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A DESIGN PERSPECTIVE ON POLICY IMPLEMENTATION:
THE FALLACIES OF MISPLACED PRESCRIPTION

Implementation has become a social science concept which, by becoming so popular and being used so often, has lost any clarity and at times appears to lose all meaning. After the initial Pressman and Wildavsky (1973) discussion, the word "implementation" has been used to describe a huge number of policy decisions. Even more importantly for our undertaking in this paper, it has been used to try to explain the success or failure of a number of policy interventions, and even has been proposed as a means of understanding political systems taken more broadly (Hjern & Hull, 1982). There is a growing wave of analysts who state, either implicitly or explicitly, that if implementation is understood and is successfully designed then the policy will be a success.

There may well be logical and empirical quibbles with the belief that implementation determines policy. However, we wish to raise a more fundamental point concerning the implementation literature. As we will amplify later, the logic of implementation has been extended to say that policy formulation should be oriented around implementation; we should do what we know how to implement well. In adopting this stance, the literature conflates empirical and normative statements, and implicitly if not explicitly argues that ease of implementation is the best criterion for judging "good policy." We believe that such a stance constitutes a serious misdirection of the policy sciences.

Our argument, stated simply, is that the concentration on implementation has added little to our theoretical understanding of policymaking beyond the fundamental idea that implementation cannot be taken for granted in a complex policymaking environment. Further, it has normative implications for the conduct of policy analysis which may be highly undesirable. The structure of our argument is built on the contrast between the approach to policymaking implicit in a concentration on implementation and that involved in a more explicit emphasis on policy design. Based on this contrast, we will emphasize a general approach to the design of both policy instruments and their implementation structures which can subsume most implementation analysis. Such an approach will stress a more appropriate concern with the characteristics of policy options and instruments inherent in a design approach (Dryzek, 1983; Linder & Peters, 1984). Our purpose here is not so much to attack and attempt to supplant the implementation focus as it is to build on its insights to develop a more positive approach to policymaking.

Implementation studies have been useful in alerting the unwary to difficulties involved in making complex policy systems function in the manner desired, but they must develop beyond that to make more constructive statements about the prospective design of implementation systems and the linkage of policy goals to policy instruments. Unfortunately, rather than attacking that problem directly, much of the literature seemingly has tacitly accepted the proposition that the outcome of policymaking is determined

at the lowest, "street level" in public organizations and have almost con-
verted that essentially *descriptive* point into a normative stance.

In addition to distinguishing between descriptive and prescriptive state-
ments, we must also distinguish analytic statements from descriptions of
the policymaking process. Our concern with policy design may imply, at
least to some readers, a more integrated and rationalistic political system
than the one with which we are most familiar. This is too restrictive a
view of design. The incremental nature of most policymaking should nei-
ther impede efforts to bring systematic reasoning to bear on policy formu-
lation nor deter analysts from attempting to understand better the charac-
teristics of public policies and the means for improving their performance.
Most implementation research has taken both policy and the political system
as givens. We are assuming that the political system is a given, but that
policy can be better designed to meet conditions prevailing in that political
system. Unlike some implementation literature, however, we do not regard
political feasibility as the only, or perhaps even the most important, cri-
terion when considering policy. Feasibility is important but should not
drive the selection of policy to the extent implied by students of implemen-
tation. There are other political, economic and ethical criteria which must
be considered along with feasibility when designing public policies.

IMPLEMENTATION: THE LITERATURE

As noted, there is now a very large body of literature which can be
described as implementation studies. This literature can be divided into
two very broad groups, which we label "The Horrors of War" and "The
Search for Theory," with the second and more important of those contain-
ing four major theoretical views of implementation.

The Horrors of War

The first group of studies can be termed somewhat facetiously the "hor-
rors of war" approach to implementation, or as Rein (1983) termed it, the
"nothing works" approach. The title of this section is intended to convey
the tendency of this body of writing to describe the numerous barriers to
effective implementation. A less fanciful characterization of this work is as
"the search for perfect administration" (Hogwood & Gunn, 1984; Hood,
1976). Most of this work has involved essentially a cataloging approach to
the barriers to perfect administration, describing them and (in some in-
stances) analyzing their characteristics, but really doing little else to aid
in the development of effective policymaking systems.

This approach to implementation began long before the use of the term
came into vogue. Much traditional literature on public administration has
something of this about it. The development of the "proverbs of adminis-
tration" (Simon, 1947) was the result of efforts to understand why organi-
zations did not function as effectively as they might and, unlike other re-
cent literature, to propose solutions for those real or perceived problems.

The value of the "horrors of war" approach to implementation is demon-
strated by Chris Hood's *The Limits of Administration* (1976). This is an
excellent analysis of why traditionally organized hierarchical public organi-
zations may not function effectively. Hood develops an analytic model of
"perfect administration" and discusses a set of categories describing the
problems preventing perfect administration from occurring, and then

proceeds to analyze the dynamics of administrative failure. Although the term "implementation" was used rarely in this book, it is an extremely perceptive description of the problems of putting public programs into effect.

Unfortunately, not all of the literature with a "horrors of war" orientation to implementation is as useful as Hood. The large majority of this literature does little more than list things which can go wrong. There is little or no attempt to develop any dynamic model of the policymaking process which could explain such failures in policymaking more generally, or to provide any real guidance about amelioration of the problems.

What this approach does, however, is to imply (if not always explicitly state) that the majority of failures in the policy process are the results of failures in administration. It appears to assume that if we could only find means to coerce bureaucrats and the private organizations charged with implementing public programs to do as they should then our policymaking problems would be solved. Also, a great deal of this literature does not make the differentiation between failures of implementation and other failures in making public policy (Sieber, 1981; Hogwood & Peters, 1985). Some programs may be implemented perfectly and still be failures, or perhaps even have results opposite of those intended. Thus, placing all our emphasis on failures of implementation may direct attention away from aspects of policymaking which are at once more important and actually easier to correct. It is much simpler to remedy design failures in public programs before they are put into the field than to alter the behavior of organizations and individuals after the program has been initiated. Interestingly, then, a field of study which began with an interest in pointing out the political realities which faced the naive has itself seemingly done little broad thinking about the manner in which the political system functions, and has tended to concentrate its attention on the most difficult parts of policymaking to change. As we will point out, this seemingly has led to an acceptance of their fate.

It would be worthwhile at this point to discuss three alternative types of failure which any policy may encounter along its path to fruition. The first, as we have been discussing is implementation failure. This occurs when a program or policy which, in other respects, is quite reasonable and potentially effective is sabotaged during implementation. Such sabotage may be intentional or accidental, but the ultimate outcome is that what was promulgated into law did not go into effect because of the *process by which it was implemented or the resistance of individuals or groups which were charged with its implementation.* This may be the least common cause of the policy failure.

A second cause of failure is *policy design,* or the failure of those making policy to formulate a program which had any possibility of being successful. Some programs are simply "crippled at birth" (Hogwood & Peters, 1985) and the best public bureaucracies in the world would have no chance of making them successful. These design failures may be the result of excessive ambition (e.g., some antipoverty legislation in the United States) or the result of misunderstanding of the nature of the problem (e.g., some anticrime legislation), but for whatever reason the solutions chosen simply do not correspond with the problems ostensibly being addressed.

Finally, there can be *policy failures* in which a program may, or may not, achieve its goals, but creates so many negative side effects that the cure may be worse than the disease (Sieber, 1981). For example, some

welfare programs may achieve their stated goals of making cash payments
to certain classes of individuals, but the restrictions upon eligibility may
have very negative effects upon other social values, such as family struc-
ture. In this case, even if the policy *per se* were to be considered a suc-
cess, and it was successfully implemented, the total social impact of the
policy may be negative. If we look at interactions of any program with an
array of other programs, then the number of policy failures may be in-
creased.

The general point to be made is that implementation is but one reason
why policies do not succeed, and to place all of our scholarly emphasis on
that one cause is to misunderstand the problem. As Mayntz (1983, p. 124)
has written:

> To a certain extent it is a methodological requirement of imple-
> mentation research to treat the programme as a given in order to
> have a baseline for defining what perfect or faulty administration
> consists of in the particular case. But this methodological de-
> vice can surreptitiously become an implicit assumption, i.e. that
> all is well if only the programme gets implemented as designed.
> Implementation research itself has shown that such an assumption
> is manifestly false in many cases. While it remains true that
> poor implementation can ruin the best of policies, it is also true
> that perfect implementation does not assure realisation of policy
> goals if the programme takes the wrong approach.

The Search for Theory: The Four Major Views

Providing catalogs of implementation failures and barriers to perfect ad-
ministration is useful, but does not carry the development of useful theory
about policymaking very far. Rather, more explicit attempts at under-
standing of the dynamics of implementation must be made, and these con-
stitute the second broad category of the implementation literature. The
work which has been conducted in this area can be broadly classified into
"top down" and "bottom up" approaches. The "top down" perspective on
implementation views the problem from the vantage point of a manager or a
politician who wishes to see some particular action occur. As in the "per-
fect administration" approach, this approach to some extent is oriented to-
ward barriers to effective management. The "bottom up" approach takes
quite a different perspective, arguing for the importance of the lowest
echelons of the organization in defining the true meaning of public poli-
cies. Rather than being interested in command and control, the "bottom
up" perspective is concerned with the bargaining necessary to have a poli-
cy implemented, and the resulting changes which may occur within the pol-
icy. We will now proceed to briefly discuss each of these approaches, al-
though giving much greater emphasis to the bottom up approach. We will
also discuss several other theoretical approaches which, although not so
pervasive, do provide additional insights into the implementation process.

The Top Down Perspective. As noted, the "top down" perspective on
implementation studies adopts the view of the manager or senior official
attempting to enforce a policy (Dunsire, 1978). Rather than merely pro-
viding a catalog, as in the search for perfect administration, this litera-
ture does attempt to aid the manager faced with that task (Rosenthal,
1982). As a consequence, much of this literature is managerially oriented,

seeking to improve the structure of organizations or the compliance of organizational members, in order to more closely approximate perfect administration. The development of managerial tools such as PERT, or organizational devices such as organizational development, are all directed at improving the functioning of public organizations and making policy on the street as closely approximate policy in the central office as possible.

The Bottom Up Perspective. One of the two major theoretical approaches to implementation has been termed "backward mapping," or the "bottom up" approach. This approach to implementation studies may have the greatest potential detrimental effect on the development of policy studies. The fundamental point of this approach to implementation is that the most important activity in policy determination takes place at the lowest level of the organization. Rather than hierarchical control or control by law and rules, policy is determined by the bargaining (explicit or implicit) between members of the organization and their clients. Therefore, programs must be compatible with the wishes and desires, or at least the behavioral patterns, of those lower echelon officials. In this approach, however, that compatibility is almost certain because of the assumption that those lower echelons will eventually mold policy to suit themselves.

It is certainly important to understand that "street level bureaucrats" have great influence over policies and programs (Lipsky, 1980; Yates, 1977). We have argued so elsewhere (Peters, 1984) and it is a worthwhile caution for those who develop public programs. However, this useful tonic should not be taken as the sole cure for what ails public policymaking. There are two quite explicit problems in using backward mapping or the bottom up perspective as the organizing rule for implementation studies.

The first problem arises if one accepts fully the *descriptive* generalization about implementation being determined largely by the lower echelons in organizations also as a *prescriptive* statement. If that is the case, then many ideas about policy control in democratic political systems must be questioned. Some organization theorists have argued for decades, that lower echelons of an organization do have greater information about the situations within which a policy is actually being put into place. That is not, however, the same as saying that those charged with policymaking *should* abrogate their responsibilities to make policy to those who may have more information. There are certainly administrative situations in which higher levels of decentralization would be efficacious (Kochen & Deutsch, 1980), but that decentralization should be understood within the context of some centralized control. This position is summarized nicely by Hogwood and Gunn's (1984, p. 208) critique of the bottom up approach:

> Even in the case of central-local relations, however, we find it difficult to see why the view from the top is necessarily less valid than that from other levels.... If a Home Secretary is committed to better relations between policemen and black youths, should we view with equanimity the persistence of 'street level' police attitudes and actions which are openly racist? If Parliament decided to move from left-hand to right-hand drive on our roads, would we be happy to leave to 'negotiation' between road users, local authorities and the central government such questions as when, how and whether the change-over should occur?

The examples are hyperbolic, but the fundamental point remains: governance is not about negotiation, it is about the use of legitimate authority. While most writers on implementation have discussed the "bottom up" view from an empirical perspective, the normative implications are quite obvious, and at times the empirical and the normative are not separated, as when Elmore comments on the virtues of discretion and the absence of uniformity (1982).

If one adopts a less extreme position and instead tries to tailor policies to values and operational patterns in the lower levels of public organizations, one encounters a second danger in relying on the backward mapping approach: what *should* be done becomes defined by what *can* be done by existing organizations with minimal disruption. This is stated rather explicitly in some work on implementation. Elmore (1982) argues that policymaking should be understood first in terms of the organizational processes of those charged with implementing a program and the effects which those actions have upon the presumed targets of government activity. It would appear that this implies that goals for policymaking then evolve from an understanding of what it is possible to do within the existing organizational framework. In this way, backward mapping is similar to the "garbage can model" of organizational behavior (Cohen, March, & Olsen, 1972) in which goals derive from activities.

Backward mapping may describe quite adequately how implementation occurs in a decentralized policymaking environment. The question, however, is whether this is the most appropriate model for policymaking viewed from a more normative stance. By saying we should do what we can do with minimal disruption, and that we should do what those already in public organizations prefer to do, appears to place a mortmain over the actions of government. Reliance on ease of implementation as a guide for action is as potentially undesirable when applied to means as to ends. We may encounter difficulties in choosing mechanisms for accomplishing goals as well as in choosing goals. The choice of instruments in policymaking has perhaps as many normative and efficiency implications as the choice of goals (Linder & Peters, 1984).

The problem of relying on "backward mapping" in the choice of policy instruments is amply demonstrated by the selection of Medicare as the mechanism for addressing the medical problems of the elderly. Medicare was designed as a social insurance program because American government had had experience in implementing such programs and it was perceived that a social insurance program would be easier to administer than other programs. Unfortunately, however, Medicare depends upon copayments and deductibles and is particularly unsuitable for the medical needs of the elderly whose earning capacity is not sufficiently elastic to meet increasing levels of payments demanded; such payments are, however, a quite common part of insurance programs intended, rightly or wrongly, to provide disincentives to excessive utilization (Jackson & Peters, 1980). Implementation has not been the problem for Medicare, even though the program involves a number of actors including large numbers of private providers. Rather, the problem is that the program was not designed adequately to meet the needs of its target population.

Lane (1983) has discussed the analytical weaknesses of backward mapping by explicating the potential differences in policy intentions of "formators" and implementators. He argues that the formator's goals are crucial

to the analysis of implementation and that to say that any implementation effort has been successful if the wishes of the implementor have been executed is extremely weak empirically: it borders upon a tautology. This ignores for the potentially serious normative implications of the approach. Lane argues that:

> Even if a great deal of implementation analysis has focussed sin-glemindedly on the formator of policy and even if a naive as-sumption about the possibility of hierarchical control has plagued much of public administration--as Elmore states--it is hardly fruitful to reverse these exaggerations in the opposite direction making the implementor the sole crucial party to the implementa-tion game. It is not clear what is meant by a "behavior that creates the occasion for a policy intervention"; there is practi-cally no limit to the number of instances of such behavior that the scholar may find, but how are they to be selected if one cannot study them all. A necessary component of an implementa-tion perspective is the enactment of a set of goals by an enactor or, as mentioned in the introduction, a formator. The goals of the formator may not be precise or clear, and they may change over time or be in conflict with the goals of the implementor. Yet, without inclusion of the formator and the goals enacted the implementation has no determinate focus. If there are no goals enacted, how could there be anything to be implemented?

Thus, to place excessive emphasis on the goals of the implementor weakens the concept of implementation and deprives it of much of its empirical con-tent. It is a truism that "street level bureaucrats" have a great deal to do with the success or failure of public programs, and a great deal of em-pirical and theoretical mileage can be gained by careful analysis of their discretion (Mashaw, 1983; Davis, 1976). However, to place goal definition in the hands of that element of the public sector (empirically, analytically or managerially) is to admit defeat and the inability of the policymaking hierarchies in government to function effectively to produce governance. The forward mapping approach may err, as Elmore points out, in assuming that those in nominal charge of public organizations and public programs do indeed control them. The backward mapping approach errs equally, however, in accepting an empirical difficulty as both a normative statement and the sole basis of analysis of a complex organizational and political problem. Indeed, the "horrors of war" approach mentioned above, despite the apparent lack of analytic rigor, may be a better starting point because it recognizes that those elected by the public to government should be able to place their policies into action (Rose, 1974).

   Evolution and Backward Mapping. Closely related to the "bottom up" approach is the evolutionary approach initially fashioned by Pressman and Wildavsky (1973) and developed further in some of Wildavsky's later writ-ings (Majone & Wildavsky, 1978). The basic point of this approach to implementation is that, as Heraclitus said long ago, we cannot step into the same river twice. The world of policy and implementation is changing con-tinually and thus "policy" itself is continually changing. As in the back-ward mapping approach, policy evolves during the process of being im-plemented rather than being imposed by central policymakers. As such

"policy" has no life of its own but is a construct emerging from interactions. This ignores goals of central political decisionmakers in favor of developing understandings and bargains among actors involved in implementation.

The evolutionary approach (Majone & Wildavsky, 1978) communicates an important truth about policymaking and implementation, but it is not entirely clear how this aids the analysis of implementation. Implementation becomes a tautology: implementation was a success because what was implemented became the policy. This is certainly true, but it does not aid the analyst attempting to assess the effects of different forms of organization or different types of policy instruments. Implementation has an important linkage to evaluation research and without a better conceptualization of the meaning of implementation, evaluation research is doomed to failure—or perhaps to finding excessive success.

Some types of policies may be more precisely defined than others, but the empirical argument that policies and their consequences are not neatly contained is no substitute for a more positive normative stance stating that we need to understand the effects of policy more precisely and that any approach to policy analysis which regards effective evaluation research as impossible or virtually inevitable may be fundamentally flawed. We must agree in part that the interaction of political actors in implementation is indeed important. However, it is important only to the extent that it allows policymakers to be successful in implementing policies.

Understanding interaction is crucial, but it is a means to the end and not the end itself. This may be taken (unfortunately) as an extremely authoritarian statement by some interested in the power of subordinates in public organizations. It is not intended as such. Rather, it is intended as a statement positing good democratic values that those who are elected to occupy central positions in governments are elected to make policy. They may well have to bargain in making their policies, but this does not deny that the success or failure of governments is to some degree determined by their success in getting policies put into effect. If the implementing classes do not like that then perhaps they should stand for election at the next opportunity.

From the Bottom Down. A fourth approach to implementation analysis, advanced in the work of Mazmanian and Sabatier (1983), adds concern for program evaluation to the emphasis of the top-down approach on the limits of administration. The concept of implementation failure is extended to include the failure of programs to attain their stated objectives. In this instance, implementing organizations are engaged not so much in rearguard action as in accommodative maneuvers intended to deal with external threats and other exigencies of the program's environment. Hence, this approach to implementation views the process from the bottom down in that it focuses on the lower echelons of administration but is still concerned with implementing more centrally determined goals.

Program environments are viewed as complex and turbulent, posing special problems for even the most conscientious implementor. Some problems are associated with the response of the very groups whose behavior or characteristics a given program is intended to change. For example, they may resist change or respond in unintended or unproductive ways. Other problems arise in connection with structural and political factors, such as socioeconomic conditions and levels of public support. In this approach

environmental variables are thought to exert a substantial influence on both the process and end-result of implementation.

In common with the top-down view, this approach has confidence in the ability of central authorities to coordinate and, under favorable circumstances, to control implementation. However, this is accomplished not through the imposition of hierarchy and procedure stressed by the top-down view but through properly fashioned legal mandates. A proper mandate includes a precise and unambiguous statement of objectives, sufficient fiscal and political resources, and a reasonable basis for both expecting and obtaining desired change. Thus, assuming an hospitable environment, central authorities can shape implementation through refinements in a given program's organic statutes.

The logic of this argument is quite familiar to scholars in public law and public administration: administrative discretion can and should be structured with carefully stipulated delegations of authority. What makes its substance appear novel in the context of implementation is the added concern for program effectiveness. Structuring discretion is important foremost as a prerequisite to programmatic success rather than as a juridical principle. Moreover, aside from their implications for administration, objectives stated with precision provide the only valid benchmark for assessing program performance.

In contrast to other approaches to implementation, the bottom-down view is preoccupied with the nexus between environment and policy machinery. Flaws in the implementation component of this machinery are best dealt with by employing (in Bardach's words) a "tamperproof" legal imperative. From this perspective, the ideal case is one in which the interaction of central authority and implementators, so essential to both the evolutionary and backward-mapping views, is effectively preempted. The more difficult task from the bottom-down view lies in confronting environmental factors, like intransigent groups and intractable problems.

With the range of concerns expressed by the approaches to implementation described above, one might conclude that there is no overarching implementation perspective. Nevertheless, the approaches spring from the same basic root and share a common focus on governmental organizations as endogenous political actors. Further, the approaches share a concern with feasibility and with the causes and cures for policy failures. We will explore the common themes and examine their implications for policymaking in the second half of the paper. Throughout this discussion the design perspective serves as a countervailing view intended to addresss the excesses of the implementation perspective.

DESIGN AND IMPLEMENTATION

The discussion of the implementation literature has obviously been critical of some of the work in that tradition and of the unexamined implications of that literature for policymaking. It is true that much of the literature discussed is intended to be more descriptive than prescriptive, but the focus of so much of the policymaking literature on implementation problems appears to indicate that if those problems were solved, the problems of making policies would also be solved. We do not share that view.

We argue in favor of a more diverse approach to policy selection by government. Such an approach would be concerned with implementation,

but only as one of a number of conditions which must be fulfilled for successful policymaking. We also would argue that the selection of policies should depend first upon the selection of *goals* and then mechanisms for attaining those goals should be developed. Policy should be made foremost on the basis of what we want to do, not what we can do easily.

The logical response by implementation scholars is that we are free to have all the goals we wish, but if we cannot implement programs related to those goals then the goals are of little importance. There are several possible rejoinders to that position. The first is that goal clarification at the outset may prevent adopting programs or policy instruments which are at odds with our own normative positions or which make goal attainment less likely.

Another possible rejoinder is that policy selection on the basis of goals, even if those goals are not attainable in the short-term, may begin progress toward achieving those goals, while choosing policies more on the basis of what can be done may be counterproductive. Thus, greater attention to goals at the outset of policymaking may enable us to develop an incremental strategy toward achieving ends, or enable development of more creative designs for achieving desired ends. As Dryzek (1983) pointed out, unconscious reliance on the existing programs and policy options seriously detracts from the ability of the public sector to achieve desired and desirable ends. If nothing else, willingness to make policies on the basis of feasibility may waste resources and create stocks of goods and services which will make putting a more desirable program into effect more difficult (Hogwood & Peters, 1985).

The option to unconscious choice is a more conscious pattern of choice based upon some ideas of policy design. The idea of design is to link together values, models of causation, and the choice of instrumentation so that better choices can be made. This need not be a technocratic choice, but only a better means of guidance for policymakers than incrementalism, reasoning by analogy, and reliance on feasibility to guide the choice of options.

DIAGNOSING POLICY FAILURE AND THE R_x FOR SUCCESS

Despite different emphases among the views of implementation examined earlier, all have the core idea that implementation represents a quagmire for policy goals. Further, conditions for successfully negotiating this quagmire demand a high, but fair, price. Although the exact nature of the price and its implications for policy goals differ from one view to another, all see it serving an important function in policymaking.

For the top-down and bottom-down views, the price of implementation is a pragmatic test for objectives. Paying the price is a matter of enduring the rites of passage. In effect, implementation subjects policy goals to a trial-by-fire which eliminates the objectionable and ill-conceived and tempers the rest. As a result, policy formulation becomes disciplined by the prospects of failure. With proper sacrifices to feasibility, most policy goals can be attained. However, the social value of attaining these "rehabilitated" goals is entirely another matter, a separate question better left outside implementation analysis. Accordingly, prescriptions for success take the form of recipes for avoiding failure, detailing the necessary preparation for the rigors of implementation.

From the bottom-up and evolutionary views, the price exacted by implementation serves as an effective rationing device for government activity. Broad designs are screened out, encouraging what Wildavsky (1979) has called a strategic retreat on objectives. The price in the evolutionary view is repeated modification and adjustment. Goals that persevere remain in a state of flux, constantly adapting to changing circumstances and adjusting to new constraints. For the bottom-up view, the price is bargaining and compromise. Goal adjustment in this instance involves mutual accommodation between the central authority and the implementors.

Both views stress the inherent value of implementation in terms that appeal to democratic values. More specifically, this process seems to offer an additional set of checks and balances against "arbitrary" use of centralized power. Hierarchy is out, local control is in; planning is out, interaction is in; and finally, design is out, accommodation is in. The prescriptions for avoiding policy failures which emerge from the bottom-up and evolutionary views offer little solace to the prospective reformer. Efforts to alter the dynamics of the process to make it more lenient toward objectives, or at least more forgiving, are likely to fall prey to the same forces motivating those efforts in the first place. Thus, only two basic routes to success remain; either pay the price of implementation, effectively relinquishing control over the direction of policy, or court disaster with initiatives that must remain intact.

The diagnosis of failure and corresponding prescriptions for success advanced in each of the four views of implementation can be illustrated in four diagrams. These appear together as Figure 1. To simplify, only the barest bones of the process are represented. Similarly, the arrangement of these elements follows the metaphor of a rudimentary, mechanical system. Three elements are included: formulation machinery, encompassing central authorities and formulation functions; implementation machinery, including groups and organizations involved in implementation; and finally, the environment, subsuming both target groups and contextual factors external to the other two elements.

The arrows connecting the elements represent the direction of influence among them. For our purposes, this influence can be understood as a decisive factor shaping policy. There are a number of asterisks appearing over certain arrows and next to selected elements. Each asterisk locates the origin of the symptoms diagnosed by a particular view as policy failure. Most prescriptions for avoiding failure are intended to relieve these symptoms. Accordingly, they concentrate on the presumed origins of the symptoms. Asterisks appearing in parentheses represent minor sources of symptoms deserving some, but relatively less, attention.

The first diagram at the top of Figure 1 represents the bottom-up view of implementation. Here, the implementation machinery exerts a decisive influence over policy. This influence bears on the formulation machinery through restraints on acceptable policy objectives and demands for discretion over important details. Influence on the environment is felt through authoritative changes in behavior or characteristics of target groups with requisite resources to back them up. Policy fails when either the formulation machinery refuses to operate on those terms or target groups offer resistance to the intended influence.

In both cases the symptoms of failure emerge as obstacles to the flow of influence. With a sleight-of-hand these empirical difficulties are

transformed into normative statements. Prescriptions to avoid failure are remarkably simple: remove the obstacles. The conception of policy success here is premised on an unfettered flow of influence outward from the implementation machinery. The would-be formulator, then, is left to develop ways of accommodating this influence.

FIGURE 1
A Schematic Summary of Views of Implementation
and the Design Perspective

Diagram 1: The Bottom-Up View

Diagram 2: The Evolutionary View
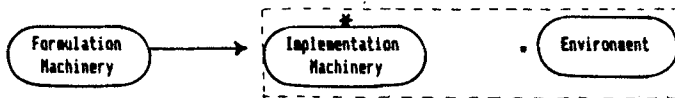
Diagram 3: The Top-Down View
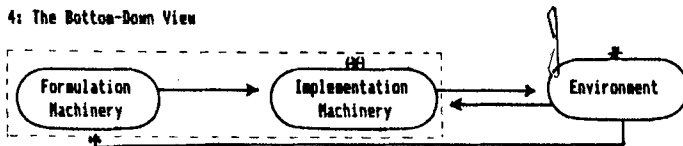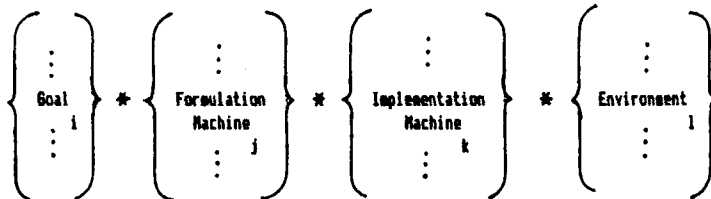
Diagram 4: The Bottom-Down View

Diagram 5: The Design Perspective

The evolutionary view--a somewhat modified, bottom-up perspective--appears in the next diagram. In this instance, the environment is of relatively little bearing on either the shaping of policy or its prognosis. Policy

is effectively determined by interaction of the formulation and implementation machineries. Failure occurs when this interaction is disrupted or biased toward the machinery of one or the other. To a large extent, prescriptions are based on restoring the balance of humors necessary to sustain interaction and to promote policy adaptation. Success resides in mutual accommodation.

The top-down view and its modified bottom-down version appear in the next two diagrams. There are several conspicuous differences from the preceding diagrams. First, influence flows from formulation to implementation machinery, but not vice versa. Formulation is attributed primarily to the central authority and its integrity is allegedly maintained throughout the process. And secondly, none of the sources of failure are thought to be located along the paths of influence. Rather, failure emerges from symptoms within the machinery or from environmental factors.

The top-down view of failure locates its symptoms squarely in the implementation machinery. Environmental problems are largely manifestations of these implementation difficulties. Following the same logic established above, these difficulties translate into prescriptions for success: flaws in the implementation machinery must be corrected or at least circumvented.

The bottom-down view acknowledges these symptoms and the necessity for some corrective action but views the environment as the more serious source of difficulties. In this case, the environment is thought to exert a direct influence over policy determination. As a result, the prescription for avoiding failure is relatively less straightforward. Efforts must be made to make the environment more hospitable to policy.

The last diagram in Figure 1 depicts the design perspective. Since the design perspective eschews the leap of the implementation views from empirical difficulties to prescriptions, there are no empirical flows of influence shown. Moreover, the representation is intended to be *ex ante* rather than *ex post*, so no one set of implementation or formulation machinery need be indicated. Instead, we are given a range of choices over formulation and implementation machines and a set of plausible environments.

The design perspective confronts prescription explicitly, rather than by inference from imputed policy failures. As a consequence, tradeoffs among higher-ordered goals, such as equity, replace feasibility as the driving force behind policy reform. Notice that the diagram for design represents distinct opportunity sets in place of the causal descriptions of process appearing above it. Here policy emerges as the product of a mapping across the four choice sets which identifies a particular mix of goals, machines and environments (for a contrast see Bardach, 1980). The concern is not with the etiology of various mixes but with their comparative merits. Moreover, each form of failure discussed earlier is represented as a choice error. Responsibility for error, then, is allocated to each of the separate components of the policy "mix" rather than to flows of influence, the implementation machinery, or the environment.

CONCLUSION: CHANGING THE COURSE OF INQUIRY

Our most fundamental critique of the existing implementation literature has been its tendency, particularly manifest in the bottom-up approach, to conflate empirical and normative statements. As noted, there has been a pronounced tendency to translate empirical statements about implementation

difficulties into normative statements about how implementation should proceed. This arguably has moved policy studies away from developing better mechanisms for designing policies and designing implementation systems. This paper therefore can be seen as a plea for greater consideration for the application of carefully considered design criteria in policy formulation.

This paper is also a more general plea for the social sciences to deal more systematically with the normative implications of their work. As is evident in the implementation literature, there is a tendency to quickly translate empirical observations into implicit ideal types, and to then extract evaluative statements from that ideal. Thus, criteria tend to be inferred from the "success" of some systems, and are then applied to other, potentially quite different situations. Further, the notion of success most commonly used is a rather conservative one stressing stability and equilibrium.

If observations of the state of the world at one time and in one place, or reconstructed logics of social dynamics, become entrenched as normative standards of performance, then a chilling conservatism can arise within our social theories and our policy advice. Several examples may help illuminate this point.

A commonly cited example of this mode of theorizing is development theory. For example, Rostow's (1960) ideas about the stages of development in Western, industrialized countries were quickly translated into evaluative and normative statements about the way in which economic development *should* (or had to?) occur in emerging nations. Similarly the Almond and Coleman (1961) and Almond and Powell (1966) ideas concerning political development appeared to posit that political development was teleological and would eventually produce political systems similar to those in the Western democracies. Therefore, policy advice deriving from these approaches would be directed at producing political systems such as those with which we are most comfortable. This certainly does fit our own values about good government, but it is not necessarily drawn on any logic inference from theory. Similarly, translation of empirical observations about how politics appears to function in the United States (Dahl, 1961) into prescriptive statements about how governments can function most effectively (Dahl, 1971) makes the same logical error. Clearly, because we value a certain form of government, that form of government appears "natural" and appears to be right. There is little logical reason, however, to assume that this is the case. The logical error appears akin to that which might be made by a social anthropologist who, after squatting in the village of a remote tribe for some years, deduces the nature of the good society based upon those observations.

Closer to the subject of this paper, the gradual transformation of the incrementalism literature from a description of the somewhat chaotic patterns of policymaking in the United States into normative statements about how budgeting and policymaking more broadly should be conducted also illustrates the subtle shift from empirical observation to prescription. Wildavsky (1964) brilliantly described the processes by which incremental solutions were used in the budgetary process in the United States. Likewise, his statistical treatments of these results (Davis, Dempster & Wildavsky, 1966, 1974) confirm the adequacy of that description. However, when that description becomes translated into statements (Wildavsky, 1978)

about how budgets should be made--based in large part upon "feasibility" and language close to that arguing for ease of implementation--then we have moved from description to prescription. Such prescription might be adequate if the only criterion worthy of consideration were feasibility. Quite clearly, that is not the only criterion which should be applied to the allocation of resources through the public sector.

We have largely refrained from singing hymns in praise of "good science" in this discussion in large part because the hypothetico-deductive model of science which is taught as the "scientific method" seems to fall into some of the same logical traps as does the social science work discussed here. The model of science which has been promulgated is a reconstructed logic more than a logic-in-use but has been made into a model of how science should be practiced. Such an approach does not leave adequate room for personal intuition and "hunches" which critics of the conventional model of science have argued to be of great importance (Polanyi, 1958; Feyerabend, 1975). Just reading the account of one of the greatest scientific discoveries of recent history would indicate the extent to which personal knowledge is important in the actual practice of science, and further the importance of scientific politics in the process (Watson, 1968).

In challenging the implementation perspective, we have also questioned by implication the adequacy of an epistemology based solely on trial-and-error learning. This is not to say, however, that policy knowledge should never be treated as hypotheses subject to empirical testing or that error is an inappropriate guide to theory refinement. The design perspective is not incompatible with these particular principles of "piecemeal social engineering." Rather, the implementation perspective has gone too far in stressing lessons of experience over critical appraisal of first principles.

The version of trial-and-error learning in the implementation literature offers too narrow a view both of what constitutes a trial and which kind of error is most relevant to policy reformulation. Typically, a trial is some intervention intended to serve certain stated purposes. However, the purposes and the intervention are taken uncritically as given. Error, then, is defined solely in terms of deviations from the stated purposes of the intervention. Consequently, policy learning and reform occur as a purely adaptive, unreflective process holding much in common with more conservative versions of incrementalism. In the extreme, there would be no learning and no "errors" as stated intentions converge on what has been or can be successfully implemented.

As with incrementalism, emphasis on a particular conception of error carries over to a conception of the optimal intervention. For incrementalism in the extreme, minimizing the size and possibility of unanticipated consequences dictates that interventions be only marginal ones. Similarly, the implementation view finds that the best way to avoid deviations from stated intentions is to mold them to the range of predictable bureaucratic behaviors and stable environments.

At its best, the implementation literature views trial and error as a means of validating a particular mapping of policy intentions into policy outcomes. A trial, in this sense, can be a research hypothesis about the causal details of the implementation process. Errors, then, are failures of model specification, measurement, or calibration. This conception overlaps with the "evolutionary" epistemology of Donald T. Campbell and his associates in evaluation research. Unfortunately, it also overlooks possible

conceptual errors in how policy research problems are defined and inter-
ventions constituted, and omits a variety of valuative dimensions from its
appraisal.   Moreover, efforts to divorce this approach from the prescrip-
tive concerns merely encourage the application of these results to a more
precise definition of feasibility--grist for refining the "avoidance of imple-
mentation errors" as the primary focus for policy formulation.

In summary, much of the implementation literature has taken an empiri-
cal point of some importance and developed a largely normative theory from
it.   By so doing, attention has been diverted from the more important
tasks of designing effective policies and effective implementation systems.
It would appear that rather than admitting defeat and turning the potential
domination of implementation by lower echelons of the public bureaucracy
and the environment into a virtue, more attention should be given to
mechanisms for formulating and implementing desirable policies.   Such a
reorientation will, in turn, require a serious reexamination of the episte-
mological roots of policy research.

REFERENCES

Almond, G.A., & Coleman, J.S.   (1961).   *The politics of developing areas.*
    Princeton, NJ: Princeton University Press.
Almond, G.A., & Powell, G.B.   (1966).   *Comparative politics: A develop-
    mental approach.*   Boston: Little, Brown.
Bardach, E.   (1980).   On designing implementable programs.   In G. Ma-
    jone & E.S. Quade (Eds.), *Pitfalls of analysis.*   New York: John Wiley.
Cohen, M.D., March, J.G., & Olsen, J.P. (1972).   The garbage can model
    of organizational choice.   *Administrative Science Quarterly, 17,* 1-25.
Dahl, R.A.   (1961).   *Who governs?*   New Haven, CT: Yale University
    Press.
Dahl, R.A.   (1971).   *Polyarchy, participation and opposition.*   New Haven,
    CT: Yale University Press.
Davis, K.C.   (1976).   *Discretionary justice.*   Urbana, IL: University of
    Illinois Press.
Davis, O.A., Dempster, M.A.H., & Wildavsky, A.   (1966).   A theory of
    the budgetary process.   *American Political Science Review, 60,* 529-547.
Davis, O.A., Dempster, M.A.H., & Wildavsky, A.   (1974).   Toward a
    predictive theory of the federal budgetary process.   *British Journal of
    Political Science, 4,* 419-452.
Dunsire, A.   (1978).   *Implementation in a bureaucracy.*   NY: St. Martins.
Dryzek, J.   (1983).   Don't toss coins into garbage cans: A prologue to
    policy design.   *Journal of Public Policy, 3,* 345-367.
Elmore, R.F.   (1982).   Backward mapping: Implementation research and
    policy decision.   In W. Williams (Ed.), *Studying implementation.*
    Chatham, NJ: Chatham House.
Feyerabend, P.K.   (1975).   *Against method.*   Atlantic Highlands, NJ: Hu-
    manities Press.
Hjern, B., & Hull, C.   (1982).   Implementation research as empirical
    constitutionalism.   *European Journal of Political Research, 10,* 105-115.
Hogwood, B.W., & Gunn, L.A.   (1984).   *Policy analysis for the real
    world.*   Oxford: Oxford University Press.
Hogwood, B.W., & Peters, B.G.   (1985).   *The pathology of policy.*   Ox-
    ford: Oxford University Press.

Hood, C. (1976). *The limits of administration*. New York: John Wiley.

Jackson, S.M., & Peters, B.G. (1980). Making physicians cost account-able. *Policy Analysis, 6*, 235-238.

Kochen, M., & Deutsch, K.W. (1980). *Decentralization: Sketches toward a rational theory*. Cambridge, MA: Oelgeschlager, Gunn and Hain.

Lane, J.E. (1983). The concept of implementation. *Statsvetenskaplig Tidskrift, 86*, 17-40.

Linder, S.H., & Peters, B.G. (1984). From social theory to policy de-sign. *Journal of Public Policy, 4*, 237-259.

Lipsky, M. (1980). *Street-level bureaucracy*. New York: Russell Sage.

Majone, G., & Wildavsky, A. (1978). Implementation as evolution. In H.E. Freeman (Ed.), *Policy Studies Annual Review* (Vol. 2). Beverly Hills, CA: Sage.

Mashaw, J.L. (1983). *Bureaucratic justice*. New Haven, CT: Yale Uni-versity Press.

Mayntz, R. (1983). The conditions of effective public policy--a new chal-lenge for policy analysis. *Policy and Politics, 11*, 123-144.

Mazmanian, D., & Sabatier, P. (1983). *Implementation and public policy*. Glencoe, IL: Scott, Foresman.

Peters, B.G. (1984). *The politics of bureaucracy* (2nd. Ed.). New York: Longmans.

Polanyi, M. (1958). *Personal knowledge*. Chicago: University of Chicago Press.

Pressman, J., & Wildavsky, A. (1973). *Implementation*. Berkeley, CA: University of California Press.

Rein, M. (1983). Implementation: A theoretical perspective. In Rein (Ed.), *From policy to practice*. London: Macmillan.

Rose, R. (1974). *The problem of party government*. London: Macmillan.

Rosenthal, S.R. (1982). *Managing government operations*. Glenview, IL: Scott, Foresman.

Rostow, W.W. (1960). *The stages of economic growth*. Cambridge: Cam-bridge University Press.

Sieber, S.D. (1981). *Fatal remedies*. New York: Plenum.

Simon, H.A. (1947). *Administrative behavior*. New York: Macmillan.

Watson, J.D. (1968). *The double helix*. New York: Athaneum.

Wildavsky, A. (1964). *The politics of the budgetary process*. Boston: Little, Brown.

Wildavsky, A. (1978). A budget for all seasons? Why the traditional budget lasts. *Public Administration Review, 38*, 501-509.

Wildavsky, A. (1979). *Speaking truth to power*. Boston: Little, Brown.

Yates, D.A. (1977). *The ungovernable city*. Cambridge, MA: MIT Press.