”

OIRA, Regulatory Impact Analysis: A Primer
Scientific Integrity

“[E]ach agency shall ensure the objectivity of any scientific and technological information and processes used to support the agency’s regulatory actions.”

Executive Order 13,563
Information Quality Act (2000)

“The Director of the Office of Management and Budget shall... issue guidelines .... that provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies.”

44 U.S.C. § 3516
IQA in the Courts

“Courts that have reviewed the IQA have uniformly found that it does not create any legal right to information or its correctness.”

Harkonen v. United States (N.D. CA 2012)
The Reality of Rulemaking

The diagram illustrates the process of rulemaking, starting with an identified need, leading to hearings and debate, and culminating in the publication of the final rule in the CFR.
The Reality of Rulemaking
Core Presumption:
All Final Agency Action is Subject to Review

“A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof.”

5 USC 702
Scope of Judicial Review

“The reviewing court shall compel agency action unlawfully withheld or unreasonably delayed; and hold unlawful and set aside agency action, findings, and conclusions found to be

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required law...”

5 USC 706
MVMA v. State Farm (U.S. 1982)

“The scope of review under the ‘arbitrary and capricious’ standard is narrow and a court is not to substitute its judgment for that of the agency.”

“[T]he agency must examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made’”
MVMA v. State Farm (U.S. 1982)

“Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.”
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“[W]e find the Commission’s zero-release assumption to be within the bounds of reasoned decision making required by the APA.”

“It is not our task to determine what decision we, as Commissioners, would have reached. Our only task is to determine whether the Commission has considered the relevant factors and articulated a rational connection between the facts found and the choice made.”
“We have already noted that the Commission’s Statement of Consideration detailed several areas of uncertainty and discussed why they were insubstantial for purposes of an individual licensing decision.”
“The ... rule also refers to the staff reports, public documents that contain a more expanded discussion of the uncertainties involved in concluding that long-term storage will have no environmental effects.”
“These staff reports recognize that rigorous verification of long-term risks for waste repositories is not possible, but suggest that data and extrapolation of past experience allow the Commission to identify events that could produce repository failure, estimate the probability of those events, and calculate the resulting consequences.”
“[A] reviewing court must remember that the Commission is making predictions, within its area of special expertise, at the frontiers of science. When examining this kind of scientific determination, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.”
Alaska v. Lubchenco (D.D.C. 2011)

“The most important thing to remember is that even if plaintiffs can poke some holes in the agency’s models, that does not necessarily preclude a conclusion that these models are the best available science. Some degree of predictive error is inherent in the nature of mathematical modeling.”

“While there seems to be a reasonable difference of opinion regarding whether the model accurately predicted concentrations of diazinon, it is not within the purview of this Court to weigh the evidence supporting these extremely divergent scientific opinions and decide which of them is correct.”
Conclusion

Yes, litigation over regulation is itself a risk for agencies.

But the reality is that courts usually defer to agencies.

Key ‘Takeaway’: Act responsibly, be transparent, give reasons.