# IMPLEMENTING NUTRITION PROGRAMS: Lessons from an Unheeded Literature

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## CONTENTS

What has been wrong with planning so far has not been its conceptual or logical or technical content so much as in its implementation, its lack of cohesion with social factors, and the impediments imposed by political, social, administrative and cultural forces rather than strictly economic factors.

> V. K. R. V. Rao, on the occasion of the first V. T. Krishnamachari Memorial Lecture, Institute of Economic Growth (India), quoted in *The Overseas Hindustan Times,* April 7, 1984, p. 15.

It is hard enough to design public policies and programs that look good on paper. It is harder still to formulate them in words and slogans that resonate pleasingly in the ears of political leaders and the constituencies to which they are responsive. And it is excruciatingly hard to implement them in a way that pleases anyone at all, including the supposed beneficiaries or clients.

Eugene Bardach, *The Implementation Game*, 1977 (Ref. 6, p. 3).

. . . how difficult it is to make the ordinary happen.

Jeffrey L. Pressman and Aaron B. Wildavsky, *Implementation*, 1973 (Ref. 70, p. xii).

## INTRODUCTION

Well-planned programs that are conceptually sound and technically appropriate often fail in practice because little thought is given to problems of implementation. Implementation is a weak link in much of the social sector, but nowhere more so than in nutrition programs the world over. It is subject to neglect, especially by economists, who tend to focus on planning and evaluation. It is also subject to mechanical treatment by technical experts, whose inclination is to equate implementation with the application of their expertise. Rather few analysts look at delivery systems independently of what they deliver, while fewer still are sensitized to the complexities of system-society interaction, the exceptions being mostly in the field of community development (19, 62, 79, 87).

This essay relates a small but insightful literature concerning implementation to the particular needs and problems of nutrition programs in low-income countries. Most of this literature is derived from other policy arenas—urban renewal, rural extension, agrarian reform, public health, and family planning especially—while much of it is based on Western (typically American) experience. A major concern of the implementation literature is to explain why so much public policy does not seem to work as intended. Our task in these pages is to distill messages that are germane to nutrition policy in the developing countries.

## THE TOPIC, ITS RATIONALE, AND ITS LIMITATIONS

Implementation is a process of doing things purposefully. The term "implementation" refers to the activation of policy. It represents the operational linkage between objectives and results, consisting of the many things done to promote the former so as to attain the latter. Implementation may presume

formal organization and prescribed duties, but its essence lies in what actually happens in an on-going series of associations, decisions, tasks, and events. How an administrative system functions is critical to implementation. So too is how that system intersects with society, for much of what goes on in implementation entails transactions between those who are trying to further a goal and others in the broader environment. If planners are inclined to equate implementation with "putting the machine together and making it run" (6, p. 36), policy analysts (including the author) prefer to view it more as a form of experimentation and as an opportunity for learning (23, 24, 51, 52, 77).

There are several reasons why implementation is a useful organizing concept. It focuses on activity, not rhetoric. Accordingly, it deals with public policy where policy really counts, in terms of what is being attempted, how a given system has been organized to accomplish the objectives stated, and what is actually happening as a result. Implementation also shifts attention from the capital to the countryside, from the locus of initial decision to the environment of subsequent action. It is among the better rubrics for assessing the capacity of the political center to exercise its will on what is often a vast and diverse periphery (41, 66, 82). Moreover, implementation draws attention to how different groups in society respond to governmental initiatives, and it highlights patterns of interaction between state and society that powerfully condition the success of public policy.

There are additional reasons for exploring implementation. In countries with weak legislatures, limited traditions of interest group activity, and unstable political parties, the policy adoption process not infrequently conveys the appearance of easy consensus and high commitment. Official pronouncements articulate an unchallenged national will, while planning commissions allocate resources "rationally" and "authoritatively." All that remains is for the bureaucracy to do as it is told within the constraints of the budget provided and its own functional capacity.

In most instances the appearances are deceptive. Issues not considered or deflected in the policy adoption process typically surface during implementation. Consensus is strained by the need to work out details, to activate and coordinate different actors in the system, and to ensure the regular and orderly flow of resources as the *sine qua non* of effective and sustained action. As the process unfolds, it becomes evident that not everyone in a position of authority agrees with the policy or accords it the same high priority. Previously latent opposition is aroused. Ministerial requirements must be reconciled, and subnational officials must be harnessed. Often the public must be educated and even cajoled. Lots of things go wrong when the energizing impulses from the apex lose force, when alternative and contrary definitions of purpose intrude, when resources are spread too thin, and when the tasks to be performed exceed the system's competence to perform them. When, on top of breakdowns within

the system, one's intended beneficiaries respond to well-intentioned policy with hostility or indifference, that policy's *problematique* (16) is increased all the more.[1]

It is little wonder, then, that implementation is an important process influencing policy outcomes and, hence, becomes an analytical reference of considerable practical as well as theoretical significance. For the scholar, implementation represents political economy in action because it relates the dual question of "who governs" with "who benefits" through the expression of political will, the display of operational capability, and the interplay of various coalitions of interest, all to some substantive end. For the practitioner, implementation offers insights and lessons derived from experience that have a hands-on utility. Implementation may be an "unstable and precarious process" (95, p. 184) characterized by persistent "buffeting by a constantly shifting set of political and social pressures" (6, p. 5), but it is too consequential a parameter of policy and program success to be dismissed as a mere afterthought or, worse, as an unwelcome externality to rational decision-making. "The separation of policy design from implementation is fatal," Pressman & Wildavsky (70, p. xvii) observed in 1973. The nutrition planning community has since learned how prescient they were.

As worthy a topic as implementation is, its importance should not be inflated. Good implementation is no substitute for bad policy (6, 70, 95). Nor is it adequate compensation for weak institutions or severely limited resources. It counts for little in the face of public indifference, and there are numerous contextual factors that will condition it regardless of characteristics internal to the process. Lest implementation be reified beyond utility, at least five considerations should be borne in mind.

First, breakdowns in implementation are but one source of policy failure. In many instances the basic theory informing public policy is itself faulty (70). Government officials and other benefactors are instructed to do the wrong thing—or what is later determined to have been the wrong thing (e.g. school feeding to meet nutritional needs or erecting big city hospitals as the principal answer to public health needs). Not infrequently, the policy makes sense, but the approach taken—the operational theory—is counterproductive, as in certain family planning programs (35, 93, 95). Especially common in the nutrition field is a third manifestation of faulty theory: one does the right thing, or at least an appropriate thing, but however well intentioned, it has limited prospect of

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[1]Interestingly enough, the erosion of early and general consensus characteristic of the policy adoption process under the multiple strains of the policy implementation process is most completely documented in the United States (6, 20, 70).

impacting the problem significantly.[2] Supplementary feeding as a response to protein-calorie malnutrition is, more often than not, a case in point.[3]

Second, if sound implementation is necessary for some measure of success to be achieved, rarely is it sufficient. Strong commitment by senior officials and the resources necessary for effective action are essential (71, 95). Similarly, one must plan and organize well, which is to say that institutional capabilities must already have been established or they must be built in order for implementation to be a dominant concern. In many low-income countries institutional capabilities are a limiting factor of no small magnitude (3, 41, 67; regarding nutrition 25, 29, 73). Either the institutions themselves do not exist (or are weak when they do), or they are so entrenched in their ways that reform is extremely difficult. As Pyle (73) illustrates so poignantly in his study of primary health care in Maharashtra (India), structure, culture, and strategy must all be synchronized (see also 39, 42, 68). That is to say, the process of doing will be conditioned powerfully by the mechanisms at hand and by the reigning values of the system involved. Implementation reflects these, but they have an independent salience all their own.

A third cautionary note concerns popular responsiveness. Good implementation is no guarantee that people will take advantage of what is offered. The path of least resistance for the average citizen is to do nothing, as if the program—designed by others for his benefit—does not exist. Active involvement requires positive choice (95). Moreover, mobilizing public understanding, support, and sustained participation is a hazardous enterprise for most governments. Perhaps no other aspect of social sector development is more sensitive or subject to countervailing influences, be they cultural resistance, misperception, ennui, or inconvenience. Family planning programs often elicit outright opposition among the people for whom they are intended, while nutrition and preventive health programs must struggle to overcome indifference. In all three cases, it is the clients who are the ultimate arbiters of success. The system must be internally coherent, but it also must be able to function in society to the desired end (51, 83). These considerations both limit the importance of implementa-

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[2]As the author has noted elsewhere (29, p. 358), "While the international nutrition planning community is still attempting to learn what works, under what conditions, and why, the evidence to date is clear in one critical respect: single-shot inputs . . . are typically not sufficient. The reason is that there is a mismatch between the problem and the response to it. The problem is large, diverse, subject to multiple determinants, and embedded in a syndrome of deprivation. The response, all too often, is small-scale, mono-emphatic, isolated, and intermittent. Even at their best, most nutrition interventions are simply not enough."

[3]In addition to problems of supply, targeting and leakage, diversion and substitution (4, 7), the basic ration provided is often too small (C. Capone, personal communication), while participation rates by those in greatest need tend to be low (2, 31). For a good programmatic critique of supplementary feeding, see Jackson & Eade (43).

tion, defined in terms of organization and activity, and expand the definition to include intersection with the public, the critical final link.

Fourth, even though implementation influences policy outcomes, in turn it reflects other things. Some of these are idiosyncratic: for example, the timing of key events and the presence or absence of extraordinary individuals in the right place at the right time, persons with the ability both to manage an intervention and to inspire its beneficiaries (Weber's bureaucrat and charismatic leader rolled into one). Other factors influencing implementation are more structural: the social system, the economy, other public policies, and the enduring characteristics of public administration. Whether features intrinsic to the situation or externalities difficult to predict, the context conditions agenda, organization, performance, and impact. Implementation, therefore, is not only a cluster of independent variables influencing the fate of policy; it is itself an outcome, a product of systemic characteristics and the inevitable vagaries of time and circumstance.

Finally, implementation is not a universal concern. Rather like the issue of participation (and for much the same reason) it arises principally in the public sector. Implementation functions as an alternative to marketplace incentives, arrangements, and choices. It pertains to "public" (ostensibly indivisible) goods provided by public institutions. Social policy accentuates these tendencies, for coverage is expected to be comprehensive, or nearly so, for a given category of citizen, while what is being implemented reflects an officially endorsed definition of social need, not an investment decision for private (i.e. highly divisible) gain.[4]

In short, implementation is not the only reason why the desired does not happen. Nor is improved implementation a panacea. Many other parameters condition success, much as they condition implementation itself. What the topic of implementation does is offer a handle to understanding that invites remedial reform when necessary. It converts the abstractions of declared policy into more concrete and observable courses of action.

Thinking about implementation is especially worthwhile in nutrition, health, and related policy contexts infused with the complexities of popular will, motivation, beliefs, and behavior. Despite recent reforms, nutrition planning has been notoriously inattentive to the "black box" between planning and evaluation (much of which is implementation), while operational analyses of nutrition programs are few and of very uneven quality (27, 29, 71, 73, 81). Moreover, nutrition programs typically exhibit a host of qualities that accentu-

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[4]There is no inherent reason why implementation should not be addressed in the private sector. Much that is subsumed under the rubrics of "management" and "business administration" entails implementation. Yet the terminology used in the public and private sectors tends to be different (for example, "services" vs "products," "beneficiaries" vs "customers"), and the literature on implementation is derived principally from failures of policy, not investment.

ate difficulties in implementation, such as reaching the preschool children of poor families on a sustained basis, relying on low-level operatives for initiating and maintaining contact with them, and resolving logistical problems of supply and delivery, particularly when the shelf life of foods and medicines is a factor.

The topic of implementation is, therefore, a natural one for nutrition planning. To ignore it is to risk the persistence of unnecessary error, missed opportunities, and thwarted learning. If we in the nutrition field are serious about improving the performance of the many things we recommend and do, we need to look critically at our own programs in action. As a backdrop to such an effort, we would do well to consider the lessons made available from other policy contexts.

Three caveats warrant mention before proceeding further into the subject matter. First, nutrition planning is the reference point for the observations made in this essay. Although the argument has a broader applicability, no attempt has been made to relate it to other spheres of action. Similarly, implementation themes not central to nutrition planning have been downplayed or ignored.

Second, within nutrition planning, the topic as addressed here pertains almost exclusively to those interventions featuring the delivery of services (e.g. supplementary feeding, nutrition education, and primary health care). Technical responses to malnutrition such as plant breeding and the fortification of foods are really not relevant to the discussion. Nor are consumer food price subsidies and other means of manipulating markets to benefit the poor. Much of the important agenda of "food policy analysis" (90) lies beyond the scope of this exercise as a result.

Third, the text draws disproportionately on a relatively small number of studies that successfully go beyond case experience to generalize in ways helpful to theoretical understanding. Four studies stand out in this regard (6, 70, 77, 95). Several others are used to communicate more specific themes (32, 39, 51, 73, 94), while still others provide a general background on the topic (22, 38, 57, 63, 81, 93, 98–100).

Before turning to the principal insights and messages of the implementation literature, we should note two sharply divergent perspectives concerning implementation itself.

One perspective regards implementation as a nearly automatic extension of policy decision-making and planning. Known as the machine theory of implementation, this perspective presumes well-articulated goals, detailed specification of desired action, tight controls, monitoring, and evaluation. Implementors do what planners and those who write job descriptions tell them to do. They are trained in the skills required for the tasks identified and then are supplied, supervised, and otherwise supported to ensure that they perform their prescribed functions accurately and competently. Creativity lies in planning and program design. Implementors have little latitude for discretion; their

effectiveness comes from knowing what they are expected to do. In effect, "good implementation is the irresistable unfolding of a tautology" (59, p. 179). Machine theory, with its assumptions of plan and control, rationality and order, unitary authority and high predictability of both process and outcome, dominated thinking in the nutrition planning field in the early to mid 1970s and persists, to a greater or lesser degree, in the present (1, 13, 45–47, 58).

A second perspective equates implementation with transaction. "Implementation can fruitfully be seen as a series of dealings between program representatives and others whose actions are necessary to attain the program's goals. . . . The concept of transaction implies deliberate action to achieve a result [and] conscious dealings between implementors and program environments, . . . particularly . . . negotiation among parties with conflicting or otherwise diverging interests . . ." (95, p. 181). Granted that policy choices define the agenda and that planning plays an important formative role, the concept of implementation as transaction emphasizes an on-going process of bargaining and exchange that shapes policy outcomes. Implementation is not a logical extension of some master plan or of organizational design. Nor is it a tightly knit, consensual, and orderly process. Rather, it is inherently pluralistic, often conflictual, and intrinsically messy. In this perspective, implementation is an opportunity for creative problem-solving, with program management being the key to success. Planning and implementation are linked in an interactive, if necessarily unstable, state of mutual dependency.[5]

These two alternative conceptions have powerful implications for the design and implementation of nutrition programs.

## WHAT WENT WRONG?: THE LITERATURE'S PRINCIPAL INSIGHTS

All policies and programs have a *problematique*. They differ in what they seek to accomplish, in the priority they enjoy politically, in the resources made available to them, in the mechanisms at their disposal, and in the environment into which they are introduced. All of these factors influence the prospects for success. So too does implementation. Policies and programs are likely to

[5]The leading theorist of this approach is Warwick (94, 95; see also 92). Two variations on the idea of implementation as transaction are implementation as games (6, 75) and implementation as evolution (59). They share with the transaction theme the belief that implementation is a semiautonomous process with a dynamic of its own, that the essence of good implementation lies in seizing opportunities and working around constraints, that discretionary latitude is a virtue as well as a necessity, and that—at root—implementation is a process of learning and correction, not the mindless execution of formal duties. These themes are well developed in (16, 39, 40, 51, 52, 70, 73).

experience difficulties in implementation to the extent that they depend on innovative organizational forms, untried technologies, complicated methodologies, extensive coordination, and altered thinking and behavior on the part of target groups in society (32; also notably 16). So many things can go wrong in implementation and at all levels and stages of the process that an exhaustive listing would only numb the mind and dispirit the soul.

Fortunately, much of what might be included in a catalogue of catastrophes is easily subsumed under a rather small number of conceptual headings that permit seeing both forest and trees without becoming lost in the latter. What follows is a review of what the implementation literature advances as three principal sources of breakdown. There are others, but these seem especially germane to nutrition programs intended to help poor people in poor countries.

## Conceptual and Organizational Complexity

Complexity increases with the number of ministries or other organizational units involved in policy-making and implementation, the number of interest groups with some stake in the policy, the number of sensitive issues raised by the policy question, and the variety of rules and bureaucratic layers involved in execution. Overall, the greater the complexity, the more formidable the planning required and the more difficult the implementation (94, p. 27).

There are many types of complexity. Some are internal to plans and programs for these differ in their objectives, technical specifications, fiscal arrangements, logistics, and organizational structure as well as in the adaptations called for in staff attitudes and conduct. Other sources of complexity are interactive, linking a program to the broader environment in which it is to function. One consideration is the magnitude of change being sought. Here too plans and programs differ greatly in the extent to which they seek adjustments in social, economic, and political relationships and in the extent to which behavioral change among beneficiaries is either an explicit goal or a necessary means.

Nutrition planning has been characterized by a high degree of complexity in several respects. The plans themselves are often elaborate documents based upon sophisticated analyses of available data. The course of action identified is typically multifaceted, if no longer multisectoral, inasmuch as the complexity of the problem and its determinants disposes to complexity in the solutions advanced. Operationally lots of people are to do lots of things. (It is a rare plan that features only one intervention; most feature several.) A premium is placed on coordination and, at times, integration of effort, requiring the people and organizations involved to subordinate their autonomy in pursuit of the efficiency and effectiveness desired.

Moreover, the goals of nutrition plans and programs tend to be ambitious, reflecting a political need to make the impact promised commensurate with the

effort proposed.[6] Unfortunately, alleviating malnutrition, especially protein-calorie malnutrition, is a difficult task under the best of circumstances. The problem is embedded in a total ecology of deprivation. Its determinants are multiple and difficult to manipulate. Single interventions (e.g. health care delivery, weaning foods, or rural extension services) are easily neutralized. In the early to mid 1970s fear of doing too little became an incentive to try to do too much, abetted by uncertainty as to what actually would work.[7] "Public policy has been given a bad name by efforts to accomplish what no one knows how (or is willing) to do," Pressman & Wildavsky (97, p. 166) noted more than a decade ago, when multisectoral nutrition planning was on its launching pad. The years since have confirmed their statement, and complexity is a prime reason.

Three broad insights emerging from the implementation literature help to explain some of the problems that nutrition planning has experienced and still faces in its attempt to become more effective. First, things are always more complex than they originally seem. As Pressman & Wildavsky (70, p. 93) also noted, "the apparently simple and straightforward is really complex and convoluted." Their book and other studies of ostensibly noncontentious, even pedestrian reforms document this point powerfully (6, 20, 78, 89). Complexity creeps into programs whether intended or not as the politics of process replaces (or is added to) the politics of purpose.

Second, conceptual simplicity is essential. This is because operations are always more complex, and hence more difficult, than are the ideas giving rise to them. If one begins with conceptual complexity, operational complexity is guaranteed. Plans and programs that are conceptually intricate and difficult to keep clear in one's head are extremely susceptible to breakdown. Herein lay a problem with multisectoral nutrition plans derived from systems analysis: being suitably comprehensive became a euphemism for being notoriously complex. Even the integrated delivery of services through the health sector alone is so organizationally and procedurally complex that it taxes the capabilities of many governments (2, 5, 27, 61, 73). All too often in the social sector, intellectual aspiration and operational feasibility are inversely related. According to implementation theory, the wise course is to keep things as simple as possible from the very beginning.

Third, operational complexity is compounded by the number of steps involved in the chain of causality, by the number of actors whose preferences

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[6]This is not to say that the concern for impact endures much beyond the funding process. Rarely are there political costs attached to poor implementation and performance, the exceptions being mostly where politicization results in accountability from below (34, 73, 74). Promising significant impact within a reasonably short time frame is typically a means of satisfying international benefactors and of pleasing political patrons (40, 69). See Solon (85) for a likely example.

[7]These concerns were part of the rationale behind multisectoral nutrition planning. For a reassessment based on World Bank experience see Berg (11).

determine the outcome of each step, and by the number of discrete decisions informing their interaction. The more steps, participants, and decision points, the more difficult the process. Cohen's review (18) of integrated rural development projects found these qualities to be associated with difficulties in obtaining cooperation and maintaining coordination while also being a disincentive to local participation in project design and implementation. Pressman & Wildavsky (70, p. 93) discovered the "geometric growth of interdependencies" leading to disagreement, delay, and eventual failure. They calculate that expanding employment opportunities for the underprivileged in Oakland, California, entailed no less that fifteen institutional actors with widely differing interests and priorities, resulting in thirty decision points for a public works program alone, each involving different clusters of actors. The cumulative total was seventy specific agreements leading solely to the letting of contracts for the construction of an airport hanger. This process covered the better part of six years and, with the need for seventy clearances, had a very low probability of success.[8] It is little wonder, therefore, that Pressman & Wildavsky (70, p. 87) bemoan the complexity of joint action or that Warwick (94, pp. 43–51) defines plan complexity prominently among the factors disposing to failure in implementation.

In sum, difficulties in implementation are compounded by the magnitude of change to be accomplished, by the intricacy of program design, by the number of actors involved, and by the volume of transactions required. In each case the more, the worse. As Pressman & Wildavsky (70, p. 92) learned, "An agency that appears to be a single organization with a single will turns out to be several suborganizations with different wills." The more agencies, the more wills and the greater the likelihood that purposes, priorities, and institutional interests will diverge. Programs that call for extensive coordination are especially vulnerable for this reason. So too are programs that rely heavily on popular support and participation for their success. These are all sources of complexity, and there are others (the technologies to be employed, the logistics of supply, accounting procedures, etc). Individually and in combination, they confirm the basic message of the implementation literature that simplicity is a virtue and complexity a source of grief.

## Long Time Frames and Delay

[T]he longer the duration of implementation, the slimmer the possibility that the original policy will prevail . . . (16, p. 289).

Related to complexity is time. Programs with ambitious agendas and detailed operational plans requiring interministerial coordination are likely to have long

[8]At a probability of 80% agreement at each decision point, the likelihood of success was about one in a million (70, pp. 94–108).

time frames because complexity adds to the time required to organize, activate, and accomplish.

Time is usually thought to be a necessity if policies and programs are to accomplish their goals. The program assembly process of identifying actors and tasks, letting out contracts, obtaining materials, training personnel, and building networks of logistical support requires considerable time even in advance of doing the things that are supposed to be done. The process of program implementation is itself typically a matter of years, especially in the social sector. Certainly improvements in nutrition and health do not come easily in most instances; sustained interaction between the delivery system and its beneficiaries is essential to success (60, 102). When the number of people to be served is large and when the area to be covered is broad, programs take on time frames that, understandably, are considerable. Indeed, it is not unusual for experts to bemoan the short time perspectives of political leaders and their inclination to prefer ventures of high visibility and rapid return over the slower, more basic and difficult if less sensational ventures believed critical to longer-term gains for society. Others warn of the frustration born of impatience and caution that early judgment concerning the performance of a project or program can lead to a premature and self-fulfilling declaration of failure. Hirschman's celebrated "principle of the hiding hand" (40) is, in part, a plea for time.[9]

Interestingly enough, the implementation literature offers a very different conception. Time is not the ally of implementation. "[T]he greater the length of time required for implementing a plan," writes Warwick (94, p. 49), "the smaller its chances of success." The explanation is three-fold. The longer the time frame, the greater the risk of diffused commitment and energy, the more likely it is that changes in political leadership will subvert important aspects of the program, and the greater the potential for general consensus to fragment given the on-going need for specific decisions. As Pressman & Wildavsky (70, pp. 98–99) observe, disagreement over means is just as likely and, in consequence, even more serious than disagreement about ends, the reason being that means "are what the action is about" whereas "ends are always around the corner." The literature on implementation records the debilitating effects of new leaders coming to power with their own agendas and priorities, anxious to put distance between themselves and their predecessors; of personnel shifts in administration changing the amount of attention and emphasis given to a program; of the eventual loss of key operatives through recycling and pro-

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[9]The "hiding hand" refers to the adaptations made by astute project managers in the face of unexpected opportunities and constraints. It is the salvation made possible by creative problem-solving when programs experience difficulties that otherwise would dispose to their premature abandonment.

motion; and of unintended consequences taking their toll (6, 16, 33, 39, 73). Moreover, time takes the edge off policies and programs conceived in an atmosphere of crisis, and it permits scrutiny to raise questions about performance, basic design, and general merit.

In sum, if programs require time in order to accomplish their goals, time also constrains their capacity to do so. The literature implies that most policies and programs have some kind of safety period after which the latitude for self-correction diminishes as the corrosive forces of derailment take over. There would appear to be considerable opportunity for theoretical refinement relating program types to contextual parameters in terms of their safety period, but the promise remains unfulfilled.[10]

What makes the question of time a matter of particular urgency is the fact that delay is so common. Bardach (6) defines delay as one of the three principal perils of implementation, the other two being underachievement and cost overruns. Along with disparities of purpose, delay is a principal cause of failure. Ironically, it is predictable yet always seems to catch planners and program managers by surprise.

Delay reflects other features of implementation. "[It] is a function of the number of decision points, the number of participants at each point, and the intensity of their preferences" (70, p. 118). The greater the need for coordinated action, the longer and more complicated the decision paths required to attain program goals, the more people and interests involved, and the greater the number of clearances necessary in order to proceed, the more likely it is that delays will occur. "Often enough," Bardach (6, p. 180) notes, "delay is a synonym for perpetual procrastination, which is in turn a synonym for effective resistance or obstruction." Typically, however, it is less purposeful than incidental, a product of goal atrophy, social entropy, and the sheer volume of transactions to be performed. Externalities (or what appear to be externalities) abound, making it very difficult to maintain control over the timing of activities and events.

If delay is inevitable, it is also costly. Delay saps energy, erodes commitment and discipline, makes integration of effort all the more difficult, invites desertion, and results in a general loss of momentum. Inefficient and unproductive, it cuts into the safety period available to a program, enhancing its *problematique*. Occasionally, delay can be a useful tactic when the need exists to build consensus, overcome opposition, and develop capabilities. More often than not, however, it is a curse of implementation and one of the principal reasons why plans go awry.

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[10]The case study method typically featured in studies of implementation impedes comparative analysis and theory-building, although the work of Hirschman (40) is an exception.

## The Importance of Clients

> The transactions most vital to implementation are those between the programs and the clients. No amount of success on other fronts can compensate for the rejection of a program by its intended clients (95, pp. 189–90).

Whether referred to as target groups, beneficiaries, or clients, the people who stand to gain the most from public policy have been known to influence it negatively in a manner that would seem contrary to their own interests. This tendency is pronounced in the case of social service programs, especially in those programs attempting to engineer significant behavioral change. Social services break down when the clients are reluctant to accept them or when the circumstances of their delivery become a disincentive to utilization. Programs seeking to instill a new understanding among clients while altering their attitudes and practices concerning food, hygiene, and sex are likely to meet with powerful resistance, however well intentioned they are. When success depends critically on client support and participation, the transactions that take place between a program and its intended beneficiaries are crucial. If they fail, the program fails (73, 95).

The implementation literature highlights four sources of breakdown in program-client relations.

1. Client characteristics: Dispersed, inarticulate, and unorganized social groups are extremely difficult to mobilize. Poor people generally have to contend with high opportunity costs in order to take advantage of government programs, while preschool children are the most difficult of all to reach and serve. Institutional capabilities are taxed severely when one's intended beneficiaries are, at one and the same time, everywhere (load) but nowhere convenient (access). Similarly, transactions with such clients are easily impeded by class and/or cultural barriers, as illustrated in the delivery of health care by modern practitioners to traditional clients (48, 84, 86, 88). When villagers are perceived as passive recipients and allowed to remain so, lots of things do not happen (27, 73). When they are viewed as mere receptacles of government largess with their feelings, preferences, concerns, and fears ignored, lots of things go wrong (35, 93, 95).

2. Issue salience: Implementation runs into difficulty when clients fail to appreciate what is being done for them. Services that are not understood are not likely to be utilized. Those that offend cultural norms or threaten personal dignity are candidates for outright rejection. The less valued a program is by those for whom it is intended, the greater the need for mobilization and education, both of which place a premium on organizational capacity, tactical sensitivity, and time. "[A]s a rule of thumb," Warwick (94, p. 29) notes, "the formulation of plans should not run far ahead of societal concerns about the issues they address."

3. Sustained participation: To the extent that program success requires a high level of system-client interaction over time, implementation is confounded by the need to maintain a regular and effective presence in the community, to maintain a staff morale and appropriate standards of performance, and to keep one's target groups interested and coming. Even when actual contact is intermittent—e.g. once a fortnight (barring emergencies) in the usual program featuring the monitoring of child growth, take-home supplementary feeding, and primary health care—participation rates must be kept as high as possible for as long as possible if the intervention is to work.[11] For a variety of reasons—among them low salience, high opportunity costs, and insensitive treatment—it seldom happens. Clients attend sometimes but not others and, over time, drift away.[12]

4. Behavioral change: As Wray (101, p. 1) noted a decade ago, "health program success is negatively correlated with the behavioral change required of the beneficiary." While smallpox and malaria eradication campaigns have enjoyed considerable success for this reason, nutrition, family planning, and much primary health care typically have not. Behavioral change adds to the burden of implementation because it requires sustained interaction over time and because it places a premium on interpersonal relations. Programs that must motivate people to use their services and then must educate them in order to derive full benefit are especially vulnerable. Another theme in the literature is that programs themselves run afoul of the need for behavioral change among operatives in the system (27, 39, 73, 87, 95). The more that this is so, the less it is likely to happen and the lower the prospects for successful implementation.

Difficult client characteristics, low issue salience and/or affect, the need for sustained participation by beneficiaries, and the special demands of behavioral change all add to the difficulties of implementing social sector programs. Moreover, they tend to assert themselves when the state is ambivalent about its own relation to society; that is, when the inevitable tension between norms of central decision-making and control, on the one hand, and norms of local initiative, responsibility, and control, on the other, remains unrelieved. Field staff are often buffeted by this tension, the resolution of which determines both their discretionary latitude and the prevailing direction of their accountability (56, 57). Their dilemma is accentuated by the disparity found in many low-income countries between the rhetoric of policy (participatory socialism) and

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[11]Child participation in take-home supplementary feeding programs is normally recommended for a minimum of one year (2, 4).

[12]Warwick (95, p. 37) notes that in many family planning programs large numbers of initial "acceptors"—at times more than half—drop out. One reason in Mexico is that "persons living in a culture of subsistence respond poorly to a program organized around clinics and bureaucratized methods of service delivery" (95, p. 81). This phenomenon has been noted elsewhere as well (29, 73, 86).

the reality (administrative authoritarianism) and by the tendency for political leaders to send mixed signals to those who implement policy (the state as servant and responsive to popular will vs the state as mobilizer and guide). When the echoes of ambivalence reverberate, the usual result is confusion, inconsistency, and public skepticism (8, Ch. 7; 30, 39, 64). When, as is usually the case, the issue is settled in favor of command down and accountability up, the result is all too often insensitive implementation and alienation of beneficiaries. These permutations reveal "how fraught with difficulties is the process of implementing participatory development" (30, p. 2; see also 12, 15, 17, 53, 91).

## Summary Observations

Problems associated with complexity, time, and system-client transactions are dominant themes in the implementation literature that have special relevance to the planning and management of nutrition programs in low-income countries. Together with issues of political will, organizational capacity, the combination of inputs to be employed, and the choice of technologies—all familiar issues in the nutrition field—these three themes form a major part of implementation's *problematique*. That they are not always sufficiently appreciated is the principal reason for this essay.

The implementation literature does have a bias. It is profoundly pessimistic, even cynical. As their splendid subtitle declares, Pressman & Wildavsky (70) consider it amazing that US government programs work at all. Grindle's book (32) on policy implementation in the Third World contains nine case studies, eight of which are analyses of failure. Warwick's *Bitter Pills* (95) reviews population policies and their implementation in eight developing countries; few of these policies can be said to have worked out well. In offering a seemingly endless litany of all the things that can be expected to go wrong in public programs, with the explanations ranging from pettiness to political economy, the literature communicates a feeling of helplessness. Big government means bigger implementation means underachievement, delay, and excessive cost.[13] The contrast with the heady optimism of planning models could not be more striking.

One of the great strengths of Warwick's book on family planning is that it eschews both predetermined positivism and deterministic pessimism. Warwick exceeds all other analysts in defining the *problematique* of implementation, but he also offers a range of hopeful hypotheses. Among them, social programs are more likely to succeed when they enjoy high political support, when influential administrators participate in their formulation and design, when relevant interest groups do not oppose them, when the operating environment offers

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[13]This observation is an amalgam of Majone & Wildavsky (59, p. 165) and Bardach (6, p. 3).

minimum threat and uncertainty, when tradition is not contravened, when few rather than many agencies are involved, when one organization has clear responsibility for outcomes, when the routines required already exist or can be developed easily, when implementers are not overburdened with ill-connected responsibilities, when clients want the benefits provided and when they are favorably disposed to the implementers. In all, Warwick offers more than sixty hypotheses disposing to both success and failure. He reminds us that public policy is not, *ipso facto,* in a straitjacket and that implementation does not lead inexorably to failure (see also 16, 51, 63, 68). If many of his hypotheses are simple truths, they comprise a useful checklist nonetheless, and they crystalize the latitude that remains for creative administration.

Nevertheless, implementation has been a pervasive Achilles' heel in social sector programs, and the literature on implementation explains why. The insights summarized above are surprisingly simple yet elusive in practice. They, in turn, lead to several inferences and conclusions having implications for how nutrition programs should (and should not) be planned, managed, and activated in society. These are discussed in the next two sections.

## WHAT THE INSIGHTS MEAN GENERALLY

Implementation is clearly an important part of the policy process. Not only does it represent the activation of intent; more to the point, unless conceptualized properly and then managed with skill, it functions as a source of delay, distortion, and derailment. To ignore implementation is to leave policy unprotected and at the mercy of hostile forces. To address it is to improve the likelihood that these can be held at bay or maneuvered around, thereby enhancing the prospects for success.

This section addresses one general implication of the insights reviewed, namely that the divorce of implementation from planning is a practice harmful to the attainment of policy goals. Because this is easier to say than to do much about, consideration is given to blending the notion of implementation as transaction with the notion of development projects as policy experiments. When this is done, it becomes apparent that implementation offers unique opportunities for social learning (15, 44, 51, 52, 68, 77). Also apparent is how counterproductive both machine theory and comprehensive planning have been as vehicles for promoting development in low-income countries.

### Planning and Implementation: The Need for Linkage

The separation of policy design from implementation makes little sense in concept or in practice. Implementation is no more the faithful and routine unfolding of a master plan than planning is exclusively an analytical exercise that defines the course of action to be pursued. As Rondinelli (77, p. 15) has argued, "Planning and implementation must be regarded as mutually dependent

activities that refine and improve each other over time, rather than as separate functions."

Unfortunately, it is easier to assert the need for linkage than to forge linkage. In most low-income countries planning and implementation are, in fact, independent activities performed by different people in different units and levels of government. In the usual situation planners and implementors are separated organizationally, spatially, and by rank. [14] The former typically are economists and technical experts whose mandate is to determine what can and should be done with available resources. The latter are managers and functionaries whose responsibility is to carry out the duties prescribed. Nor does having an "implementation plan" satisfy the need for linkage. Implementation plans are designed by planners as a preproject specification of tasks and responsibilities. While the attempt to anticipate operational needs and problems is laudable, the net effect is often to reduce the discretionary latitude of those charged with implementation (77).

So the role of planning remains ambivalent, as does its relationship to implementation. On the one hand, planners are called upon to codify the national agenda and to recommend an optimal use of resources. On the other, they are increasingly absorbed in operational detail, identifying scopes of work, chains of authority, and mechanisms of coordination and control. At both levels what they do is subject to nullification. How often we have seen the big picture, constructed so meticulously by planners, come unravelled under political pressures that never informed their deliberations. How often, too, the organization charts and activity flows of operational planning have been shed as lifeless shells after the discovery that coordination tends to be a euphemism for coercion and the demonstration that different actors in the system not only have wills of their own but, in addition, display dispositions and capability limitations not adequately appreciated in advance (6, 70, 95). The dilemma of thwarted expertise and precision is well summarized by Warwick (94, p. 11): "To treat planners as a disembodied cerebrum mounted above the development effort is to consign them to irrelevance. To ask them to be the ultimate controllers of implementation is to cast them into the lion's den of bureaucratic politics."

The solution is to find ways of combining Warwick's transactional approach with Rondinelli's perception of development projects as policy experiments. The notion of transaction directs attention to influences on policy outcomes that are external to the planning process. The formal modeling of applied economics is complemented by political sensitivity to the relevant people and organizations, in and out of government, whose interests and behaviors inform the policy environment. Prominent among these are implementors themselves and one's intended beneficiaries. Implementation as transaction entails for-

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[14]See Field (26, p. 235) for more on this hiatus as it affects nutrition planning.

mulation of a strategy to harness available energy behind a program—a process of consensus generation, coalition formation, and a conflict deflection—combined with the management skills to maneuver the program through the inevitable "obstacle course" (70, p. 112) of specific agreements, clearances, and tasks. The transaction model differs from machine theory in acknowledging the process of implementation to be uncertain, even precarious, yet inherently dynamic and potentially creative. It also differs from machine theory in accepting implementor discretion as inevitable and as an asset, not a liability.

This is where the experimental approach to development projects dovetails so nicely with the transactional approach to analysis. As championed by practitioner-theorists like Korten (51, 52) and by scholarly observers like Rondinelli (77, also 15, 40, 44), the experimental approach encourages flexibility, responsiveness, and learning as against the specification, efficiency, and control characteristic of machine theory. Although each approach is a response to uncertainty, the responses differ markedly. Machine theory compensates for what is not known by acting on what is; it copes with uncertainty by meticulous program design. The experimental approach concedes that the range of ignorance is too vast and consequential to allow for blueprints. In Rondinelli's words (77, p. 19), "Unknowns and uncertainties affect nearly all aspects of development projects, from the definition of problems and the feasibility of alternative interventions to the choice of the most appropriate technologies and organizational arrangements." The experimental approach compensates for uncertainty by trial-and-error implementation.

Intellectually, the experimental approach is not without shortcomings. Although the rationale for it is cogent enough when addressing complex problems like malnutrition in settings ill-defined save for their poverty, it is not entirely clear what trial-and-error implementation entails. One suspects that, in practice, it is not (or need not be) all that dissimilar to what actually takes place in the aftermath of a carefully crafted planning exercise. Moreover, the experimental approach would appear to be more serviceable in small, locally managed projects where the roles of planning and administration are intertwined than in large systems where they are (often excessively) divorced and where learning tends to be fragmented, difficult to integrate, and hence noncumulative.[15]

[15]Rondinelli's discussion (77, Ch. 4) of the four-stage sequencing of program development—experimental, pilot, demonstration, and replication—conveys this impression. So does Korten's written work, which is mostly project specific and grassroots based. It is not clear how one actually shifts from a bureaucratic style of administration to one that is distinctly unbureaucratic, especially when bureaucracies are involved. See Field (29) for a case study of the latter. Pyle (73) considers the opposite problem: moving from the experimental, adaptive style of relatively small PVO (private voluntary organization) projects to bureaucratized management of larger programs. That transition is laden with difficulty. See also Pyle, Sabin & Martin (72).

Nevertheless, the experimental approach possesses a number of useful antidotes to biases implicit in the plan and control model. Planning is put in proper perspective. Its purpose is not "to control in fine detail" what will be done in implementation but to increase the probabilities that appropriate action can and will be taken as more is learned about problems, constraints and opportunities as a project progresses" (77, p. 21). Implementation is elevated from the predetermined execution of a plan to guided improvization through imperfectly charted waters. It becomes a series of incremental steps, each providing essential feedback concerning approach, instruments, and context that will permit suitable adaptation (40, 55). An analogy is that of a tapestry to be woven, not of a blueprint to be followed. Implementation becomes an innovative enterprise not only in terms of *what* is to be done but *how* as well.

Perhaps the most important contribution of the experimental approach concerns learning itself. In machine theory, learning follows upon doing; in the experimental approach, learning is part and parcel of doing. One does not wait for evaluation to discern the lessons of experience after the fact. Instead, this is a function of implementation. "Projects thus are used, not to carry out existing knowledge, likely to be lacking, but to obtain knowledge through action" (14, p. 309). Moreover, much of the knowledge to be acquired is contextual and operational (as against being merely technical), thereby facilitating transactions in the program environment. Implementation becomes what it should be: "a long voyage of discovery" (40, p. 35) and a process of self-correction.

## Two Obstacles: Machine Theory and Comprehensive Planning

Together the transaction and experimental approaches to implementation represent the best response yet conceived to the multiple uncertainties of development, particularly social sector development with its intrinsic complexity (especially in the case of programs directed to the needs of women and children). These approaches have evolved in reaction to earlier concepts found wanting both as handles for understanding reality and even more as guides to effective action. In combination with insights from the implementation literature concerning complexity, time, and clients, these approaches suggest two conclusions of general validity that have particular importance to the nutrition planning field.

One is that machine theory, whether in full bloom or in residual fragments, is counterproductive and should be discarded once and for all as an obstacle to success. To the extent that people actually believe this theory or act as if they do, development policy is in trouble. Organizations do not function as machines, Third World bureaucracies least of all (94). Yet international assistance agencies and many national planners still require levels of specification that entail excessive pre-implementation wind-up and false presumptions of rationality, order, and control (14, 77). Such requirements serve far better as

instruments of accountability than as blueprints for action. They impose an undesirable and unnecessary rigidity on implementation because to adhere often becomes counterproductive and to adjust becomes extremely difficult. As Warwick (94, p. 10) has noted, "The machine theory of organizations is now so badly discredited in the literature on organizations that one wonders how it can continue to survive in the mindset of planners and donor agencies." Unfortunately, it does, in practice if not in theory. The result is that many plans begin as visions, become straitjackets, and end as discarded or discredited monuments to arrogance.

The second conclusion suggested by the implementation literature is that comprehensive planning is an albatross, however appealing intellectually. Practically speaking, it is the wrong way to go, particularly with regard to social policy in low-income countries. One reason is that it disposes to machine theory. Another is that it equates complexity with sophistication (77, p. 143). A third is that it overloads the front end of the policy process at the expense of what follows (94, p. 11). A fourth is that the effort is too demanding in its requirements for data acquisition and analysis, for the systematic comparison of different options, and for the harnessing of total systems behind specific goals. Comprehensive planning typically makes Herculean assumptions about administrative coordination and integration of effort, while indulging in camouflaged guesswork about the prediction of impact to be achieved and benefits to be derived. These tendencies "lead away from reality, from what is feasible" by encouraging "the design and propagation of ideal models which are not only unattainable but also liable to impair rather than improve performance" (Chambers & Belshaw, cited in 77, p. 53). As Caiden & Wildavsky (14) noted a decade ago, in the heyday of multisectoral nutrition planning, comprehensive planning presumes information that is unavailable, knowledge that is nonexistent, and management skills that, at best, are rare. It also requires a degree of political stability that few new states have been able to attain. "Thus, this type of planning turns the most characteristic features of poor countries into obstacles to development" (14, p. 293). After reviewing the planning and budgetary procedures of eighty low-income countries, Caiden & Wildavsky (14, p. 293) concluded that "if we were asked to design a mechanism for decisions to maximize every known disability and minimize any possible advantage of poor countries, we could hardly do better than comprehensive, multi-sectoral planning." The implementation literature endorses this conclusion and provides further justification for it.

## IMPLICATIONS FOR NUTRITION PLANNING

These several insights and conclusions have implications for the nutrition planning field. They remind us why multisectoral nutrition planning never

really flowered despite the talent and resources put into it. Of greater practical salience today, they caution us about problems of design and implementation that are likely to arise even in quite specific intrasectoral initiatives against malnutrition.

## Multisectoral Nutrition Planning and its Aftermath

It is abundantly clear from the implementation literature that multisectoral nutrition planning, which dominated thinking and which constituted the approach to alleviating malnutrition recommended during much of the 1970s, had little prospect of working. Multisectoral nutrition planning proudly displayed all the programmatic features so devastating to effective implementation: ambitious goals, long chains of causality, organization charts featuring numerous actors, and multiple decision points. The process of multisectoral nutrition planning was conceptually elaborate and organizationally complex. It entailed long time frames and placed a premium on interministerial coordination. By reifying the planning exercise itself, it emphasized, in effect, central guidance and control over implementation. The premium given to expertise left nutrition planning largely insensitive to clients, treating them as objects to be manipulated for their own good (37).

On top of these liabilities were others. Multisectoral nutrition planning often recommended complicated methodologies, novel technologies, and innovative but untested organizational forms (nutrition planning institutes and cells, the cerebrum above line ministries). In the face of limited information and formidable logistics, it sought to engineer significant behavioral change and to predict impact. In more general terms, the multisectoral approach to nutrition planning encouraged patterns of association incompatible with the compartmentalized structure of government (26, 69). It also aspired to predetermine the course of action very much along the lines of the plan and control model; and in so doing, it placed extraordinary loads on very weak institutions (25). The fact that the entire approach was both new and untested as a means of addressing malnutrition merely added to its *problematique*.

In sum, multisectoral nutrition planning contradicted every lesson contained in the implementation literature.[16] As Pines (69, p. 284) notes in his own review of the lessons of experience, "The leap from multi-sectoral analysis to multi-sectoral intervention, never a logical necessity, made nutrition planning seem more complex than was required." He goes on to mention that mul-

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[16]Parenthetically, it also ignored the findings and theoretical inferences of the literature relating demographic outcomes—infant mortality and birth rates especially—to strategies of development (e.g. 50, 74, 76). The result is that multisectoral nutrition planning exhibited insensitivity to contextual factors critical to success (26, 28, 37, 69), while offering little more than a standard set of specific interventions that were advanced indiscriminately (and naively) as serious responses to the malnutrition problem.

tisectoral institutions were even less necessary. And yet the approach was honorably and enthusiastically advanced with hardly a murmur of dissent until it ran squarely into the stone wall of reality.[17] The implementation literature helps to explain why multisectoral nutrition planning collapsed so rapidly once tested in practice.

Today most initiatives in the name of nutrition are occurring within the health and agriculture sectors, or as PVO complements to them. Nutrition is less a guiding principle (less still a rallying cry) than it used to be. Rather it is something to be represented within established sectors, not planned for separately (69, p. 284). There continue to be discrete nutrition interventions, as there always have been; but increasingly these have become components of primary health care and broader rural and agricultural development projects.

This retreat from multisectoral nutrition planning goes a long way toward meeting the concerns of the implementation literature. Nutrition interventions have become more simple, direct, organizationally coherent, and compatible with the rest of the policy agenda than was the case only a few years ago. Nevertheless, as Bardach (6, p. 253) observes, "Programs predicated on continuing high levels of competence, on expeditious interorganizational coordination, or on sophisticated methods for accommodating diversity and heterogeneity are very vulnerable. They are not necessarily doomed to failure, but they are asking for trouble." Even intrasectoral nutrition programs that are specific in thrust and explicitly targeted remain vulnerable to the pitfalls of implementation. The warnings of the literature remain salient. Simplicity in design and operational requirements is a virtue, complexity a curse. If good planning is the key to identifying targets of opportunity, adaptability in implementation is the key to eventual success. Programs that treat their intended beneficiaries as mere receptacles or as objects of manipulation are unlikely to stimulate the understanding, trust, and support essential to sustained utilization.[18]

Most important of all are sensitivity to contextual parameters and a willingness to learn in the process of doing. Unlike family planning, nutrition programs do not arouse serious opposition, but it is also the case that they rarely command high political or administrative priority. Nutrition must be energized, and this is a distinctly political task that begins with advocacy and extends

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[17]For early expressions of doubt concerning the feasibility of multisectoral nutrition planning, see Hakim & Solimano (37) and Field (26). McLaren (65, p. 742) equated it with "holistic daydreaming." Sadly, neither these authors nor any other nutrition planning experts seem to have been aware of the rich literature on planning and decision-making available at the time which would have tempered expectations concerning what the multisectoral approach was likely to accomplish (e.g. 14, 15, 40, 55, 96).

[18]For specific ideas concerning how to improve the design and implementation of nutrition programs and their ultimate effectiveness, see Pines (69) and Pyle (73).

through implementation. Nutrition planners are really project managers harnessing and allocating energy throughout the process, hence the need for understanding of the political, administrative, and sociocultural environments involved.

The importance of learning in nutrition planning is underscored by how little we really know beyond the tenets of nutrition science and the formulas of applied economics. Experimentation is a necessity when, in Rondinelli's words (77, p. 91), "problems are not well-articulated, elements or characteristics of a problem have not been clearly identified, alternative courses of action have not been widely explored and their impacts cannot be easily anticipated." These are the usual conditions facing us in the nutrition planning profession, and they call for an implementation style that is incremental, flexible, and unabashedly experimental.

Herein, of course, lies the rationale for the small-scale demonstration and pilot projects that have always characterized the health and nutrition fields in low-income countries. The need to test new technologies and combination of services has long been considered essential to the determination of cost-effective approaches that might then inform public policy on a larger scale (31, 49, 80). Nevertheless, two considerations are worth bearing in mind concerning experimentation: first, demonstration and pilot projects are not the same, and their implications for larger programs are quite different; second, the need for experimentation increases, not decreases, as nutrition programs expand from their initial trial base.

## Policy Experimentation: Demonstration Projects, Pilot Projects, and the Scaling-Up Process

Demonstration and pilot projects differ in both design and purpose. Confusing them leads to false expectations followed by disappointment.

Demonstration projects are intended to show that something can be done in an environment, or that a given goal (e.g. reducing infant mortality) can be attained by virtue of doing certain things in certain ways. Accordingly, the inputs and operational characteristics of demonstration projects are often exceptional and extremely difficult to replicate on an expanded scale.[19] By contrast, a pilot project represents the humble beginnings of what is to be a larger program in which the input ingredients and operational characteristics—including management quality and style—remain much the same as the effort unfolds. A pilot project is supposed to be a complete or nearly complete microcosm of the macro program, the only significant difference being scale.

[19]To illustrate, eight of the ten health/nutrition projects whose accomplishments are highlighted in Gwatkin, Wilcox & Wray (36) were essentially research projects carefully designed and administered in the field by scholars.

Demonstration projects, on the other hand, typically feature such distinctive managerial, manpower, logistical, and process attributes that replication is seldom even possible. Nevertheless, when the model of a demonstration project is blindly assumed to be appropriate for a large-scale program, these attributes usually assert themselves with devastating effect. Indeed, a basic problem with many so-called pilot projects is that they are "pilot" in technology only and "demonstration" in all or most of their other parameters. The more that this is so, the greater the problem of scaling-up will be.[20]

In effect, for pilot projects to be useful as policy experiments, they must be realistic in their operational characteristics. This means that the total approach be transferable, the "who" and "how" as well as the "what" (87). Two tendencies common to nutrition programs make it difficult to keep pilot projects pilot. One is the need to show results. The more important it is to achieve impact or to test the capacity of an experimental intervention to obtain the results desired, the more likely it is that the experiment will resemble a demonstration project because of the premium placed on quality of performance. So too with the second tendency common to nutrition programs, the high probability of their encountering organizational, logistical, and motivational difficulties. The more they do, the greater the likelihood that managers will introduce special coping mechanisms in order to keep the experiment on track; and the more this happens, the lower the likelihood that the experiment will function as originally intended. Once again, the pilot project becomes a demonstration project.

Moreover, the very process of scaling-up has profound implications. When replication means expansion, as it does in moving from prototype to program, two critical parameters change: scale and setting. The level of effort increases enormously with expansion, with extensiveness replacing or being added to intensity. Material requirements and personnel recruitment are affected, as are organization and management. All become more complex and demanding. Similarly, the nature of the relationship between a program and its clients is subject to change as the number of people to be served increases. The variety of people and their circumstances also change when expansion entails moving into new ecological, economic, and cultural environments. Warwick's transaction model reminds us that these new elements are likely to be influential. When sponsorship shifts as well, as from voluntary agency to government, a major parameter changes that is extremely prone to result in incongruities between structure, culture, and strategy (29, 68, 73). When government redefines the scope of work to be performed, as by adding new responsibilities to old or by

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[20]The conception of pilot and demonstration projects employed here follows that of Pyle (71, 73), not Rondinelli (77). See References (72) and (73) for an in-depth analysis of problems associated with the scaling-up process.

broadening the target groups to be served, further changes are introduced. The cumulative effect of shifts in scale, setting, sponsorship, and scope is to reduce significantly the probabilities of success.

These considerations reveal how fraught with difficulty the scaling-up process is. They also reveal how rare genuine pilot projects are. Moving from small to large alters many essential characteristics, as does crisis liquidation and the pursuit of demonstrable success in small-scale experiments. Shifting sponsorship from private to public confounds matters further. When all is said and done, the French proverb really holds in reverse: the more one tries to keep things the same, the more different they actually are.

In other words, the need for experimentation in nutrition programs does not end at the pilot or demonstration stage. For the reasons indicated, it persists and may even be accentuated in large-scale programs whether or not they originate in small-scale efforts. Establishing scientific validity is not the same as demonstrating operational feasiblity. The former can be done at any level, granted that smaller is easier. The latter must be done at every level in which important features of the policy environment change. Rondinelli's call for an adaptive approach to development administration is every bit as cogent in national nutrition programs as it is in localized pilot projects. What a shame it would be if trial-run creativity in the new generation of nutrition initiatives results in mindless formula adoption as scaling-up or emulation of experience elsewhere is attempted. That would be yet another victory for machine theory, unnecessary and harmful in its consequences.

## CONCLUDING THOUGHTS

The implementation literature may have its roots in other issue arenas, but it says a lot about where nutrition planning went astray in the 1970s and about how it can avoid going astray again. It is sobering to realize that nutrition planning's misadventure with multisectoral planning was well predicted, in argument, by this literature—and also by the planning literature available at the time.[21] Clearly, nutrition planning professionals would do well to follow both literatures. They are a hedge against mistakes that are so easy to make when one functions in a policy vacuum, and they are a healthy antidote to the illusions of technocratic omniscience and omnipotence that seem to plague our trade. The implementation literature, in particular, commands attention because for the past several years it has been expanding into related themes central to our

[21]The book by Pressman & Wildavsky (70) was published in the same years (1973) as the AID manuals (1) on nutrition planning, Berg's seminal book on the topic (9), and the MIT conference's compendium of interdisciplinary insights (10). The books by Chambers (15) and Caiden & Wildavsky (14) appeared in the following year, while the studies by Lindblom (55), Waterson (96), and Hirschman (40) were published very much earlier.

concerns: program management; centralization, decentralization, and devolution; popular participation; and political economy.

Nutrition planning is well positioned to enrich the implementation literature in turn, benefitting both theory and practice. There is obvious merit in examining nutrition programs in action, especially from a transactional perspective. We need to learn a great deal more about how different nutrition programs function in their environment: that is, how a given system mobilizes energies and resources; how it packages and operationalizes interventions; how it generates consensus and either deflects or resolves conflict; how it structures participation; how it monitors performance and directs accountability; how it seeks to institutionalize new capabilities; and whether and how it builds self-reliance or creates vertical linkages to enduring sources of support. The reverse side of these management issues is popular responsiveness: how the intended beneficiaries react to what are, in essence, attempts to manipulate them.

In sum, implementation is the true "soft underbelly" (26) of nutrition planning as it is, in varying degrees, of other social sector efforts where the process affects the outcome. In nutrition, the plan and control model based on the machine theory of implementation is a proven failure, and not many "hiding hands" (40) have come to the rescue. In nutrition the "what to do"—often sensible—has been confounded by the "how to do it" range of concerns, which technicians seldom ponder in any depth. The danger is that, unless work on implementation is encouraged, the capacity of evaluation to detect failure is likely to outpace the ability of implementation to cause success (97).

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