

Policy research in sub-Saharan Africa: an exploration

CALESTOUS JUMA

African Centre for Technology Studies

and

NORMAN CLARK

University of Sussex

SUMMARY

This article argues that a major problem with contemporary policy analysis is that it has difficulty coming to terms with complex economic change. This in turn is probably influenced by a view of socioeconomic systems that still harks back to the classical mechanics of the nineteenth century and a relatively stable world in which social action could reasonably be informed by disinterested scientific research of a traditional kind. By means of a review of some recent policy analysis literature and by focusing on issues relating to development issues in contemporary Africa, the article maintains that a more realistic approach would recognize the evolutionary nature of modern socioeconomic systems and base policy interventions accordingly. In particular, there is a need to see 'policy' as a process of complex change requiring innovative institutional contexts and novel managerial capabilities.

INTRODUCTION

Recent political and socioeconomic changes in Africa have brought into sharp focus the role of policy reform in creating a suitable environment for change since it is becoming clear that the implementation of sustainable development programmes will depend on the degree to which African countries reform their policies to facilitate social innovation. As Chapter 8 of Agenda 21 states:

‘Prevailing systems for decision-making in many countries tend to separate economic, social and environmental factors at the policy, planning and management levels. This influences the actions of all groups in society, including Governments, industry and individuals, and has important im-

Calestous Juma is Director of Research at the African Centre for Technology Studies, Nairobi, Kenya. Norman Clark is Reader at the Science Policy Research Unit, University of Sussex, Mantell Building, Falmer, Brighton, BN 1 9RF, UK. The article is also part of a larger study being prepared in conjunction with Tom Fox of the World Resources Institution (Washington, DC). The research has been supported at various stages by the Swedish Agency for Research Cooperation with Developing Countries (SAREC); the Government of Norway; the World Resources Institute (WRI); and the Pew Scholars Program in Conservation and the Environment based at the University of Michigan. We are grateful to Mark Sagoff and Teresa Chandler of the Institute for Philosophy and Public Policy at the University of Maryland (College Park) for providing much inspiration and research support for this article.

plications for the efficiency and sustainability of development. An adjustment or even a fundamental reshaping of decision-making, in the light of country-specific conditions, may be necessary if environment and development is to be put at the centre of economic and political decision-making, in effect achieving a full integration of these factors.’ (UN, 1993, p.95)

But the prospects of introducing such reforms need to be considered against the background of recent efforts to introduce policy reforms in Africa. For example, in an assessment of the current situation, Steedman (1990, p.6) has argued that

‘despite the several external macroeconomic shocks of the last 15 years, African governments have not accorded political priority to adjusting their economic policies along rational lines. Nor have they shown much interest in exploiting their own capacity to formulate or implement economic policies or in improving their local analytical capacity. Policies have often been imposed by donors with the leverage accorded by a crisis; given a lack of economic data and analysis within government, donors have at times been forced to make rapid appraisals and to suggest measures on the basis of their own understanding of the situation. In many cases, such policies risk having little chance of success over the long run, based as they are on analyses carried out by foreign agencies with little local involvement in their production or commitment to their implementation.’

He further notes that in many African countries ‘erratic or mercurial policy making has prevailed despite the presence and development of considerable local policy making capacities.’ He concludes that ‘donors, who have usually been responsible for the maintenance or development of such capacity, need to ensure its continued and improved supply, despite the erratic nature of demand, in the hope that eventually policies will change and local talents will be used effectively’ (Steedman, 1990, p. 7). Steedman’s eloquent diagnosis, though too generalized and seemingly antagonistic, provides a useful starting point in the search for strategic ways of enhancing endogenous public policy management. The issue of policy management is not merely a matter of the supply and demand of policy analysts, although capacity building in this area is certainly needed. The problem is more that little has been done to analyse the processes typical of policy-making in Africa and to identify ways that would improve the use of analysis in policy-making. Moreover, ‘policy research’, i.e. the provision of intelligence to policy-making communities, is not offered as a specialized area of study in African universities despite a widespread recognition that the presence and use of policy research capacity lies at the very heart of a country’s ability to manage socioeconomic and political change, to steer through the difficult times, to anticipate changes in the external environment, to adapt to at least some of the changes and finally to move towards sustainable development.

Following two recent contributions in this journal by authors who have raised similar issues of methodology and metaphor (Angelides and Caiden, 1994; Bell, 1994), the central theme of this article is that an essential ingredient in enhancing the capacity for effective policy-making is the recognition of the evolutionary nature of social systems. For far too long the prevailing metaphor of the ‘policy sciences’ has been that of society as a relatively homogeneous machine, in which tools for evaluation, monitoring and control of public policy can be applied in a quasimechanistic fashion to most situations. Conversely, the reality is that most societies are experiencing increasingly rapid rates of structural change, so much so that the capacity to both

anticipate and adjust to localized events is becoming an essential ingredient in policy intervention—especially in Africa, where there is an absence of political systems that both place a premium on social innovation and also organize themselves to maximize social learning.

In order to develop this theme, the article starts with a broad discussion of the nature of the policy sciences, pointing out that the field still has no commonly accepted definition. The article goes on to suggest therefore that ‘policy’ should be viewed in the context of metaphors that practitioners use. The identification of such metaphors is likely to help us understand the evolution of the field as well as the perceptions that have shaped its character over recent years. The fourth part of the article deals with the major social factors that appear to the authors to influence policy-making in contemporary Africa and outlines a set of guidelines for policy reform. The final section concludes by focusing on the need for institutional change, especially with respect to the conduct and use of policy research. The need to develop an evolutionary approach to the policy process that not only has generality but also can help in the task of building relevant policy-making capacities in the African context is stressed throughout the article.

THE NATURE OF THE POLICY SCIENCES

What then is meant by the terms ‘policy’ and ‘policy analysis’? The theory of public policy is not new of course. It goes back to the 1950s and the era of the early ‘think tanks’, such as the Rand Corporation and the Brookings Institution in the USA, and very probably to prewar writing (Smith, 1991; Weiss, 1992). In more recent years a variety of disciplines have taken an interest in the topic and there has emerged a considerable literature dealing with how policy decisions are taken and how these are justified empirically, intellectually and ideologically.

It was in the late 1960s that the field probably started to acquire intellectual standing in the US. The impetus for its growth was provided by national and international public concerns such as those of poverty, space technology and communism. This period also coincided with major social experiments in the fields of education, welfare, government, budgeting, labour and taxation. It was felt that ‘science’ would help to solve societal problems and increasingly scholars began to be consulted by governments on what to do. And as social problems mounted and the issues were found to be inherently complex, so programmes to study them expanded, although from a disciplinary standpoint, and with a few notable exceptions, the field of policy sciences has remained largely a subset of political science. Today, however, many authorities have begun to admit that the concept of policy studies has never been clearly defined. As Emery (1993) says,

‘the striking feature about the whole field of policy studies is the lack of definition of what it is that distinguishes policy studies ... from political science, economics and applied social sciences. A common practice is to provide a simple postulate of what a policy is and then, without analysis or justification, proceed to attribute whatever meanings suit the matters under discussion.’

Indeed, in many cases the search for a definition has been actively discouraged. Wildavsky (1979), for example, confesses:

‘At the Graduate School of Public Policy in Berkeley, I discouraged discussions on the meaning of [policy] analysis. Hundreds of conversations on this slippery subject had been futile, even exasperating, possibly dangerous... What was it, then, that could be learned but not explained, that all of us could sometimes do but none of us could ever define ...’

Similarly, Dye (1992, p.3) discourages elaborate academic discussions of the definition of public policy by asserting that ‘we say simply that public policy is whatever governments choose to do or not to do’. Such discussions on the proper definition of public policy ‘have proven futile, even exasperating, and they often divert attention from the study of public policy itself’.

Kean (1994, p. 20) argues that ‘much of (this policy science) literature—(has)---had a strong linearity in its conceptual framework’, by which he means that, if policies do not achieve what they are intended to achieve, this is often held to be a problem not of the policy-making process itself, but rather of political or managerial failure in *implementing* policies. Put another way, much of the standard literature concentrates on generalized statements about the policy-making process, but tends then to be relatively weak on following through what actually happens in practice and then using this knowledge to inform theory. It is Kean’s position that all too often what actually happens in practice is that policy outcomes bear very little relationship to policy decisions. The *rhetoric* of policy is one thing. Its *result* is quite another. Indeed, there are often powerful ideological reasons why policy-makers are reluctant to face the consequences of their actions.

Criticism of this (mechanistic) position is not new of course. The classic article by Lindblom, in which he argues that the most effective type of policy procedures should avoid ‘ex ante’ means/ends formulae, was originally published in 1959. Since then a small band of iconoclasts such as Clay and Schaffer (1982) and Thomas and Grindle (1990), for example, have continued to argue similar positions by emphasizing the importance of institutional power politics and the importance for the policy implementer of preserving ‘room for manoeuvre’. Ostrom (1990) provides detailed evidence on the organizational variability that typically characterizes the management of ‘common pool resources’, and uses this evidence to mount a devastating critique on simple solutions to complex problems—such as that of privatization for example. On the policy evaluation side, political scientists such as Freeman (1985) and Rose (1991) have begun to favour a more inductive approach based upon comparative case studies of specific sectors and countries, which admit only broad policy trends, although it is not altogether clear how they expect empirical results to inform the theory of public policy.

In the absence of a common definition, therefore, it would appear to be sensible to search for the meanings ascribed to public policy in the ‘world views’ or ‘metaphors’ that apparently guide public policy research. Moreover, these should be examined according to their ability ‘to produce satisfactory explanations of the type of events which (they) investigate ... rather than (their) success or lack of success in getting results by the method of natural science (Levinson, 1966, p. 155). Accordingly, what follows is the authors’ own classification of metaphors that appear to be current in recent periods. This classification is not the only or even the best one, but it seems a reasonable point of departure for suitable analysis of the African context.

METAPHORS OF PUBLIC POLICY

The mechanistic world view—society as a machine

The dominant approaches to public policy management, which are still prevalent in most of Africa, are informed by classical organizational theory based arguably on mechanistic thought. A major feature of such organizational models is a rigid bureaucratic structure that equates jurisdiction with intellectual authority. It is assumed that such a structure is applicable in all circumstances and provides the basic elements of control and efficiency for all policy decisions. An important feature of this ‘classical’ model is that it separates policy formation from implementation. It is operated through the linear translation of policy guidelines into

implementation programmes and distinguishes ‘policy-makers’ from the ‘technicians’ responsible for actually implementing policies. In recent years the line-up of ‘technicians’ has been expanded to include non-governmental organizations (NGOs), especially in the developing countries.

It is also arguable that the dominance of this model in Africa has had a number of implications for wider participation in the policy process and hence for social learning. Firstly, many governments have maintained control over policy-making by systematically preventing other institutions from participating in the process. Secondly, policy-making is often mystified and treated as a secretive activity involving a small political elite. Thirdly, because most colonial agencies were initially designed to implement orders from political leaders, their ‘offspring’ see little reason to use analysis in policy-making. Fourthly, the tradition of policy-making in colonial states, which is still dominant in Africa, is to perceive the public not as a clientele, or even-as a resource, but rather as a source of potential problems which the decision-maker must somehow strive to neutralize. As Thomson (1961, p. 11) says, government policies are usually implemented by ‘subordinate administrators whose obedience to commands should be prompt, automatic, and unquestioning’. In addition, NGOs, which are often seen nowadays as an extension of the army of implementers, are expected to behave in the same way, although clearly they are not directly under state control.

From linear to non-linear processes

The demarcation between policy formulation and implementation started to break down as social problems became more complex, articulated for example in the early 1970s by Pressman and Wildavsky (1973), whose work showed that the formulation of policy is usually quite separate from its implementation. Conversely, they argued that implementation ‘should not be divorced from policy... and... must not be conceived as a process that takes place after, and independent of, the design of policy’ (Pressman and Wildavsky, 1973, p. 143). Further elaboration was provided by McLaughlin (1976), who argued that implementation is a ‘mutual adaptation’ process involving institutional change in response to new policies. Policy implementers interact with policy-makers by adapting new policies, co-opting the embodied project designs or simply ignoring new policies, hence underscoring the fact that implementers are crucial actors whose actions determine the success or failure of policy initiatives. This analysis was extended by Bardach (1977), who used game theory to show how implementers routinely change policy goals, divert resources to other activities, resist new policies or subvert on-going initiatives.

However, the break with the linear view of policy-making probably came with Reiner and Rabinovitz (1978, p. 322), who argued that the process was both consensual and circular.

‘The process is not one of a graceful one-dimensional transition from legislation, to guidelines, and then to auditing and evaluation. It is ... circular or looping... No one participant in the process is ever really willing to stop intervening in the other parts of the process just because his stage has passed.’

And soon afterwards further recognition that policy formulation and implementation is a product of interactions between societal subsystems was articulated by Nakamura and Smallwood (1980). The authors recognized firstly that there are complex relationships existing between the different actors who operate in the (three) policy environments of formulation, implementation and evaluation and, secondly that such environments are always in flux.

‘They are not mutually exclusive, since the same actors can participate in different roles in different environments. The concept of environment suggests there is some order in a

policy's life, but that the ordered parts can be fluid rather than dominated by a single unidirectional movement from top to down.' (Nakamura and Smallwood, 1989, p. 22)

According to Nakamura and Smallwood (1980, p. 24), the actors in each environment tie the policy system together through communication and compliance linkages. Such linkages can fail because of garbled messages from the senders, misinterpretation by the receivers or system failure (through transmission breakdown, overload, 'noises and inadequate follow-through or compliance mechanisms). Thus, the Nakamura— Smallwood model appears to draw from an ecological metaphor, in which the policy system is made up of a small number of distinct environments, which in turn are made up of arenas and actors. A policy may be initiated because of the interests of powerful actors, crisis situations and public concerns and pressures, but in such an open system not only is it 'difficult to determine how policies get into the system, it can be even more frustrating to ascertain where, when, and how policies may eventually get out of the system'.

Policy as arguments

In this metaphor public policy analysts are seen to enter into a discourse with leaders, the public and other experts in which, it is argued, language not only depicts reality, but also shapes the issues at hand. Policy discourse is characterized in the form of an argument 'in which participants present claims and justifications that others review critically' (MacRae, 1993, p. 311).¹ Before a claim is asserted and justified, there is a consensual process to generate proposals.

'Part of this process involves the winnowing of policy alternatives considered to deal with a given problem. This is a process of seeking the best proposals, for which claims can later be made, rather, than simply of making claims; it involves systematically considering arguments and counterarguments.' (MacRae, 1993, p. 311)

Policy reforms can therefore be presented as reasoned arguments rather than experiments that put questions to the test of reality. Such reasoned arguments embody the intention to change social reality itself, and not simply to use it as the source of selection pressure for new policy proposals. But social reality is mediated through language and argumentation (Majone, 1989, p. 1). We thus have something akin to a jurisprudential metaphor in which arguments are like law suits with conclusions similar to claims put forth in court. Conflicts among stakeholders are analogous to cases in law in which disputes are resolved invoking common standards appropriate to different contexts, for example in criminal or civil disputes. However, whereas the aim of jurisprudence is to study the variety of concepts and procedures used to resolve legal claims, the aim of the applied social sciences is to investigate concepts and procedures used to argue and settle issues of a more directly political nature (Dunn, 1993, p. 263).

Policy as social experiment

The concept of policy as social experiment is rooted in the application of evolutionary analogies to cumulative social change. This view starts off with the premise that social change is a product of trial-and-error learning processes which involve successive hypotheses which are tested against reality in an experimental manner akin to the process of scientific enquiry about natural phenomena. As Rondinelli (1993, p. 17) says, 'public policy-making is recognized as an

¹ This approach builds on Toulmin (1958).

incremental process of trial and error through political interaction and successive approximation.' The adaptive approach aims at dealing with development problems associated with complexity, uncertainty and ignorance over the major issues that influence the trajectory of the development process.

Critics of this approach have pointed to the fact that the experimentation is more relevant in the natural sciences than in the social sciences. Dunn (1993, p. 258), for example, says that 'appropriateness of the experimental metaphor depends in part on our success in establishing that social systems in which reforms are carried out are analogous to physical systems in which laboratory experiments are conducted', a view that it is difficult to accept, however, since it appears to presuppose the universal applicability of the scientific method. Conversely if socioeconomic systems are inherently much more unstable and evolutionary (especially in contemporary Africa) than physical systems, then most development situations will clearly require on-site generation of information. It follows that models placing emphasis exclusively on experimental analysis are unlikely to be effective. The implementation of a particular policy may generate new problems that require additional policy interventions. This adaptive approach requires that policies are designed in a flexible manner. In a similar vein, public policy change has been viewed as analogous to technological innovation, a view put forward by Polsby (1984), who argues that the culture and incentives for searching enhances a country's ability to introduce policy innovations.

Policy as interactive learning

As might have been expected, however, it is within the field of development studies that perhaps the most trenchant criticisms of the mechanistic model have begun to be made. In particular, a number of analysts have criticized prevailing theories on the grounds of their 'top-down' nature. By this they mean that policy decisions are taken centrally by political authorities without much regard for the ways in which such decisions are likely to unfold in practice. Moreover, because very often policies are not properly rooted within the communities being affected by them, there is often resistance to their implementation which could have been avoided had the policy formulation process been more participative. A good example of this broad position is given by Long and Long (1992), who argue strongly against what they describe as 'structural' approaches to the study of development and social change. By this they mean methods of analysis which implicitly assume the correctness of externally generated models, i.e. models that do not take into account the (relatively autonomous) behaviour of a wide range of relevant stakeholders who are part of the system under analysis.

Instead they argue in favour of an 'actor perspective', which also stresses the additional need to investigate all those agencies, individuals and social groups that have a stake in how the system evolves. For example, they believe there is little point in planning the installation of a new irrigation system as some kind of neutral, technical project without at the same time having regard to the various ways stakeholders will try to manipulate the system in the service of their individual interests. History is full of examples of such plans going awry simply because of the inevitable machinations of intelligent and determined interest groups. Long and Long's view is that this has frequently been allowed to happen because decisions have been taken as if the investment can be regarded as a kind of 'black box', independent of the exigencies of social complexity. Their solution is to engage the direct and 'reflexive' participation of all relevant actors in all important policy decisions, including analysts themselves, who have their own 'cognitive' axes to grind. There are a number of recent examples of this approach, such as the advocacy of participatory rural appraisal methods by Chambers, (1994) and his colleagues, and the recent suggestion of Gass *et al.* (1993), who recommend the use of a modified version of the original Tinbergen framework for economic policy analysis (Ellis, 1991).

THE AFRICAN CONTEXT

So far in this article it has been argued that the policy-making process is by no means the rational activity that it is often held up to be in much of the standard literature. Indeed, the metaphors that have guided policy research over recent years suggest that it is actually rather messy, with outcomes occurring as a result of complicated political, social and institutional processes which are best described as 'evolutionary'. If that is so the question remains: 'How does this insight help throw more light on current African developments?' In the remainder of the article these issues are explored with a view to suggesting ways in which the conduct of public policy can perhaps become more responsive to a world whose growing complexities are such that the old methods are becoming increasingly ineffective.

One important factor in this context is the growing awareness of political plurality across most of Africa whereby many regional, social, cultural and economic factors influence the process of policy-making. The definition of institutions has often been limited to formal organizational structures. However, informal organizations often shape the direction and pace of policy reform. Hence policy discussions that do not take into account factors such as ethnicity, religion, business, regionalism, gender and the armed forces are not likely to provide realistic options for reform. Many of these factors are analysed in the context of interest groups, but some are important enough to warrant special attention while growing social complexity changes the composition of such factors.

Some of these groups are now starting to form alliances. For example, women are emerging as an important political force and will in future play a pivotal role in the allocation of power. There are already institutional initiatives whose aim is to turn women's concerns into yardsticks against which policy success will be judged, particularly in agricultural production and environmental management, where women play a central role (Khasiami, 1992), although textbooks and other publications still portray men as the major actors in these sectors (Obura, 1991). Nevertheless, women are now beginning to initiate projects to change such images and claim their rightful position in society. Other types of influential groupings are NGOs, donor agencies (emerging as important political actors in Africa) and new types of agencies at state level such as ombudsmen, permanent presidential commissions, permanent statutory commissions and other *ad hoc* bodies. Not only are they exerting direct pressure on political authorities, but some of their members have been vocal advocates of political change in Africa.

A related issue concerns the impact such groups have on the management of public institutions, an issue which has acquired much prominence in recent years as a result of rampant mismanagement, corruption and abuse of office in many African countries. Leonard (1991, pp. 279—81), for example, has referred to the problem as the 'tragedy of the state commons', responses to which have often been proposed in the form of appeals to morality, transparency, good government, accountability and democracy. In the authors' view, however, such notions carry certain world views which may be in conflict with the dominant perception of public institutions in Africa. It is through a more sophisticated understanding of the popular perceptions towards public institutions that we can start to work meaningfully towards the effective management of public institutions.

The popular approach towards public (and even private) institutions in Africa is indeed that they are 'commons'. Much of the attention is therefore placed on devising methods of accessing the resources in the commons and turning them into private property or sharing them with others. It is not unusual for people to heap praise and even revere those who have illegally appropriated funds, the concern being usually about how the funds are used, not how they were acquired in the first place. In this way the pressure to turn public institutions into open-access regimes is often part of the cultural ethos. Under such cultural imperatives, it is not easy for civil

servants to perform the role of public trustees. Rather, they are seen as warriors who have gone out on a mission to secure resources for their communities and whose standing is judged in the light of how well they have performed this task.

Problem formulation or agenda setting

One of the most critical aspects of policy research is to formulate the problem as clearly as possible since arguably much of what is called policy failure is largely associated with the lack of effective problem formulation approaches in the first place. In most African countries policy problems are formulated to respond to singular concerns, often associated with vested interests, but because of a general lack of democratic responsiveness the public is usually not in a position to articulate its demands. The overall impact of this situation is that the choice of problems is often not directly related to the immediate needs of the population or is inspired by external concerns, as for example in the case of structural adjustment programmes (SAPs) or donor pressure to introduce multiparty politics.

Again in most African countries the main agenda-setting forum is the political arena, and in practice this means mainly within government. Under conditions of limited public accountability, politicians and civil servants wield enormous power in shaping the direction of public policies and determining how they are implemented. Public institutions are often required to respond to the demands of politicians. This may be done through the appointment of loyal officials, linking the civil service more closely with ruling parties, or even through direct intimidation. Under such conditions, it is difficult to introduce more balanced approaches to policy agenda setting. It is precisely because of this point that it is often argued that policy research efforts are unlikely to have an impact unless political systems and practices are reformed.

Arguably a more dynamic policy management system would provide for an open system for generating policy ideas. Such ideas could originate from forums specifically created to identify options but not exclusively so, provided that mechanisms existed for bringing ideas from other sources to the attention of policy-makers. The point is that a more dynamic system would shift its emphasis from relying on specific agencies to looking at options on the basis of their intrinsic merit. Indeed, in an ideal world many policy ideas would originate from criticisms of existing policies, commentaries on current practices or even policies applied in other countries.

To a large measure, however, the civil service should play a major mobilizing role in the search for policy ideas. Such searches should not be confined to the local scene but would include importantly the monitoring of global trends. For example, the monitoring of policy initiatives in the European Union could lead to a number of policy Initiatives that would enable African countries to adapt to the changing European situation, especially in the field of commodity markets. Other areas of potential importance include the monitoring of technological trends to identify their possible impacts on economic performance. Similarly, close inspection of recent developments in the newly industrializing countries (NICs) of South and East Asia might well provide a number of 'inspirational models' which, suitably modified, could be used in an African context.

At a domestic level policy initiation should also be accompanied by strengthening institutions which collect, process, evaluate, store and apply information to policy management. We shall refer to these institutions as development intelligence organs. Development intelligence is still underdeveloped in Africa, but other developing countries, such as Egypt, Jamaica, Brazil, Indonesia and Malaysia have effectively used it to enhance their global competitiveness in certain sectors (Dedijer and Jéquier). Intelligence is used here to refer to the building of analytical capacity to derive viable policy options from information that is largely available from public sources.

Policy formulation and forecasting

While the process of sources policy ideas should ideally be a relatively open one, the decision to initiate a process through which a particular policy option can be chosen is largely internal to the civil service. Nevertheless, after a decision has been made to explore policy options in a particular area, it is important to involve those likely to be affected in the process of choosing the options, including forecasting efforts under which the effects of each promising path are assessed. The area of forecasting is still underdeveloped in Africa and is carried out mainly for academic purposes or in special units in government agencies. The often quoted explanation for this is the lack of baseline information upon which to base such scenarios. While access to data is important, forecasting needs also to be developed as an important aspect of policymaking and policy research.

More importantly perhaps is that, in most African countries, communities affected by development projects are often the last to know about planned activities. Legislation or administrative measures that ensure a community's right to know would go a long way in expanding public participation in policy management. But the right to know is not adequate unless it is accompanied by reforms that allow for the right to participate in the decision-making process. Information is not an end in itself but a means to improve the capacity for participation in decision-making. And although some countries have begun to introduce measures such as hearings or commissions which enable the public to participate in decision-making, the practice is still not widespread.

In the authors' view this is an area where a series of practical reforms could pay enormous dividends, particularly in the mobilization of expert opinion from all sections of the community. One possibility, for example, is the establishment of an independent assessment capacity for African parliaments. At the moment, they tend to rely heavily on the civil service for technical advice, a situation that compromises their ability to evaluate the effectiveness of the executive branch. In certain areas of strategic importance, for example technology-based investment in development projects, the creation of a parliamentary 'Office of Development Projects Assessment' would provide a capacity to assess the merits of major projects from a more informed position and help to identify the technological implications of new ventures.

A related point is that the setting up of such assessment offices would create considerable demand for policy analysts in a wide range of fields, although it is not expected that such organizations would act as bureaucratic institutions. On the contrary, they would operate more as temporary 'informational nodes', mobilizing and coordinating expert advice drawn from other institutions on the basis of particular expertise. The availability of such assessments would also make it easier for the public to engage more effectively in debates on particular issues. Policy dialogues would become a legitimate practice whenever new policies were being contemplated because the basic information and the policy rationale would be much more readily available. The feedback from these debates would also give the policy initiators an idea of the degree of acceptance for their proposals, which could then be suitably modified.

Experiments and scale-up

The process of testing policy ideas takes many different forms. These forms may include trials, pilot projects and vicarious testing. The main aim of testing a policy idea is to experiment on a relatively small scale so that it provides lessons which can be used for wider application. In areas where the government has already gained adequate experience, the preferred mode of approach is to use the notion of 'familiarity' in order to reduce the costs of experimentation. But

the use of this notion should not be a substitute for applying the precautionary principle, which requires that care be taken to ensure that the impacts of new policies are reduced while the benefits are increased.

The experimental approach would require broader participation and would go against the common practice of issuing decrees, although in cases where familiarity can be established it may still be possible to use decrees. Such decrees are more suitable in areas where the policy has incremental effects or builds on on-going activities. For example, it may be necessary to move quickly from a pilot project to a broader application of a particular policy. Under such conditions, it may be reasonable to use an executive order because it is assumed that the decision is based on the fact that the source of the decree is relying on successful policy experiences to determine the degree of risk related to the new policy.

The scaling-up of policy lessons also needs to take into account the need to reduce the risks of scale effects. For example, projects may work in small localities because they rely on traditional institutions for their support but when scaled up to go beyond the jurisdiction of the traditional institutions may encounter new problems. This is partly why lessons from village projects are difficult to scale up and why each new project tends to evolve in a different way. The timing of projects may also create unique conditions that cannot be replicated in larger projects. This view suggests that, throughout the policy process, learning and adaptation should remain a guiding principle.

A closely related point is the need for effective mechanisms to bring about continuous policy change. In the past, policies have often been introduced without serious consideration being given to this despite the obvious fact that an approach that underscores learning will put a high premium on monitoring and evaluation as a means of providing policy feedback. In addition, monitoring and evaluation of past initiatives can also allow the civil service to assess the costs and benefits of introducing a particular policy. It is this feedback that provides the necessary information for the incremental improvement of the policy. Through the use of policy guidelines, the civil service should establish mechanisms for continuous monitoring and evaluation of policies.

Policy research and decision tools

Finally, account should be taken of the increasingly complex nature of modern economic systems. By this is meant that nowadays the amount of information relevant to any prospective policy decision is often so great that policy-makers rely more and more on 'experts' to help them. And in turn the experts must have continuous access to knowledge about how systems are changing. In a sense so much is happening, and at such a fast rate, that no policy-maker can hope to perform well without significant help from analysts who have made it their business to understand in some detail the inner workings of this or that part of socioeconomic systems. It is in this sense that policy research is defined i.e. as being concerned with the provision of information and other forms of intelligence to facilitate the making and administration of policy. It is usually thought of in terms of public policy, although there is no reason in principle why the term should not be used in other contexts as well, for example with regard to corporate decision-making. It has emerged in recent years as a necessary, and potentially very powerful, tool to help those responsible for the conduct of policy in economic systems that are becoming increasingly complex and subject to unpredictable change.

A good example from the corporate sector is that of fund managers responsible for the disposition of large sums of investible resources. So large are the amounts of money involved, so many are the potential assets, and so rapidly changing are their financial characteristics, that most such companies now employ analysts who specialize in particular areas of the stocks and bonds market. Their job is to provide the intelligence that will enable fund managers to allocate

portfolios of cash in the most optimal ways for clients. Similar examples could be cited with respect to the public sector and international agencies, where again very large resources are involved.

A major difficulty with this kind of research however, as compared with conventional scientific research, is that it is always carried out with regard to a rapidly changing context characterized by a multiplicity of interests that often conflict. Policy research, therefore, cannot strictly be done according to the 'scientific method' in which a stable system can be defined before experiment. On the contrary, as has been pointed out, in all cases the systems involved are complex systems that are very dynamic and subject to unpredictable (and often irreversible) change. This creates a problem for those accustomed to the rigours of conventional science. It is one thing to conduct experiments on systems whose parametric structures are relatively invariant over time (i.e. one can be reasonably confident that estimations of these parameters will conform to reality provided the experiments have been properly conducted). It is quite another to do so on systems that are continuously evolving (i.e. whose parameters are also changing as a function of time), since under these conditions the scientific method no longer works—or at least it needs to be modified considerably.

For this reason the need to do two things should be stressed. Firstly, as mentioned above, it is necessary, as far as possible, to involve those who are directly concerned with any given policy, the 'actors' whose livelihoods are likely to be affected and at the same time whose intimate knowledge of the system under review has an important informative role to play. A recent example of this in Africa is the 'participatory rural appraisal' initiatives. There is growing evidence that policies informed in this way are likely to be much better, and much more acceptable, than policies emanating from some distant government department. The second need is to ensure agreement about the real nature of the system under review. For example, returning to the Tinbergen matrix discussed above, it can be argued that, while such a 'stakeholder matrix' certainly highlights the gainers and losers (and hence permits better dialogue among stakeholders), it does not provide an account of the underlying processes that characterize the system under analysis. In other words, it permits opportunities for disagreements about the very nature of the system itself, and to that extent prevents clear discussion of the issues involved.

Another way of putting the same point is to stress the need for an agreed consensus about the system itself and how it is likely to evolve over the time period of the policy process. This means that there must exist some realistic model that in a sense 'reifies' the system that is being 'acted upon'. Moreover, such a model needs in some sense to characterize the whole system, for example including the evolutionary behaviour of the natural system in response to changing patterns of land use. Other texts (Allen, *et al.*, 1992; Clark *et al.*, 1995) have explored this point in some detail, suggesting *inter alia* that there is a class of model that permits greater involvement in the policy process on the part of stakeholders, and have provided an example of such a model and how it has been used in an African context (Senegal). Moreover the model, when combined with risk analysis, can be used as a powerful decision tool with the capacity to be effective in rapidly changing situations.

TILE WAY AHEAD

The foregoing exploration has presented an overview of the place of public policy in a complex world that is undergoing rapid change. Under such conditions, it is necessary to enhance analytical ability and to bring new knowledge to our understanding of the policy process in Africa. Political and other social theory which has in the past played an important role in generating ideas about policy change can offer important insights, but these are unlikely fully to capture the real world in which policy-makers operate. Scenario builders using the 'if... then' method can enrich the policy process, but the empirical material upon which to base their

options will remain sparse. Under such conditions political advocacy, on the other hand, will continue to dominate the scene and the politics (which for practical purposes can be defined as the management of ignorance) and hence will therefore remain the dominant guide to policy-making.

In the authors' view changing this situation will require two things. First, there has to be a recognition among those concerned with public policy in Africa that they are dealing with evolutionary social systems experiencing rapid and relatively unpredictable change. Their capacity to manage such systems will therefore depend greatly on appropriate institutional reforms that facilitate continuous social learning on the part of actors at all levels of society. Top-down, bureaucratic practices will no longer work. Or at least, if they are persisted with, prospects for sustainable economic development will be compromised to some extent. Somehow or other political masters need to be persuaded that the political and economic outlook is not a 'zero-sum game' but that all can benefit from such reform. Some suggestions in this direction have been made in this article, but much remains still to be done.

The second point is that the role of knowledge in the formulation, conduct and evaluation of policy needs to given much greater focus in policy reform. Here we would suggest that traditional institutional models relating expert knowledge to social need are increasingly unable to cope with the demands of a technologically complex world. Indeed, many African institutes of higher education and research were established on the basis of colonial models relevant to a time when economic systems were both simpler and more stable than they are nowadays. At that time it could be safely assumed that an epistemology applicable to physical phenomena could be extended relatively easily to natural and social phenomena, and therefore that the search for, and validation of, knowledge relevant to the latter could be pursued according to similar canons of scholarship. Equally it could be assumed that these pursuits could be centralized in specialist institutions devoted to the discovery of general truths having the same standing as physical laws. But in a world in which rapid structural change is the norm such an assumption cannot reasonably be made. Instead, it is much more reasonable to assume that much knowledge is context dependent. In other words, the knowledge needed to understand the system is at least partially a function of where in the system you happen to be and who are the people most likely either to possess the knowledge or to have an interest in generating it if it does not yet exist. The issue really is 'How can this best be achieved?' What institutional innovations are needed to mobilize the inherent creativity of those who have most to contribute, and most to gain, from the development process as a whole? And how should the publicly financed research sector respond?

It is the authors' belief that a necessary component will be concerted investments in improving knowledge of the policy-making process both at established educational institutions and through the creation of new ones. At present there are very few African countries with expertise in policy research. Indeed, a major problem with established academic bodies throughout Africa is that they are often totally preoccupied with providing mass higher education on the back of declining budgets. The capacity to deliver the kinds of expertise based upon on-going research competence is therefore very limited. For this reason it is recommended that governments and international agencies support efforts aimed at creating new types of policy research and training activities. Such activities will need to recognize the interdisciplinary nature of the relevant issues and should therefore not be too tied to established academic disciplines. It is also probable that postgraduate programmes that rely on inductive handling of case study material are most likely to offer useful insights into the policy-making process. If this is so, then perhaps schools of policy research can do for the management of public affairs what business schools have done for the private sector.

In this article an attempt has been made to present an agenda for the policy process applicable to African countries as the twenty-first century approaches. Central to the recommendations is the argument that traditional approaches to policy have been dominated by

a mechanistic world view, a view that is out of touch with the complex and dynamic nature of modern economic systems. On the contrary, the important feature of such systems is that they are experiencing very rapid structural change as a result of contemporary technological and socioeconomic developments. It is no longer possible to manage such change using the old bureaucratic procedures, at least not if the country in question wishes to benefit from economic development. Inevitably there will be a period of experimentation as new ideas and institutional forms are tried out. Sometimes mistakes will be made, but these are a price well worth paying for a better future.

REFERENCES

- Allen, P. M., Clark, N. G. and Perez-Trejo, (1992). 'Strategic planning of complex economic Systems', *Review of Political Economy*, 4(3), 275—290.
- Angelides, C. and Caiden, G. (1994). 'Adjusting policy-thinking to global pragmatics and future problematics', *Public Administration and Development*, 14, 223—239.
- Bardach, E. (1977). *The Implementation Game*, (MIT Press, Cambridge, MA).
- Bell, S. (1994). 'Methods and mindsets: towards an understanding of the tyranny of methodology', *Public Administration and Development*, 14, 323—338.
- Biggs, S. D. (1989). 'Resource poor farmer participation in research: a synthesis of experiences from nine national agricultural research systems', *On-Farm Client-Oriented Research, Comparative Study Paper No. 3*, ISNAR, The Hague, The Netherlands.
- Biggs, S. D. (1990). 'A multiple source of innovation model of agricultural research and technology promotion', *World Development*, 18, 1481—1499.
- Biggs, S. and Farrington, J. (1991). *Agricultural Research and the Rural Poor: A Review of Social Science Analysis*, IDRC, Canada.
- Campbell, D. T. (1974). 'Evolutionary epistemology' in Schlipp, P. A. (ed) *The Philosophy of Karl Popper*, Open Court Press, LaSalle, Ill, pp. 413—463.
- Clark, N. G. (1988). *A Science and Technology Council: Problems and Prospects for Botswana*, IT Publications, London.
- Clark, N. G. and Juma, C. (1992). *Long Run Economics*, Pinter, London.
- Clark, N. G., Perez-Trejo, F. and Allen, P. M. (1995). *Evolutionary Dynamics and Sustainable Development: a Systems Approach*, Edward Elgar, Cheltenham, (forthcoming).
- Clay, E. J. and Schaffer, B. B. (eds) (1984) *Room for Manoeuvre: An Exploration of Public Policy in Agriculture and Rural Development*, Heinemann, London.
- Dedijer, S. and Jéquier, N. (1987). *Intelligence for Economic Development: An Inquiry into the Role of the Knowledge Industry*, Berg Publishers, London.
- Doron, G. (1992). 'Policy sciences: the state of the discipline', *Policy Studies Review*, 11, 304.
- Dunn, W. N. (1993). 'Policy reforms as arguments' in Fischer, F. and Forester, J. (eds) *The Argumentative Turn in Policy Analysis and Planning*, UCL Press, London.
- Dye, T. R. (1992). *Understanding Public Policy*, Prentice Hall, Englewood Cliffs, NJ. Ellis, F. (1991). *Agricultural Policies in Developing Countries*, Cambridge University Press, Cambridge.
- Emery, F. E. (1993). 'Policy: appearance and reality', in De Greene, K. B. (ed) *A Systems-Based Approach to Policymaking*, Kluwer Academic Publishers, Boston.
- Ericksen, T. H. (1992). 'Ethnicity and nationalism: definitions and critical reflections', *Bulletin of Peace Proposals*, 23, 2 19—224.
- Freeman, G. P. (1985). 'National styles and policy sectors: explaining structured variation', *Journal of Public Policy*, 5, 467-496.
- Gass, G. M. and Riggs, S. D. (1993). 'Rural mechanisation: a review of processes, policies, practice and literature', *Project Appraisal*, 8 157—187.
- Gass, G. M., Riggs, S. D. and Kelly, A. P. (1993). 'Criteria for poverty focused rural mechanisation R & D', Occasional Paper, School of Development Studies, University of East Anglia.

- Juma, C. (1992). *Public Policy Management in Kenya*. Report for the United Nations Development Programme, Nairobi.
- Kean, S. A. (1994). *The institutional politics of agricultural research policy in Zambia: a model of contingent innovation*, PhD Thesis, School of Development Studies, University of East Anglia, January.
- Khasiani, S. A. (ed) (1992). *Groundwork: African Women as Environmental Managers*, Acts Press, Nairobi.
- Kinsey, B. H. and Almied, I. (1983). 'Mechanical innovations on small African farms': problems of development and diffusion', *International Labour Review*, 122(3).
- Leonard, D. K. (1991). *African Successes: Four Public Managers of Kenyan Rural Development*, University of California Press, Berkeley, CA.
- Lerner, D. and Lasswell, H. D. (eds) (1951). *The Policy Sciences*, Stanford University Press, Stanford, CA.
- Levinson, A. (1966). 'Knowledge and Society', *Inquiry*, 9.
- Lindblom, C. E. (1959). 'The science of "muddling through"', *Public Administration Review*, 2, 79—88.
- Long N. and Long A. (eds.) (1992). *Battlefields of Knowledge*, Routledge, London.
- McLaughlin, M. (1976). 'Implementation as mutual adaptation' in Williams, W. and Elmore, R. (eds) *Social Program Implementation*, Academic Press, New York.
- MacRae, Jr, D. (1993). 'Guidelines for policy discourse: consensual versus adversarial' in Fischer, F. and Forester, J. (eds) *The Argumentative Turn in Policy Analysis and Planning*, UCL Press, London.
- Majone, G. (1980). 'Policies as theories', *Omega*, 8.
- Majone, G. (1989). *Evidence, Argument, and Persuasion in the Policy Process*, Yale University, New Haven.
- Muller, M. (1992). 'Research and the development bank of South Africa', *Transformation*, 18, 43-51 (special issue).
- Nakamura, R. T. and Smallwood, F. (1980). *The Politics of Policy Implementation*. St. Martin's Press, New York.
- Obura, A. P. (1991). *Changing Images: The Portrayal of Girls and Women in Kenyan Textbooks*, Acts Press, Nairobi.
- Ojwang, J. B. (1990). *Constitutional Development in Kenya: Institutional Adaptation and Social Change*, Acts Press, Nairobi.
- Ostrom, E. (1990). *Governing the Commons*, Cambridge University Press, Cambridge.
- Polsby, N. W. (1984). *Political Innovation in America: The Politics of Policy Initiation*, Yale University Press, New Haven.
- Pressman, J. and Wildavsky, A. (1973). *Policy Implementation*. University of California Press, Berkeley, CA.
- Quade, E. 5. (1989). *Analysis for Public Decisions*, North Holland, New York. (revised edition by Carter, G. M.).
- Reiner, M. and Rabinovitz, F. (1978). 'Implementation: a theoretical perspective' in Burnham, W. D. and Weinberg, M. W. (eds) *American Politics and Public Policy*, MIT Press, Cambridge, MA.
- Rondinelli, D. A. (1993). *Development Projects as Policy Experiments: An Adaptive Approach to Development Administration*, Routledge, London.
- Rose, R. (1991). 'Comparing forms of comparative analysis', *Political Studies*, 39, 446—462.
- Rosen, R. (1974). 'Planning, management, policies and strategies', *International Journal of General Systems*, 1, 245—252.
- Rosen, R. (1987). 'On complex systems', *European Journal of Operational Research*, 30, 129—134.
- Sahn, D. E. (1994). 'Economic crisis and policy reform in Africa: an introduction' in Sahn, D. E. (ed) *Adjusting to Policy Failure in African Economies*, Cornell University Press, Ithaca, NY.
- Smith, J. A. (1991). *The Idea Brokers: Think Tanks and the Rise of the New Policy Elites*, The Free Press, New York.
- Steedman, D. W. (1990). 'The internalization of the policymaking process', in *The Long-Term Perspective of Sub-Saharan Africa*, Vol. 2, World Bank, Washington, DC.
- Thomas, J. W. and Grindle, M. 5. (1990). 'After the decision: implementing policy reforms in developing countries', *World Development*, 18(8), 1163-1181.

- Thompson, W. (1961). *Modern Organization*, Knopf, New York.
- Toulmin, S. E. (1958). *The Use of Argument*, Cambridge University Press, Cambridge.
- UN (United Nations) (1993). *Report of the United Nations Conference on Environment and Development*, Rio de Janeiro, 3—14 June, AICCONF. 151/26IRev. 1, Vol. I, UN, New York.
- UNDP (1989). *Report on the SAPAM Programming Mission to Kenya*, United Nations Development Programme, New York.
- Verhelst, T. G. (1990). *No Life Without Roots: Culture and Development*, Zed Books, London.
- Weiss, C. H. (ed) (1992). *Organizations for Policy Analysis: Helping Government Think*, Sage, Newbury Park, CA.
- Wildavsky, A. (1979). *Speaking Truth to Power: The Art and Craft of Policy Analysis*, Little, Brown, Boston.