Planned adaptation in risk regulation: An initial survey of US environmental, health, and safety regulation

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ABSTRACT

In principle, we want regulatory programs to be based on current realities, as reflected for example in the best knowledge of relevant experts. That would imply that old rules now on the books should be consistent with today's knowledge base, not just what was known when a rule or standard was originally set. This paper reports on a survey of US programs, examining how often existing rules are actually updated in light of better knowledge, and identifies five programs that attempt to make policy routinely adaptive. These programs exhibit what we term Planned Adaptation: they both revise rules when relevant new knowledge appears, and take steps to produce such improved knowledge. While Planned Adaptation is rare, it is used in several nationally prominent programs, including air pollution, airplane safety, and drug safety. Planned Adaptation is a policy tool that deserves more attention.

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1. Introduction

This paper asks how real organizations have coped with advances in knowledge that may affect the soundness of their past policy decisions. A few examples are found that use an interesting policy approach that we term Planned Adaptation as a strategy for making policy under conditions of persistent scientific and other uncertainties.

Much energy has been expended in discussing how to align new government decisions with the best available scientific knowledge. This is because regulatory decisions often involve many scientific and other substantive uncertainties. Analysts and policy officials must in such cases formulate plausible working assumptions about the benefits and risks that a new policy will bring to the public. The reasonableness of those assumptions is often at the heart of public debates over policies, and, as a general matter, unreasonable assumptions should be identified and amended before a final decision is made. In the United States, elaborate legal and administrative safeguards have been put in place to promote the substantive accuracy of such assumptions. In Europe, too, institutional arrangements have been made to promote thorough assessment of relevant science; examples are found in the Impact Assessments required for new regulations considered by the European Union.

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But if the overall public objective is to link policy with factual knowledge, this is only a fleeting victory. Over time, things change. Science evolves, technology advances, and implementation costs migrate, so assumptions that were once reasonable can become much less supportable. When this occurs, the delivered benefits of a policy decision and its actual social costs may fall substantially out of the intended balance. Over time, a policy may come to embody benefits that are unreasonably low or costs that are too high, as reflected in updated knowledge.

Thus, the larger question is whether practical means can be devised to *keep* policy yoked to an evolving knowledge base, once decisions are put on the books.

2. Approach

To address this question, we used an inductive approach, one that focuses on US regulation and that seeks to find practical lessons of the past in delivering policy that can adapt to new realities. Is adaptive policy a realistic possibility?

While such writers as Charles Lindblom, Aaron Wildavsky, and Karl Deutsch have written of policy as an inherently dynamic process, none has focused on the everyday aspects of coupling old policy to new knowledge [1]. More recent treatments have begun to refine conceptual notions of adaptive policy processes [2]. Respecting the reality that reform ideas must be both conceptually sound and administratively practical, our survey asks what actual American programs have evolved with induced-learning features, and what lessons we can learn from those cases.

As detailed below, this exploratory survey turned up a handful of such heuristic cases. We employ the term "Planned Adaptation" to describe their shared features. Our use of the term is reserved for cases where [a] there is a prior commitment to subject an existing policy to *de novo* re-evaluation and [b] systematic effort is made to mobilize new factual information for use when the re-evaluation takes place. Our search field is primarily US Federal regulation with respect to the environment, health, and safety.

In any society, rules are constantly subject to change. Such change often comes as a result of a "reality bites back" failure. A rule fails to prevent some highly visible calamity, or its political opponents undermine its legitimacy, and thus its revision is forced by events. Our interest is in fostering policy adjustment without the ruckus: Can governments bring new knowledge to old policies in a more thoughtful way, and one in which the underlying uncertainties are successively reduced – or at least better characterized – over time?

Our survey of US regulatory experience proceeded in two phases:

- Phase One: Identification of plausible examples.
- Phase Two: Evaluation of candidate cases for relevance.

3. Phase One: Case identification

Our survey began as an investigation into how common it is for regulatory agencies to re-open their books of existing regulations to see if they needed to be adjusted. As we proceeded, however, we found that some programs were using similar methods to ensure agency learning over time – methods using Planned Adaptation. We then sought additional candidate examples of Planned Adaptation across US regulatory programs – mostly in the fields of public health and safety and the environment.

The general idea that Federal agencies should not ignore evolving evidence on the actual effects of their existing rules is one that has actually had surprisingly lively history in the US. As early as 1946, the Administrative Procedures Act laid out an explicit provision allowing interested and affected groups to ask for the amendment of an existing rule, and prohibiting the authorizing Federal agency from declining to consider such requests without explaining why [3]. In 1978, President Carter's Executive Order on regulation required that "agencies shall periodically review their existing regulations," especially when "technology, economic conditions or other factors have changed" [4]. Immediately upon taking office in 1981, President Reagan issued his own order on regulatory reform; it called for agencies to "initiate reviews of currently effective rules" and also gave the Office of Management and Budget the power to designate specific rules for review [5]. Eleven years later, when President George H. W. Bush issued a moratorium on all new Federal regulations, he gave all US agencies 90 days to examine all their existing rules to "weed out unnecessary and burdensome government regulations" [6]. The Clinton Administration too set up a program under which each agency "will periodically review its existing regulations to determine whether any such regulations should be modified" [7]. And later, responding to a Congressional mandate, the Office of Management and Budget issued a public appeal for help in identifying specific rules that needed adjustment. OMB reported in 2002 that the public had named 71 such rules, and that 23 of these were deemed "category 1" suggestions, meaning that the agency that had issued the rule was next required to defend it in writing [8].

The ultimate impact on policy of this decades-long flirtation with the re-assessment of existing regulations is, at best, unremarkable. With one exception, neither Congress nor the four Administrations involved (two of them Republican, two Democratic) even made public an account of the actual results of these ambitious screening plans. It is tempting to conclude that the idea of routine policy adjustment is one that is sweet in the abstract but decidedly unappealing in the application.

That lone exception is the 1992 George H. W. Bush initiative. This is an exception because it left a visible trail. It was not a clear policy success. In fact, economist Murray Weidenbaum, a senior Republican advisor to both Reagan and Bush's regulatory reform efforts, later wrote that "it is difficult to pinpoint specific changes that resulted" from President Bush's ambitious government-wide 90-day canvassing [9]. However, it did lead to a tangible listing of agency actions across the Federal landscape. Each agency