DESIGNING IMPLEMENTATION TO MATCH POLICY SITUATION:
A CONTINGENCY ANALYSIS OF PROGRAMMED AND
ADAPTIVE IMPLEMENTATION

Paul Berman

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The Rand Corporation
Santa Monica, California 90406
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As evidence of the disappointing results of social policies in education, health, welfare, housing, and urban renewal has grown, analysts, policymakers, and citizens alike have begun to identify the problem as ineffective implementation. Two schools of thought and practice have developed in response to the "implementation gap." One view, which we call programmed implementation, assumes that implementation problems can be made tolerable, if not eliminated, by careful and explicit preprogramming of implementation procedures. The other view, which we call adaptive implementation holds that policy execution can be improved by processes that enable initial plans to be adapted to unfolding events and decisions. Although these approaches are not truly opposites, they are strikingly different in point of view and in practice. They diagnose the source of implementation problems differently and offer apparently contrary prescriptions. Moreover, advocates on both sides seem to be throwing down the gauntlet, arguing that their approach is superior or, more usually, that the other approach cannot do the job.

*I am most grateful for the penetrating comments and sharp criticisms of Drs. Gail Bass, Edward Pauly and Peter deLeon. Had I followed their suggestions more closely, this essay's faults might have been lessened.

Various writers on implementation analysis suggest these two approaches, though often not explicitly or with the connotations presented above. Among the essays using a roughly similar distinction to mine are notably Williams (1976b), who distinguishes between "detailed-packaging" and "broad-directional-guide"; Rabinowitz et al (1976) who contrasts "compliance" and "political" approaches; and Leavitt and Webb (1978), whose conceptions of "implementing down and out" and of "implementing up and in" are most parallel to the programmed and adaptive approaches.
Neither approach is new, nor are their supporting arguments unfamiliar. One can hear reverberations of old themes: rational analysis versus muddling through, scientific management versus organization development, top-down compliance versus grass-roots control. This essay will play out variations on these themes in the implementation context of policy implementation. We will not choose sides, however, for the debate itself can distract policymakers and researchers from a fundamental truth of implementation: There is no universally best way to implement policy. Either programmed or adaptive implementation can be effective if applied to the appropriate policy situation, but a mismatch between approach and situation aggravates the very implementation problems these approaches seek to overcome.

This essay characterizes features of policy situations that policymakers could use to choose between programmed and adaptive implementation, or, in the usual policy case, to design an appropriate mix of programmed and adaptive strategies. These features will be rather abstract so as to be relevant to a wide variety of policy contexts. Nonetheless, they should provide the kind of cues that policymakers and their advisors need in designing implementation strategies.

We have a related, if secondary, message for researchers: A context-free theory of implementation is unlikely to produce powerful explanations or accurate predictions. The literature has sought to identify variables that account for the past decade's rather dismal implementation experiences. For example, the ambiguity and lack of clarity in policy objectives, the participation of many actors in decisionmaking during implementation, and the discretion of
implementors have been cited as prominent reasons for implementation problems. Yet, it can be argued, and has been as we shall see, that ambiguity, participation, and discretion do not hurt but rather contribute to effective implementation. Why these inconsistent findings? The effects of ambiguity, participation, and discretion (as well as many other variables) are contingent on their interaction with elements of the policy situation or context. Until the contingent elements in policy situations are identified, we can expect contradictory research findings. In short, researchers need a contingency analysis of implementation. This essay contains elements of such an analysis.

The research aim of developing a contingency analysis is simply the opposite side of the coin of the policy problem of matching implementation to its policy situation. Ambiguity, participation, and discretion represent design variables that policymakers often can control, at least to some extent. More specifically, programmed and adaptive implementation embody choices about these variables, as we shall discuss. Therefore, as we lay the groundwork for suggesting design heuristics—by describing the two approaches to implementation and identifying situational elements that call for one approach rather than the other—we simultaneously will be making a case for a contingency analysis of implementation.

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2 Downs and Mohr (1978) argue similarly in discussing the inconsistent findings of the effects of organizational variables, such as wealth, size, and decentralization, on the adoption of innovations.
PROGRAMMED VERSUS ADAPTIVE IMPLEMENTATION

At the risk of caricaturing the programmed and adaptive approaches, we shall describe each in extreme form as an ideal-type. In practice, these approaches are repertoires of organizational techniques and devices that are drawn on in the course of executing policy. Rather than getting bogged down in details of specific techniques, we will sketch the approaches' general features and, most especially, the point of view peculiar to each approach. Particular implementations often contain elements of both approaches, but generally one theme predominates. This essay will close by considering the design of mixed strategies composed of both approaches. First, however, we will present each approach in a relatively pure form to explore their underlying premises.

Programmed Implementation

The programmed approach calls for "clarity, precision, comprehensiveness...of the preliminary policy or design specifications" (Williams, 1976b, p.281). Such specificity is sought before the final decision on policy alternatives. Once the decision is taken, the programmed implementation procedures are supposed to be followed. Of course, in the complex policy arenas of social service delivery, a series of decisions may have to be made for different levels of organization or government. Each level, however, uses the same model of decision followed by specified implementation procedures.

Let us look in more detail at the programmed approach. Implementation problems are diagnosed as arising from at least three sources--
(1) ambiguity in policy goals resulting in or caused by misunderstanding, confusion, or value conflict; (2) participation of too many actors with overlapping authority; and (3) implementors' resistance, ineffectualness, or inefficiency.

The programmed approach assumes that ambiguity in goals leaves implementors without adequate guidance. Uncoordinated efforts among diverse actors result, with different horses pulling in different directions. Sometimes ambiguity is embedded in legislation that resulted from compromises among competing interest groups, as in the classic case of the passage of the Elementary and Secondary Education Act. Consequently, different agencies at the federal and state level could legitimately weight their priorities toward different goals.

To ameliorate ambiguity, programmed implementation formulates specific, detailed, and presumably consistent objectives. The specification of objectives often is arranged in a nested hierarchy of ends-means, both within administering agencies and, in the case of federal social policy, from one level of government to another. Planning, Programming, and Budgeting Systems (PPBS) represents one systematic way to formulate this goal hierarchy, and Management-by-Objectives (MBO) is perhaps its most complete and explicit statement. Different strategies can be pursued in developing these clear and detailed goals statements. For example, they can be mandated by a top-down order, as we usually imagine the military chain of command and its manual of operations to work. Or, they can evolve from a long process of bargaining at each operational level, as the advocates of MBO suggest.

The proponents of programmed implementation cite a second problem related to ambiguous goals--viz., unclear lines of authority
coupled with an excessive number of actors who have decisionmaking power. The Pressman and Wildavsky study (1973) of an economic development program in Oakland illustrates the "complexity of joint action" with many actors having potential veto power over implementation. Implementation difficulties caused by multiple actors also arise when competing governmental agencies have overlapping responsibilities, the apparent norm in most social service areas (Levine, 1972). In this case, no one may be willing or able to exercise final authority. Consequently, implementors at lower levels can do what they wish. The programmed prescription for anticipating and easing these authority problems takes two familiar and related forms. One is to specify clear lines of authority (with the usual slogan "authority should match responsibility"), and the other is to minimize the number of participants in the policy process.

Whatever problems may be created by unclear goals, cluttered lines of authority, and permissive participation, they exacerbate, in the programmed implementor's diagnosis, the fundamental problems of the resistance, ineffectualness, or inefficiency of low-level implementors.

Low-level implementors, whom we shall call deliverers, are perceived as operating in routinized ways that should be prescribed and circumscribed by Standard Operating Procedures (SOPs). Policy that implies alterations in these routines is seen as subject to noncompliance or more subtle forms of "resistance."3 Programmed implement-

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3 For example, we have observed teachers who were asked to introduce a form of individualized mathematics instruction into their classroom practice. Although they followed the formal requirements of the procedure (test giving, diagnostic charts for each student,
tation deals with deliverer resistance by several means: (1) limiting the discretion that deliverers have in implementation by formulating new and explicit standard operating procedures; (2) monitoring deliverer behavior to make sure that they can be held accountable for the new procedures—it is assumed that sanctions will be applied if they are not; (3) a change in the allocation of incentives to deliverers, particularly extrinsic incentives (e.g., salary, bonuses, and status rewards).

In addition to questions of forestalling resistance, programmed implementation attempts to anticipate, and thus prevent, unwanted actions on the part of implementors. Whether the policy is President Kennedy's determination to control the details of the naval blockage of Cuba (Allison, 1971, p. 128) or an innovative approach to reading in a school, the fear is that deliverers may encounter new situations during implementation; if left to their own devices, they may respond in ways that are ineffective, perhaps counter to the policy. This may occur, aside from deliverer resistance, because they are unaware of relevant knowledge (e.g., they don't know the "big picture") or because they lack the ability to follow a preferred course. These problems give rise to the formulation of extended contingency plans that become incorporated into SOPs.

Finally, programmed implementors believe deliverers tend to implement new policy inefficiently. To compensate for such inefficiency, they attempt to develop uniform practices that incorporate...
high-quality technical specifications and can be followed by deliverers. The Office of Education, for example, has been disseminating to school districts packages that lay out the procedures for implementing innovations successfully demonstrated in other districts. Proponents of packages argue that a school district adopting a packaged innovation can avoid "reinventing the wheel" and skip many of the errors in the usual trial-and-error procedure of implementing a new educational practice. In short, efficiency is gained by prescribing the steps in implementation and thus limiting the deliverers' discretion.

In summary, programmed implementation desires to produce a well-specified, perhaps completely specified, plan that has clear and detailed objectives, has clean lines of responsibility and limited participation in policymaking, anticipates various contingencies, and requires minimum discretion for all levels of implementors, particularly the deliverer. Put in its most extreme terms, the ideal is to make an initial decision on policy that includes an automatically executed implementation program. Evaluation is summative; the aim is to measure the fidelity with which the outcome of a policy has met prespecified, hopefully quantifiable goals. Aside from minor adjustments to keep the program on track, policymakers would have no need to deal with implementation once they had chosen. The aim is, in short, to make the relationship between policy decision and output "implementation proof."

Adaptive Implementation

Adaptive implementation offers a different diagnosis and prescription: implementation problems arise because of the overspecification and rigidity of goals, the failure to engage relevant actors
in decisionmaking, and the excessive control of deliverers.

The ideal of adaptive implementation is the establishment of a process that allows policy to be modified, specified, and revised—in a word, adapted—according to the unfolding interaction of the policy with its institutional setting. Its outcomes are neither automatic nor assured, and it looks more like a disorderly learning process than a predictable procedure.

In contrast to programmed implementation's highly specified plans, adaptive implementation seeks only general, perhaps vague or even tacit, agreement on goals. If not goals, then agreement on means will suffice. As Lindblom (1959) has persuasively argued, people having different values may be able to agree on means or on loose objectives, not detailed goals. Moreover, ambiguity in goals allows partisans to agree on adjustments in policy, which adaptive implementors conceive of as a stream of ends-means decisions. Thus, adaptive implementation is concerned with establishing acceptable rules of the game that would allow multiple participants to bargain and compromise during the course of implementation.

Adaptive implementation also calls for the active participation of relevant actors which is seen to afford two benefits. First, it enhances problem-solving during implementation, because diverse participants are assumed to bring more information and more points of view to bear, thereby ameliorating serious problems of "group think," high-level management bias, or lack of communication. Indeed, Lindblom (1965) detects an invisible "intelligence" of participative processes that produces better outcomes in the long run. Second,
it is maintained on the basis of organizational and management literature that when people participate, they are motivated to do a good job, perhaps because of a sense of ownership. Participation thus helps erode resistance to change.

Adaptive implementation proponents believe in considerable discretion for deliverers. Part of this belief stems from a reaction to the programmed approach. For example, Lipsky (1971) argues that excessive control—by way of programmed guidelines, SOPs, etc.—can have counterproductive effects on implementation: deliverers formulate coping strategies that subvert policy goals. Or, as Berman and McLaughlin (1978) discovered in education, excessive control can lead deliverers to follow guidelines only symbolically. In either event, adaptive implementation assumes that policy can be implemented more effectively if deliverers have the freedom (in terms of resources, legitimacy, and support from higher levels) to adjust policy to the exigencies of local conditions. Moreover, it is believed that deliverers may need to "learn-by-doing," rather than mechanically follow a "how-to-do-it" procedure, in order to implement policy more effectively. By designing implementation strategies that provide and support discretion for deliverers to learn as they implement, the prospects for a successful policy outcome would be enhanced.

Evaluation plays a different role in adaptive implementation than in programmed implementation. In the latter, evaluation is used

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4 The literature on participation is quite extensive, but far from conclusive about the above hypothesis. For a recent review that covers the literature in a variety of disciplines, see Dachler and Wilpert, 1978.

5 Evaluation research has evolved considerably since its early formulation in the 1950s and 1960s (Wholey et al., 1970; Weiss,
primarily to monitor deliverers so as to check on the fidelity of implementation: are prescribed standard operating procedures being followed? It is also used to check on hopefully quantifiable outcomes so as to compare them with expected, explicitly laid-out objectives. If outcomes fall below expectations, evaluation can be used in two ways. One, if it is found that deliverers have deviated from the program, they can be held "accountable" and sanctions (or perhaps a change in resource allocation or in incentives) can be employed. In the ideal, program designers would have decided on these compliance procedures before implementation. Two, if deliverers do adhere to the guidelines, and objectives nonetheless are not met, then the guidelines can be modified incrementally.

Whatever adjustments might be made in the program, it should be emphasized, would be incremental, not major. Programmed implementation assumes that the basic policy decision is essentially correct. If considerable evaluation evidence accumulates to the contrary, then the policy may be dropped instead of revised. In short, the policy would be judged to have failed.

Evaluation is ideally used in adaptive implementation to further adaptation, not fidelity to an initial decision and plan of operations. It is anticipated that the initial plan will mutate at the level of a local implementing unit because of adjustment to the idiosyncratic conditions of each implementing unit and its need

for learning-by-doing. Consequently, evaluation would be asked to provide information so that local adjustment and learning can take place. The feedback data for higher-level decisionmakers would be about both the adaptive process and outcomes. Insofar as adaptation is not proving workable, it is adjusted so that the process itself is thought to evolve (Nystrom et al., 1976). Moreover, policy is not seen as set in concrete; adaptive implementation is viewed as a means for attaining specificity. Thus, evaluation evidence about implementation would be used to, in effect, decide the specifics of policy itself. Policy decisionmaking and implementation thus form a seamless web with evaluation providing interior glue.

**Situational Parameters**

It is altogether too easy to attack either of these paradigms as strawmen that can be readily picked to pieces. Indeed, each has serious problems, particularly when applied to the wrong policy situation. Both nonetheless continue to be used by policymakers because they can reduce implementation problems when applied to the right situation. What kinds of policy situations are more suitable for one form of implementation compared to the other?

To simplify the analysis—a necessary task for policymakers and analysts alike—we propose five parameters that capture critically different contingencies in the policy situation. These parameters,

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6When more than one local implementing unit is involved, each unit will mutate the policy so that comparable fidelity assessments become meaningless. To use the language of evaluators, one can no longer specify the treatment so that judging the value of a policy in the usual quasi-experimental paradigm does not make sense.
which are listed in the accompanying chart, represent aspects of the
nature of the policy, the policy's institutional setting or the in-
teraction between the two. These parameters are abstract, of course,
to encompass a wide spectrum of policies, but presumably they could
be specified in detail for concrete situations. Even in their ab-
stract form, they suggest key elements in the situation that policy-
makers might use in selecting an appropriate approach to implemen-
tation.

To decide on an implementation approach, the values on all five
parameters need to be considered simultaneously. However, for the
sake of exposition, we will discuss the parameters seriatim. We will
consider each parameter to have dichotomous values, which represent
opposite ends of a spectrum. We contend that if a policy situation
were characterized by all the values in the left column, then a pro-
grammed approach is indicated; if a policy situation were charac-
terized by any right column values, adaptive strategies should be incor-
porated into implementation.7

Specifically, if all the following conditions in the policy
situation hold, then a programmed approach seems appropriate:

(1) The scope of change, implied by the policy, in the behavior
of members of the implementing system is marginal;

(2) the validity of the policy's technology (or theory) is rela-
tively certain;

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7 Although the parameters are conceptually distinct, their values
may be causally connected—e.g., major change may be more likely to be
conflictual. Yet the categories are distinct enough and our theory
so limited that this approach is warranted.
MATCHING IMPLEMENTATION TO SITUATION

<table>
<thead>
<tr>
<th>Contingent Characteristics of Situation</th>
<th>Implementation Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope of Change</td>
<td>Programmed</td>
</tr>
<tr>
<td>Certainty of Technology or Theory</td>
<td>minor</td>
</tr>
<tr>
<td>Conflict over Policy's Goals and Means</td>
<td>certain</td>
</tr>
<tr>
<td>within risk</td>
<td>low conflict</td>
</tr>
<tr>
<td>Structure of Institutional Setting</td>
<td>tightly coupled</td>
</tr>
<tr>
<td>Stability of Environment</td>
<td>stable</td>
</tr>
</tbody>
</table>
(3) members of the implementing system generally agree on the policy's goals and means;

(4) the coordination structure of the implementing system is tightly coupled;

(5) the implementing system's environment is relatively stable.

However, if any of these conditions are replaced by those in the right-hand column, elements of adaptive implementation strategies are appropriate. The remainder of this section briefly discusses each condition.

It seems reasonable to design implementation strategies that reflect the nature of the policy itself, but the dimensions to focus on are not obvious. For example, although a policy's specific substance may ultimately be critical to its results, the policy's substance is unlikely to imply a unique or a single best implementation strategy. Thus, in analyzing the implementation of educational innovations, Berman and Pauly (1975) found that some innovative projects were implemented differently in different school districts, and that the effectiveness of their implementation was not significantly related to their substance. Implementation effectiveness did depend, however, on implementation strategies, elements of the institutional setting, and the policy characteristic that we call the scope of change contemplated by the policy.

Scope of Change

By a policy's scope of change, we mean the kind and amount of change in the standard behavior of members of the implementing system
implied by that policy. Small changes in organizational behavior might involve many actors, as in the change introduced in taxation guidelines studied by Surrey (1976) or in the closing of municipal garbage incinerators described by Mechling (1978). And, conversely, major change in behavior might be required of few people, as in open education in a school or in bail reform in a court system (Friedman, 1976). Some writers on implementation have discussed the importance of the scope of change (e.g., Van Meter and Van Horn, 1975), but often in far different ways than used here. For example, a common hypothesis, derived presumably from common sense, holds that the smaller the scope of change, the more likely or effective is implementation. Unfortunately, two problems challenge the value of this hypothesis. First, it is often false! Berman and McLaughlin (1977, 1978) found almost an opposite result for educational innovations. Projects demanding little change in teacher behavior were likely to be implemented in a pro forma fashion, whereas ambitious change efforts that engaged the sense of professionalism among teachers could be made to work with appropriate implementation strategies. In short, little ventured, nothing gained.

Second, the hypothesis is the product of a flawed conceptual paradigm. In the usual scientific paradigm, scope of change is an independent variable with an hypothesized effect on a dependent

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8 Of course, a precise estimate of the scope of change would be difficult to generate and unlikely to be reliable. A gross estimate is more feasible and likely to be used as a heuristic device by implementation designers.

9 Policies can obviously involve a mix of minor and major change in which case we would be inclined to consider it a major change. The situation can be more complicated, of course, with one level of the implementing system required to make minor changes and other levels major change (e.g., the shift of federal funds from federal to state agencies might cause major change in the state agencies, but have only minor affect on local agencies). We deal with these issues subsequently.
variable (e.g., implementation effectiveness or change in outputs). This simple relationship may not be a fruitful way to cast implementation issues because the policy context has a first order effect (cf. Simon and Newell, 1972). The scope of change of a policy is a given condition (or parameter) of the situation for the designer of an implementation strategy. The type of statement most relevant to the design issue is of a conditional (or contingent) form: given the scope of change (as well as other elements of the situation) implied by a policy, implementation strategy X is more likely to lead to effective implementation than strategy Y.\textsuperscript{10} This essay is concerned with these contingent hypotheses.

In particular, we suspect, all other things being equal, policy involving minor change can be more effectively or more efficiently implemented using a programmed approach. The reasons seem clear enough. Implementation can be programmed along existing lines of authority and can consist of modification to established standard operating procedures.

Where policy involves major change, however, existing routines have to be redesigned, replaced, or sidestepped. In this situation, programmed procedures can be expected to generate the host of problems discussed earlier, particularly resistance to change and the lack of

\textsuperscript{10}It often makes sense to implement a policy with a major scope of change in small steps. In this strategic sense, the scope of change would be a design variable, rather than a given parameter. The last section raises this type of meta-implementation issue.
learning-by-doing by deliverers. Adaptive implementation, in contrast, would try to ameliorate resistance to change by extensive participation in the decision process so that implementors help develop new SOPs. It would deal with the need for learning-by-doing by giving deliverers discretion, as well as not holding them accountable for strict adherence to an initial plan.

Uncertainty of Technology or Theory

A second policy characteristic that defines a design condition for implementation strategies is the degree of uncertainty about the validity of the technology or theory underlying policy. As Pressman and Wildavsky (1973) suggest, policy assumes a theory relating policy choice to outcomes. The theory may consist of or be based on a specific technology; or it might be an organizational procedure or technique. The outcome of a policy thus depends on both the policy's technological (or theoretical) validity and its implementation. Poor outcomes can result from either valid technology poorly implemented, or a well-executed policy based on invalid theory (Schultz and Slevin, 1975; Weiss, 1972; Williams, 1976; Berman, 1978). Furthermore, policy can be based on technology (or theory) about which considerable uncertainty exists or on a technology that is "well-in-hand," as in the case of a nuclear carrier program or new agricultural practices (Glennan et al., 1978). The latter case of relatively certain technologies seems appropriate for a programmed implementation strategy. Designers can assume that all they need do is obtain high fidelity in implementation to produce effective outcomes. Were they uncertain about the

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11 By certainty, we mean certainty within risk, as usually defined by decision theorists. March and Simon's (1958) discussion of risk and uncertainty seems particularly relevant to implementation strategies.
policy's technological validity, they would also have to design evaluation to sort out implementation from technical validity.\textsuperscript{12}

The validity of a policy's technology can be profoundly uncertain. Banfield (1976) for example, describes uncertainty attending the Model Cities Program:

Even if [political] constraints had not existed, the new program would have been the product of (at best) the "educated guesses" of persons with experience and judgment but without any sort of technical expertise on the basis of which they could answer the really important questions. That the "social and psychological" approach would achieve worthwhile results, for example, was more conjecture. No "facts" or "tested theories" existed from which a remedy for any of the cities would have been derived. (p.216).

This type of uncertainty is typical of new federal programs in social services, as illustrated by even a passing mention of such programs as the Comprehensive Employment Training Act (Mirengoff and Rindler, 1970; Hargrove, 1975), the Economic Development Act (Pressman and Wildavsky, 1973), or Title I of the Elementary and Secondary Education Act (Cohen, 1970).

When the validity of a policy's theory is uncertain, the application of a programmed strategy can lead to severe implementation problems created, ironically, by the strategy itself. McGowan's (1976) description, for example, of the implementation of NIE's Experimental Educational Project, which had a highly uncertain technology based on getting youth into work sites, shows how the application of

\textsuperscript{12}Recent writings on evaluation are well aware of this problem (Weiss, 1977). The literature on implementation has not yet treated uncertainty in any systematic fashion, though Mechling (1978) explicitly incorporates uncertainty into his framework and Rabinowitz et al., (1976) implicitly consider uncertainty as embedded in their policy "issues". The early stage of systematic analysis can be gleaned from the work of March and associates. For example, see March and Olsen, 1975 and Weiner, 1976.
rational management devices—impact evaluation and systematic planning, especially—orchestrated by guidelines and rules—created new problems: serious communication barriers arose; the developers became divided from the managers in Washington; conflict arose within the central program office. As a result, misunderstandings and misinformation grew, energy in the EEP system was systematically eroded, and central guidance failed to improve. (p.441).

Besides causing problems, programmed implementation fails to assist deliverers in reducing technological uncertainty. A major element of technological uncertainty can arise from the interaction of the policy with peculiarities of the implementing system and its context. By constraining deliverers' ability to adjust to these unique and unpredictable elements, programmed implementation restricts opportunities to find unique solutions to technical problems. In contrast, adaptive implementation seeks to provide deliverers the discretion, and hopefully the necessary bureaucratic support, to allow the technology to evolve in accordance with the particularities of the implementing system and its context.

**Conflict Over Policy Goals**

The third situational parameter, the degree of conflict about policy goals and means, reflects both the policy's substance and its setting. Some policies seem to involve relative consensus or at least, a low level of conflict. The space program (Schulman, 1975), some (certainly not all) mobilization programs during wartime or crisis situations, and New York's garbage containerization program (Mechling, 1978) provide examples in which the main actors in the
implementing system basically agreed with the policy's aims and means. \footnote{Although policies having a major scope of change frequently engender considerable disagreement, the above examples suggest that many exceptions to this "rule" exist (Van Meter and Van Horn, 1975).}

At a more micro-level, many educational innovations start out with, or develop before implementation, support or at least acceptance from teachers. \footnote{Berman and McLaughlin (1978) argue that there is a stage distinguishable from and partly prior to implementation, which they call mobilization. They offer the hypothesis that active agreement on adopting an innovation is less important than and may not be necessary to the development of agreement among deliverers on implementing the innovation. This latter is critical to successful implementation, and often is generated during mobilization.}

And the usually neglected area of changes in regulations regarding tax laws, for example, can involve general cooperation among relevant actors, including legislators, interest groups, and guideline writers (Surrey, 1976). In these situations, programmed implementation seems feasible and may be desirable.

A programmed approach in conflictual situations, however, may backfire. The Elementary and Secondary Act of 1965 is a prime example from an exceedingly long list of social programs that were born as much from conflict as consensus. The Office of Education's attempts to implement Title I of the Act by a programmed approach were met, particularly in the early years, by resistance, disregard, and finally, by a pro forma compliance that fell far short of reformers' goals (Murphy, 1971; McLaughlin, 1976). An adaptive approach deals
with conflictual situations by assuming that implementation requires bargaining among the interested parties. Rather than attempting to program implementation, often by carrot and stick tactics that over-ride disagreements, means for "negotiating" an acceptable compromise are sought. This negotiation, often tacit and not necessary controlled by the policy's initiator, occurs during implementation and can leave the policy's outcome far different from its original intent. Der-thick (1972) captures the essence of this adaptive approach in her study New Towns-In Town:

Federal programs often "work" at the local level— that is, they survive and make progress toward federal goals— because in the usual case an adjustment between the federal program and local interests is worked out. ... In the process of adjustment... programs [become] neither "federal" nor "local," but a blend of the two. (p.98).

Institutional Setting

The fourth parameter concerns the structure of a policy's institutional setting, or what Rabinowitz, Pressman, and Rein (1976) call a policy's arena. Institutional settings differ dramatically, necessitating some clarifying distinctions. One type of setting is the formal organization (schools, health care centers, governmental agencies, legislative bodies, and the like); we use the term micro-implementation to refer to implementation within such organizations.

15 Many studies of implementation describe these bargaining situations. Analysts are beginning to structure implementation in terms of bargaining in conflictual situations (e.g., Bardach, 1977; Ingram, 1977). However, Elmore (1978) reminds us that a bargaining perspective is only one of many ways to conceptualize implementation.
The setting for national policy encompasses such organizations and much more. It usually consists of a collection of many diverse governments, bureaucracies, courts, public and private interest groups, local delivery systems, clients, and individual actors whose complex interactions are extraordinarily difficult to document in any but anecdotal ways. The interactions in arenas such as criminal justice, health care, urban development, and education may be fluid, chaotic, and conflictual, but they nonetheless follow tacit operating rules of the game, established roles, and routinized procedures. There often are, in short, enduring patterns of behavior in national policy settings, which we call the setting's micro-structure (Berman, 1978).

Although it is desirable to design implementation strategies that reflect the policy setting's macro and micro structures, the dimensions that should be tapped are difficult to identify in generalizable terms. One broad concept that may be fruitful for heuristic purposes is the degree of loose coupling in micro structures. Loose coupling is a composite term connoting how a system is differentiated into operating units (i.e., its "division of labor"), and how the units are coordinated (March and Simon, 1958; Glassman, 1973; Weick, 1976). In a tightly coupled setting, the established pattern is high coordination among the various units, as in the case of military organizations, many effective production firms in relatively stable

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16 Rabinowitz et al. (1976) use a related concept called the settledness or openness of a policy arena. Organization theory uses a variety of concepts, but most are not relevant to macro-structure.
environments, and many public bureaucracies. Programmed implementation strategies seem suited to a tightly coupled system because an established pattern of compliance exists.

But, when applied to a loosely coupled setting, a programmed approach can lead to the all too familiar problem of symbolic compliance or cooptation. Cases of mere paper compliance have been documented, for example, in the implementation of ESEA Title V, where the federal government funded states to strengthen the state departments of education (Murphy, 1974), and also in ESEA, Title I, where the federal government has little real control over the way local school districts actually spend Title I money for disadvantaged students (McLaughlin, 1976).

The attempt to develop precise and uniform statutes, clarify objectives, and limit participation by procedural means often simply proves ineffective in such loosely coupled situations as regulating Health Maintenance Organizations (Altman and Sopolsky, 1976) where the autonomy of local organizations is well established. Derthick (1970), commenting on the use of federal grants in public assistance, states the heart of the matter: "The more specific the language of federal

17A major hypothesis of contingency theory for firms is that effective organizations in a stable environment develop high levels of integration (Lawrence and Lorsch, 1969; Lorsch, 1976). Large size may tend to increase the degree of looseness of a macro or micro organization, but the relationship may not be strong. For example, small organizations such as school districts or even individual schools are notoriously loosely coupled, whereas large military organizations are relatively tightly coupled. Similarly, the degree of tight coupling is not the same as such organization concepts as the degree of hierarchy or of centralization. For example, according to Kaufman (1960), the U.S. Forest Service is highly coordinated despite its decentralization.

18The implementation problems caused by attempting to achieve top-down compliance are not unique to federal-state-local relations. School districts, for example, face similar problems in the top-down implementation of locally initiated alternative programs, as Bass (1978) documents.
requirements, the lower the federal capacity to adapt to state peculiarities and the greater the danger that the limitations of federal capacity to compel conformance may be revealed" p.469). The critical misconception is, thus, the fanciful belief that the "tightness" of programmed implementation can compensate for and override a loosely coupled structure.

The adaptive approach offers several advantages in these loosely coupled situations. Aside from its tolerance of bargaining and adjustments over time, adaptive implementation avoids strict adherence to uniform regulations. It expects and encourages each local delivery unit (school district, HMO, local government, court, and the like) to adapt to central policy in ways suitable to local conditions. Moreover, it seeks local participation in policy development, which despite the risk of extra time, additional costs, and rising tempers, may help coordinate implementation through the mutual adjustment of otherwise partisan and uncoordinated actors (Elmore, 1978). The adaptive approach, in short, acknowledges and seeks to work within the constraints of loose coupling.

**Stability of Environment**

The final parameters, the stability of the implementing system's environment, has not received the attention it deserves from researchers.\(^{19}\) By environment, we mean forces or conditions outside the implementing

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\(^{19}\)Organization theorists now consider the organization's environment to be a major factor in understanding organizational behavior (Emery and Trist, 1965; Terreberry, 1968; Jurkovich, 1974). It is a major component of contingency theory (Lawrence and Lorsch, 1969; Lorsch, 1976; Duncan, 1973).
system that affect the system but are not affected, in major ways, by it. The story of the failure of the New Towns-In Town program provides a macro-level example of an unstable environment. The program depended heavily on the personal commitment of President Johnson. As he became preoccupied with Vietnam, finally choosing not to seek reelection, his interest in the program waned and his support was lacking at critical junctures of the program's implementation (Derthick, 1972). At the micro level, many social service organizations must respond to exogeneous events—e.g., court orders; changes in governmental regulations that are presumably unrelated to the policy being implemented, but nonetheless affect it; new state laws like California's Proposition 13; the firing of a program advocate or opponent; a school teachers' strike. Such unforeseen events may merely cause a temporary disturbance for the overall operations of a local organization, but may profoundly affect the implementation of particular policies.

It is hard for a programmed approach to build in the contingency plans needed to cope with environmental changes. For example, the Office of Education's Right-to-Read Program provided funds for school districts to adopt a reading project that contained step-by-step procedures and schedules for its management within schools. We saw several of these projects fail because teacher strikes or a project director's dismissal disrupted the prescribed schedules. Teachers relied so much on the preprogrammed plans that they simply could not adapt to unforeseen events (Berman and McLaughlin, 1978). In short, all other things being equal, a programmed approach seems suitable to stable environments, and an adaptive strategy seems appropriate for unstable conditions.
TOWARD DESIGNING MIXED IMPLEMENTATION STRATEGIES

To summarize, we believe the effective execution of policy requires implementation strategies that match the policy situation, especially the policy's scope of change, its degree of technical certainty, the extent of agreement over the policy, the coordination structure of the implementing system, and the stability of environmental conditions. The strategic approaches, programmed and adaptive implementation, are really repertoires of techniques and points of view about how policy should be executed and, more specifically about how to treat such variables as clarity, participation and discretion. This essay has argued at length that a programmed approach applied to a basically adaptive situation exacerbates, rather than solves, implementation problems. Conversely, an adaptive approach in a programmed situation can be inefficient and ineffective.

Designers of implementation strategies are likely to face situations requiring a combination of programmed and adaptive implementation. For example, composite strategies would seem appropriate when situational parameters are mixed, when multiple levels of government (or operating units) are involved, and when different phases of implementation have different requirements. While it is beyond the scope of this essay to specify how strategies should be mixed, we believe this essay's contingency framework provides a guide for exploring this unchartered territory.


