

Still Muddling Through Space Traffic Management

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Muddling Through

- 1959 article by Charles Lindblom, “The Science of Muddling Through”
- Very influential in the public policy/public administration world
- Tried to resolve the debate between the theoretical purists and the political realists on policy solutions
- Argued that “muddling” (incrementalism) is the most pragmatic way to try and do big policy changes

The Science of “Muddling Through”

By CHARLES E. LINDBLOM

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SUPPOSE an administrator is given responsibility for formulating policy with respect to inflation. He might start by trying to list all related values in order of importance, e.g., full employment, reasonable business profit, protection of a stock market crash. Then all possible policy outcomes could be rated as more or less efficient in attaining a maximum of these values. This would of course require a prodigious inquiry into values held by members of society and an equally prodigious set of calculations on how much of each value is equal to how much of each other value. He could then proceed to outline all possible policy alternatives. In a third step, he would undertake systematic comparison of his multitude of alternatives to determine which attains the greatest amount of values.

In comparing policies, he would take advantage of any theory available that generalized about classes of policies. In considering inflation, for example, he would compare all policies in the light of the theory of prices. Since no alternatives are beyond his investigation, he would consider strict central control and the abolition of all prices and markets on the one hand and elimination of all public controls with reliance completely on the free market on the other, both in the light of whatever theoretical generalizations he could find on such hypothetical economies.

Finally, he would try to make the choice that would in fact maximize his values.

An alternative line of attack would be to set as his principal objective, either explicitly or without conscious thought, the relatively simple goal of keeping prices level. This objective might be compromised or complicated by only a few other goals, such as full em-

► Short courses, books, and articles exhort administrators to make decisions more methodically, but there has been little analysis of the decision-making process now used by public administrators. The usual process is investigated here—and generally defended against proposals for more “scientific” methods.

Decisions of individual administrators, of course, must be integrated with decisions of others to form the mosaic of public policy. This integration of individual decisions has become the major concern of organization theory, and the way individuals make decisions necessarily affects the way those decisions are best meshed with others'. In addition, decision-making method relates to allocation of decision-making responsibility—who should make what decision.

More “scientific” decision-making also is discussed in this issue: “Tools for Decision-Making in Resources Planning.”

ployment. He would in fact disregard most other social values as beyond his present interest, and he would for the moment not even attempt to rank the few values that he regarded as immediately relevant. Were he pressed, he would quickly admit that he was ignoring many related values and many possible important consequences of his policies.

As a second step, he would outline those relatively few policy alternatives that occurred to him. He would then compare them. In comparing his limited number of alternatives, most of them familiar from past controversies, he would not ordinarily find a body of theory precise enough to carry him through a comparison of their respective consequences. Instead he would rely heavily on the record of past experience with small policy steps to predict the consequences of similar steps extended into the future.

Moreover, he would find that the policy alternatives combined objectives or values in different ways. For example, one policy might offer price level stability at the cost of some



US Approach to Space Traffic Management

Obama Administration

- Started interagency discussions on STM in 2010
- Debate over Dept of Commerce (DoC) vs Dept of Transportation (DoT)
- Established baseline definitions & outline, but did not come to a decision (but leaned towards DoT)

Trump Administration

- Halted DoT pilot program, restarted interagency discussion
- Came to consensus on Space Policy Directive 3 (Jun 2018)
- Components largely same as under Obama, but implemented by DoC instead of DoT
- Congress appropriated SSA pilot budget in Dec 2020, but no new authorities

Biden Administration

- Endorsed implementing SPD-3 at DoC, major increase in budget request for FY23
- Office of Space Commerce remains inside NOAA/NESDIS, no new Director announced



Two Ways of Approaching STM

National First (U.S.): Create national regime/framework, then seek agreement on international rules/standards

International First (Europe): Get international agreement on rules/standards first, then implement through national regimes/policy

- Whether you look at the aviation or maritime models, it's clear you need ***both an international agreement and national frameworks***
 - National frameworks alone lead to fragmentation
 - International agreement is meaningless without national implementation and enforcement
- The question is not whether the U.S. or European approach is better, but rather how do we do both things simultaneously?
 - Very far away from international agreement on what the rules are in space (even just on right of way)
 - Many countries lack the national regulatory framework and capacity to implement international standards/rules



Debate over definitions

**Space Traffic
Control?**

**Space Traffic
Management?**

**Space Traffic
Coordination?**

**Space Traffic
Coordination and
Management?**

Questions?

Thanks.

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