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POLICY SCIENCES: ITS LIMITS, CRITIQUE AND LESSONS FOR NIGERIA

Andrew O. Oronsaye

INTRODUCTION

During the past forty years or so, a near revolution has occurred in the basic thinking about the nature of public policy and how it is, or should be made.¹ This concern has arisen as a result of the recognition by writers on policy making that this act which is regarded as the most important human activity is being done in a haphazard and slipshod manner. One of the arch critics of this poor state of public policy making is Dror.² As an attempt to improve the present poor state of decision and policy making, Dror came up with his idea of policy sciences which is the subject of discussion of this paper.

The paper will attempt an examination of the possibilities and limits of policy sciences with the intention of finding out what lessons a developing country like Nigeria can derive from it. Towards this end, the paper attempts a definition/ description of what policy sciences means This description tries to answer the twin questions of what and why policy sciences? It also examines the possibilities and limits of policy sciences as well as its development in general, and in Nigeria in particular. The final part of the paper analyzes the idea of policy sciences and draws out some possible lessons which Nigeria can learn.

CONCEPTUAL FRAMEWORK

Policy Sciences Defined

What is policy sciences? Before answering this question it is pertinent, for the purpose of this paper, to situate the term in its proper perspective by discussing how the term came to be used in decision and public policy-making literature. The term policy sciences was first used by Harold D. Lasswell in a book of the same title which he co-edited with Daniel Lerner and was first published in 1951.³ He used the term as an umbrella word to describe the type of policy orientation which he observed was taking place during and since the immediate post-World War n period. According to Lasswell, we may use the term policy sciences for the purpose of designating the content of the policy orientation during any given period. He went further to say that policy sciences include:

- i. the methods by which the policy process is investigated;
- ii. the results of the study of policy, and
- iii. the findings of the disciplines making the most important contribution to the intelligent needs of the time (Lerner *et al*, 1951:4).

Although Lasswell made a proposal for policy sciences, the idea did not seem to have caught on. It was twenty years later that a handle was given to Lasswell's proposals for policy sciences by Dror who is aptly described as *the primum mobile*, that is, the prime mover of contemporary policy sciences. Dror himself did not propose any outright definition of policy sciences; rather, he describes it in the form of a paradigm which can be summed up as follows:

- i. it is principally concerned with the understanding and improvement of policy making;
- ii. it focuses on the macro level as distinct from the micro level;
- iii. it involves a super disciplinary effort (integrated knowledge from a variety of disciplines aimed at policy making);
- iv. it entails bridging the usual dichotomy between pure and applied research;
- v. it accepts tacit knowledge and personal experience as important sources of knowledge;

- vi. it shares contemporary sciences main involvement with prescriptive knowledge and tries to meet the basic tests of science in respect of verification and validation;
- vii. it constitutes organized creativity, including designing, evaluating and redesigning of the policy-making systems;
- viii. it is very tune sensitive; it regards the present as a bridge between the past and the future (i.e. it is concerned with change process and dynamic situation);
- ix. deals with the contribution of systematic knowledge and structured rationality to the improvement of policy making and, at the same time, it recognizes the important roles of extra-rational and irrational processes (such as creativity, intuition, charisma and value judgment) and of irrational processes (such as depth motivation).

Dror then went on to mention that while the main test of policy sciences is better achievement of considered goals through more effective and efficient policies, policy sciences does not deal with discrete policy problems as such but provides improvements and knowledge for doing so (Dror 1971:54). Thus policy sciences can be regarded in the words of Sir Geoffrey Vickers as "the marriage of science and technology or more generally of knowing and doing" (Vickers 1972:45).

The Objectives of Policy Sciences

It would be necessary, however, to mention that policy sciences does not represent an attempt to reduce the process of policy making to a science. The intention of policy sciences as pointed out by E.S. Quade is simply to augment by scientific decision methods and the behavioural sciences the process mat humans use in making judgments and taking decisions (Quade 1970:12). Dror, on the other hand, attributes a sort of messianic role to policy sciences. According to him:

Policy Sciences holds forth the hope of improving the most backward of all human institutions and habits-policy making and decision making. It constitutes a major attempt to assert and achieve a central role for rationality and intellectualism in human affairs and to increase by jumps the capacity of humanity to direct its futures (Dror 1971:24).

Elements of Policy Sciences

Dror identifies four elements or dimensions of policy sciences, viz: (i) policy analysis (ii) megapolicy? (iii) metapolicy and (iv) realization strategy. Each of these dimensions is divided into several phases, which we shall now discuss briefly. *Policy analysis* aims at providing heuristic method to identify preferable policy alternatives and entails (i) processing values (specifying to a reasonable extent value relating to the policy); (ii) considering political variables, such as political feasibility analysis, social power implications (to do this successfully, would demand social experimentation technique and the use of social indicators); (iii) processing reality (getting the facts as distinct from subjective images of reality and evaluating some probabilities); and (iv) processing problems (distinguishing subjective problems people may be obsessed with from objective problems).

Next is *megapolicy* which involves,

- i, determining of the postures, assumptions and main guidelines to be followed by specific policies;
- ii' setting policy boundaries (determining the policy target);
- iii determining the preference time (the expected period for the production of the policy outputs);
- iv determining the policy-making strategy (i.e asking questions such as should it be high or low risk, incremental or innovative, comprehensive or limited, etc);
- v, allocating problems, values and resources (to the right parts and the right people).

The third dimension is *metapolicy*. This can rightly be regarded as the most important contribution of Dror to policy making. It is concerned with how to make better policy. It can be said to embody all the attributes of the above mentioned two dimensions and more, in the sense that it involves all structural, institutional and functional considerations necessary for better policy making.

The fourth and final dimension of policy sciences is *realization strategy*. This involves the necessary groundwork that has to be done if the objectives of policy sciences are to be achieved. This will require, among other things, the training and selection of policy makers, the pressures under which they work, and the education of those who hold them to account (i.e. building up of personnel, institutions and channels of communication).

Limitations of Policy Sciences

The paper, so far, has been concerned with the why and what of policy sciences. We shall now concern ourselves with the possibilities and the limits of policy sciences. Dror realized that there are certain obstacles that can militate against the growth of policy sciences. These barriers which he sees as present within the policy-making community, the science community, and the society at large are:

- i. lack of belief in the ability of science to help his policy-making process which is regarded as the exclusive preserve of politicians and decision makers;
- ii. strong taboos and ritualist attachment to institutions and beliefs which may be undermined with the development of policy sciences;
- iii. socio-cultural distance between scientists and policy makers;
- iv. the incapacity to understand the contributions of science to policy making because of:
 - (a) the over-technical form in which these contributions are presented,' and
 - (b) the fact that most policy makers are under-qualified in knowledge relevant to policy making.
- v. bewilderment at the contradictory conclusions arrived at by equally reputable scientists and, therefore, a tendency to ignore scientific contributions as a whole;
- vi. bad experience with scientists who have used fanciful jargon and quantitative techniques to overwhelm policy makers;
- vii. discord between good policy studies and contemporary policy making patterns of individuals, groups and organizations;
- viii. the fear that policy sciences does not constitute a technical change, but a shift in power (Dror 1971:37-38).

But be it as it may, Dror does not consider the barriers insurmountable. He sees certain changes going on in both the public and private sectors of many countries as portending a realization for policy sciences. Such changes are:

- i. the proliferation of interest by scientists on the social implications of knowledge, accompanied by demands for the re-orientation of science towards solution of societal problems;

- ii. the development of new disciplines and sub-disciplines such as strategic studies and future studies which are directly concerned with policy making in terms of interest in policy issues and are oriented towards better policy making (such disciplines are expected to provide the experiences on which policy sciences can build on;
- iii. the development of policy sciences knowledge outside the conventional academic structure either in privately- or publicly-owned special policy research institutions or organizations; and finally
- iv. the assurance—judging from the experiences of strategies, analysis, and to a lesser degree of future studies—that policy sciences will be able to achieve actual impact on policy making (Dror 1971:80).

THE GLOBAL DEVELOPMENT OF POLICY SCIENCES

The development of policy sciences over the past two decades have been on the upsurge. This can be adduced to the pressing need for governments the world over, in this age of the welfare state, to meet the complex problems that they are confronted with daily. Thus, countries and governments all over the world are beginning to realize the need for relevant policy measures to combat these problems. Among such problems are: environmental issues, urban problems, wars and peace, nuclear weapons, public order, demand for new forms of participation, changes in the concept of the welfare state and search for a meaningful "quality of life", energy crisis, new patterns of international economic co-operation, new education, social consequences of new technology, rapid social and economic development, etc.

Many countries have discovered that attempts to handle these problems with traditional means usually fail in obvious ways. As a result, there is increasing search for new solutions and answers. And because of the strong tradition to get answers from science (a tradition arising from the successful use of scientific information during the World Wars), demands are made on scientific institutions and professional staff to provide answers to pressing issues, which led in part, to attempts to develop and utilize a policy approach. Countries with stronger traditions of reliance on science for the handling of social issues tend more towards institutionalization of policy studies.⁴

Following from the above, is the problem arising from personal interest of individual scientists to influence public policy. Scientists are not immuned to the desire for power and the attempts by them to influence policy have accompanied the growth of modern science since its beginnings. What is new, perhaps, is a stronger

desire by scientists in some countries to be "relevant"—an increasing "politicization" of scientists and the availability of policy research concepts which can make science more relevant in principle to policy making.

In combination, these factors cause a number of scientists in different countries to attempt and advance and/or use policy studies in order to increase their influence on actual policies. This phenomenon has positive as well as negative aspects. On the one hand, a sense of mission to improve policy making motivates some scientists to engage in policy studies, and on the other, some scientists use policy research concepts as slogans in order to advance particular ideologies or in order to get public attention. This attitude makes policy making establishments more cautious about policy studies as a whole.

Perhaps, a very practical demonstration of the development of policy sciences is the rate at which the government of many countries in the world are undertaking administrative reforms. Countries are realizing that the classical administrative machinery is inadequate for fulfilling the functions of modern government and, therefore, they are engaging in the study and redesign of their administrative systems.

In many cases, the need to increase utilization of science for policy making, implementation and effects monitoring is recognized by the administrative reform commissions or task forces, though with different degrees of explicitness. In many cases, the recommendations of the reform commissions have led to the establishment of special policy planning and analysis units— a form of in-house policy research units in the government departments of these countries.⁵

Another dimension to the growth of policy sciences is in the area of publications. Publications constitute a main form of existence and growth of scientific endeavours. The rapid increase in the number of books and journals dealing with public policy and its improvement constitutes, a main indication of the growth of policy sciences. Relevant books and journals appear under a variety of names and, nominally within a large range of disciplines, from systems engineering to economics and other social sciences⁶ future studies and strategy.

What is common to all these books and journals is:

- a. their concern with the study of public policy and the improvement of public policy, and
- b. part of a scientific activity which clearly goes beyond any one of the traditional disciplines.

Also very pronounced, is the growing concern with public policies and their improvement with political science. Especially significant is, of course, the emergence

of literature using explicitly the verbal symbol "policy sciences" or related terms.⁶ The Markham series hi Public Policy Analysis and the Elsevier Policy Sciences Book Series are also worthy of note.

Finally, a discussion of the development of policy sciences will not be complete without mentioning its growth in the universities which are the traditional breeding grounds of knowledge. Understandably, most of these universities are in the United States,⁷ although some countries like Germany, United Kingdom, Japan and Holland can also boast of some policy sciences-oriented universities. However, despite significant quantitative progress, the qualitative problems of teaching policy sciences at universities are far from solved. Particularly hard to meet within universities are two basic requisites of policy sciences teaching; namely: (i) an inter-disciplinary approach; and (ii) an on-going work on real problems, both for clinical teaching and for realistic research. Thus, it can be said that dominance by a juridical approach and absence of advanced social sciences on which policy studies can be based (a widespread feature of university structures in a number of countries) is a feature which hinders the development of the academic and professional infrastructures essential for policy sciences.

Closely following from the above, is the existence of a growing number of new private consultants who try to apply policy sciences approaches and ideas to issues. An interesting illustration is the WEMA Institute (which originated in the Federal Republic of Germany and is now active in a number of countries, including the United States).⁸ This uses a socio-economic systems analysis approach explicitly based on recent policy sciences concepts and strongly oriented towards political and bureaucratic policy variables.

THE DEVELOPMENT OF POLICY SCIENCES IN NIGERIA

The development of policy sciences in Nigeria, unlike in the developed countries which has been on the upsurge since the 1950s, can be said to be slow and of a more recent vintage. For instance, because of the growing complexity and intractability of government, after independence, it was not until 1976 that a National Policy Development Centre was created to serve as the country's think tank.⁹ This centre was assigned the responsibility of developing ideas and policy guidelines and for suggesting new dimensions to existing government policies. However, by early 1979, when it became obvious that the National Policy Development Centre was not as effective as it was originally conceived, it was replaced by a more high powered and better structured National Institute for Policy and Strategic Studies (NIPSS) which is based in Kuru, Jos.

Apart from this national institute, there are other policy- oriented institutions - which make critical inputs into the policy formulation process in Nigeria. Such institutions include the Nigerian Institute for Social and Economic Research, (MISER) the Nigerian Institute for International Affairs (NIIA), the National Centre for Economic Management and Administration (NCEMA) and the Central Bank of Nigeria (CBN).

As a component of the 1988 civil service reform, the establishment of research and statistics divisions has become mandatory in all ministries and departments at the federal, state and local levels of government. Interestingly, and of critical importance to the development of policy sciences, is the fact that the National Planning Commission in the Presidency also has a Research and Policy Analysis department.

The Nigerian universities, as centres of knowledge, are not left out in this development. This is because in most universities with Departments of Political Science/Public Administration, courses in public policy analysis and decision and policy making are offered at both the undergraduate and postgraduate levels. In addition, in most of these universities, there is either a Centre for Social and Economic Research or Institute of Development or Policy Studies. Also of interest to the development of policy sciences is the fact that the Administrative Staff College of Nigeria (ASCON), where many Nigerian bureaucrats are trained, offers courses in decision making and public policy analysis in the Post-Graduate Diploma in Public Administration Programme (PGDPA). Yet of a greater dimension, and as a complement to the above programme, is the yet-to-be commenced B.Sc. and M.Sc. (Public Sector Management) degree programmes which have a relatively heavy load of public policy analysis relevant course offerings. In recognition of the need to contribute to the development of policy sciences in Nigeria, the management of ASCON has in its recent re-organization created a Centre for Policy Research and Documentation.

Outside the universities and training institutions, the recent establishment of the Centre for Advanced Social Science and the Social Science Council in Nigeria will serve as veritable instruments for the development of policy sciences. As a complement to the above institutions is the existence of a growing number of private centres such as the Yakubu Gowon Centre in Abuja, the Development Policy Centre and the Centre for Social Policy and Community Health both based in Ibadan, as well as the Public Policy Research and Analysis Centre, Lagos. To the extent that these centres will address their mandates to socially relevant policy issues by applying policy sciences approaches and ideas to issues, to that extent will they contribute to the development of policy sciences in Nigeria.

Finally, in terms of the contribution of publications to the development of policy sciences in Nigeria, it can rightly be said that this has been very modest. However, the *Journal for Policy and Strategic Studies* published by the Nigerian Institute for Policy and Strategic Studies, Kuru, Jos; the *Annals of the Social Science Council of Nigeria* published by the Social Science Council of Nigeria (SSCN) based in Ibadan; the *Quarterly Journal of Administration*, published by the Faculty of Administration, Obafemi Awolowo University, Ile-Ife; the *Journal of Economic and Social Studies* by the Nigerian Economic Society; *Research for Development* published by the Nigerian Institute of Social and Economic Research (NISER) Ibadan, *Studies in Politics and Society*, published by the Nigerian Political Science Association and the *Economic and Financial Review* as well as the *Annual Report* published by the Central Bank of Nigeria, among other journals, have been concerned with the publication of public policy oriented research findings.

CRITIQUE OF POLICY SCIENCES

Admittedly, policy sciences is essentially designed to provide knowledge or information to the policy formulator or decision maker. Put aptly, it is concerned with bringing knowledge to bear on action. Thus, in that sense, it can be said that in some measure, the importance of basing policy on knowledge has been recognized in every civilization. For instance, Confucius, the most influential thinker in Chinese history could, from the sayings attributed to him, be said to have given prominence to most of the intellectual tasks that policy sciences in the modern sense demands. He dealt with the clarification of values, the examination of historical succession and the analysis of conditioning factors. Ancient Indian civilization also indicate that there were teachers and advisers of the prince who were more concerned with the invention of the weighing of strategic alternatives than with religion or magic. The writings of "Kautilya", for example, are impressive demonstrations of objectivity in the critical evaluation of principles of efficient statecraft. They were designed to instruct the prince, and his advisers, in the management of all aspects of foreign and domestic affairs (Lasswell, 1968:183).

It is on record that the period of the two philosophers referred to above could rightly be described as the "Golden Age" of the two countries mentioned. This goes to show that for knowledge to be useful to a society it does not need all the sophistication of policy sciences as seen by Dror. However, on the other hand, it can be argued that the situation in which policy operates in contemporary life has become more complex and uncertain. This leads us to ask the following questions; how much is the quality, as distinguished from the quantity of what we do, improved by

the expansion of what we know? Can knowledge ever become so complete that we will enter the "Golden Age" where all problems will have answers and everything will be done right? Or, is modern society in danger of rattling apart because the progress of knowledge is so uneven in its application to the world of action?

It is the contention of the writer that while we should be concerned to a certain extent with the acquisition of knowledge for public policy making, our principal concern should be with the quality of what we do with what we know. And the quality of what we do can only be improved by the existence in the decision or policy maker's mind, of what Sir Geoffrey Vickers calls "appreciation."¹⁰ This is necessary because it is on the policy maker that the final onus of what is done with the knowledge made available lies. While recognizing implicitly the need for a proper frame of appreciation for the policy maker, Dror does not attach much importance to it. Failure to do this might result in poor use and even misuse (for bad purposes) of policy sciences.

And still on knowledge for its own sake, it is clear that with the rate at which policy sciences is developing, policy makers in many countries will soon find themselves inundated with more information than they need for a particular problem and naturally this might result in negative effect—the need to have to search through a maze of information for specific information.

Again, it is important to mention that too much has been claimed for policy sciences. For try hard as it may, policy sciences can never achieve "perfect knowledge" of society which is increasingly becoming more complex and diverse. The complexity can be adduced to the following reasons:

- i. human beings learn and adapt their choices and behaviour to new knowledge and changing conditions. The process of learning and adapting creates what may be termed the planner's paradox. Simply put, the paradox is that the more people know in the sense of knowledge of new possibilities and better ability to predict the consequences of different policies, the greater the range of potential human action. Yet again, the greater the range of potential human action, the more difficult it is for planners or policy analysts to predict the outcomes of their plans or policies, especially the more distant then- time horizon;
- ii. under conditions of expanding knowledge generated by many persons, any single person becomes relatively more ignorant hi relation to the aggregate pool of knowledge. This is because, even though an individual knows more than he used to know, the range of total knowledge has expanded even more rapidly so that each individual knows less hi relation to the sum of human knowledge.¹²

The existence of the planner's paradox and the increasing relative ignorance of any single individual should, to say the least, make policy scientists extremely cautious of assuming that either they or policy implementers can never possess perfect knowledge for their work.

Following from the above, is the fact that in a complex world, data cannot be collected on everything. Despite the extension of the scope of interest of policy sciences to non-national factors, the kind of data that is collected, however, makes the World appear much simpler than it really is and, thus, compounds the problem of any policy scientist interested in scientific knowledge. For, while scientific knowledge is essential for policy analysis, it is extremely easy to neglect what might be called time and space information which is the stuff from which better policy, in the context of the present day complex world, can be made.

The limitations of scientific knowledge can be gauged from the United States' Vietnam policy. This can be seen as three failures of knowledge resulting in three miscalculations.

- i. Washington miscalculated how much military punishment the Vietcong and Hanoi would take before surrendering;
- ii. it miscalculated how much help Saigon would need before consolidating its own jurisdiction;
- iii. it miscalculated the level of casualties and cost the U.S public opinion would tolerate.

Instances of such failures could be mentioned in many societies with high degree of scientific knowledge. An instance of such failure in recent times, is the policy of the white minority government of South Africa towards the majority black people of that country. The minority white government underestimated the fighting spirit of the blacks and their determination to see that black majority rule was enthroned in South Africa. The government also misjudged the degree of aversion by the international community against Apartheid and, therefore, the level of support that the international community was willing to give to the blacks in their fight against Apartheid.

Sir Geoffrey Vickers, in his *Freedom in a Rocking Boat*,^u came out in condemnation of the reliance of Western Countries on knowledge and daring rather than on wisdom and restraint. Vickers believes that stability must replace growth as a criterion and condition of the economic system since he views growth as ultimately a self-defeating goal. He is of the view that technology has dehumanized and distorted government (i.e. regulations) by creating an unstable system and impoverished values

partly by infecting public policy making with the habit of seeking goals rather than means. Thus, Vickers does not share the Western countries' faith in their traditional problem-solving techniques. As he put it:

I believe that no degree of technological innovation and no scale of technological effort can rescue the West from its self-set trap. ...only an age blinded by exploding technology and ruled by the vested interest of technology could accept as given, the self-generated changes however outrageous of a system which is man-made if not man designed. (Vickers 1970:22-23).

To Vickers, therefore, public policy makers should be concerned not only with what they should do, but rather with what the society should desire. This is because learning what the society wants is the most radical, the most painful and the most creative art of life (Vickers 1970:24). Also the primary source of social regulation, public policy making) stems from the widespread existence of mutual appreciative system. In essence, Vickers considers it imperative for the individual public policy maker to develop reliable expectations of what others in the society will do. This he sees as deriving from the fact that this type of expectation which includes self-expectation is the most important and effective public policy making device in a pluralistic society where there are different interests and, therefore, different preferences.

LESSONS FOR NIGERIA

Before discussing the lessons that a developing country like Nigeria can learn from the development of the idea of policy sciences, it will be necessary to point out that the concepts, models and theories of contemporary policy studies reflect a distinct cultural bias in favour of the industrialized West. Consequently, it is no wonder that this cultural bias has gone on to rub on Dror's paradigm for policy sciences which, on examination, clearly shows an extreme insensitivity to the heterogeneous, philosophical, religious, cultural values and other dynamics of a developing post-colonial country like Nigeria.

Thus, the first lesson that Nigeria can learn, is develop a critical awareness of the need for a new value and culture sensitive paradigm. For instance, the incremental model of policy making within the context of Western democracies, particularly in the United States, is believed to be the ideal approach to be adopted in decision and policy making because of the effectiveness of the strategy and the difficulty of attaining

consensus on fundamental changes. However, unlike in the industrialized West, the Nigerian past, like in many of the developing countries, is a colonial past which is considered unsatisfactory and undesired. Therefore, a major break with the "irrelevant past" is the desired goal, i.e. a "quantum jump" rather than incremental step by step approach.

The implicit assumption in incrementalism, that there is basically no change in the nature of problem addressed, does not hold in a post-colonial country like Nigeria, where governments are confronted with all sorts of demands and are required to play entrepreneurial role as against previous role of regulation, such as maintenance of law and order, in an attempt to catch up with the industrialized societies and improve living conditions, new and complex demands are now being made on the government for which they hardly have previous experience. To keep pace with such demands, Nigerian governments need creative innovation policies.

Nigerian policy makers must realize that even though all the countries of the world are undergoing rapid changes and, hence, are experiencing problems related to these changes, these problems are by no means identical for all countries. In fact, what is a problem for some countries may be perceived as desirable goal for some other countries. For example, some countries are suffering from the "success" of their industrialization, having accepted the fact that industrialization means that their countries will be polluted. While it could be argued that Nigeria, like any other developing country knows the errors to avoid, it would appear that she does not know how to get what she wants. The need to know how to get what she wants is, therefore, very critical and important.

It is in this respect that Nigerian public policy makers have to develop appropriate ways of knowing what the Nigerian society wants as well as the appropriate strategy for achieving the defined public policy goals. As succinctly put by Professor Mabogunje.¹⁴

Unless our strategies are well grounded in the realities or our social situations we would have succeeded in achieving a flurry of seemingly growth-including activities which would eventually end in stagnation and the collapse of orderly society. Such strategies should address themselves to the people directly and take account of socio-spatial context in which they live and find their being (Mabogunje 1978:29).

CONCLUSION

In conclusion, it must be stated that the main rationale for policy sciences is its potential in contributing to better policy making and implementation.¹⁵ Therefore, for policy sciences to be relevant to Nigeria it must be seen to contribute to an improvement of the policy-making process. There is no doubt that policy sciences has been growing gradually in Nigeria since the 1970s. However, it must be emphasized that the enabling environment for the development of policy sciences is a democratic environment which provides for the generation of ideas and creativity. With the modest growth of policy sciences in Nigeria, there is need for an integration of the different policy making units through a central policy coordinating body. Finally, there is the need to strengthen each stage of the policy-making process (the formulation, implementation and evaluation stages) if policy sciences is to have the desired effect.

ENDNOTES AND REFERENCES

1. This has been a post-World War II phenomenon. Many reasons have been adduced for this. But the most important ones have been (i) the realization of the big unforeseen consequences of decisions lightly taken and carried out; e.g. the First and Second World Wars; (ii) the advent of the most-industrialized societies and the need, in developing societies, for social change and rapid development.
2. Other writers of eminence who have expressed concern on the need for better public policy making are:
 - (i) Sir Geoffrey Vickers, in his books (a) *The Art of Judgement*. London: Chapman and Hall, 1965; (b) *Values Systems and Social Process*. London : Penguin Book, 1968.
 - (ii) Theodore J. Lowi, *The End of Liberalism*. New York: W. W. Norton and Co. Inc. 1969.
 - (iii) Amitai, Etzioni, *The Active Society*. New York: The Free Press, 1968,
 - (iv) John Galbrath, *The New Industrial State*. New York: Mentor, 1972;
 - (v) Daniel Bell, *The Coming of Post-industrial Society*. New York: Basic Books, 1973.
3. See Daniel Lerner and Harold D. Lasswell (eds) *The Policy Sciences*. Stanford, California: Stanford University Press, 1951.

4. Such countries in order to their degree of commitment to the institutionalization of policy studies are the United States of America, United Kingdom, Germany, Canada, Japan, Holland, Israel and India.
5. For example, the United Kingdom —The Fulton Committee on the Civil Service (1966); Canada - The Glassco Commission (1968); Nigeria—Udoji Commission (1974) and Dotun Philips Commission on the Re-organization of the Civil Service—1988).
6. For example, journals such as, *Policy and Politics, Public Policy, Policy Studies, Policy and Analysis, Policy Sciences, Social Policy and Annals of Social Sciences.*
7. Among such Universities, the following can serve as good illustrations; the Harvard Graduate Program in Public Policy—the Doctoral Programme in Policy Sciences at State University of New York at Buffalo, and the Graduate School of Public Affairs at the University of California Berkeley.
8. Such other private consultant groups in the U.S are; the Rand Corporation, the Hudson Institute, the Brookings Institute and the Urban Institute.
9. There were science and social science-based research institutes created before and immediately after independence. These institutes no doubt predated the National Policy Development Centre.
10. See Sir Geoffrey Vicker's *The Art of Judgment*. London: Chapman and Hall, 1965, for more elaboration on the usefulness of the appreciative system.
11. Here perfect knowledge implies both the knowledge of current circumstances and the ability to forecast the future without error.
12. This thesis is advanced by Jose Ortega Gasset in *the Revolt of the Masses*. New York: Norton 1930.
13. See Sir Geoffrey Vickers, *Freedom in a Rocking Boat*. London: Penguin Press, 1970.
14. For more on this, see A. Mabongunje, *Developing and Development*. Ibadan: Ibadan University Press, 1978.
15. See M. Hill (ed) *The Policy Process; A Reader*, London, Harvester Wheatsheaf, 1993.