
UNIT 4 SYSTEMS APPROACH*

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4.0 OBJECTIVES

This unit deals with one of the modern approaches in the study of Comparative Government and Politics, the Systems approach. After going through this unit, you should be able to:

- explain the meanings and evolution of systems approach;
- Defined a system
- explain the objectives, characteristics and elements of systems approach;
- distinguish the political system from other social systems;
- Evaluate the systems theory in its proper perspective.

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4.1 INTRODUCTION

In the study of Comparative Politics, political scientists adopt various approaches and methods for explaining political phenomena. The approaches used in comparative political enquiry can be broadly classified under two categories; the traditional approach and the modern approach. Traditional approaches are mainly concerned with the traditional view of politics which emphasised on the study of formal political institutions, structures or agencies existing in different political systems such as the judiciary, legislature, bureaucracy, political parties, pressure groups or any other institution which is constantly engaged in politics. Proponents of traditional approach comprise both ancient and modern political thinkers such as Plato, Aristotle, James Bryce, Bentley, Walter Bagehot, Harold Laski etc. There are various other traditional approaches to the study of politics which includes philosophical (advocated by Plato, Aristotle etc.), historical (Machiavelli, Sabine, Montesquieu, Tocqueville, etc.), legalistic (Cicero, Jean Bodin, Thomas Hobbes, Jeremy Bentham, John Austin, etc.) and institutional approaches.

However, traditional approaches have their inherent weakness and limitations. They are also normative and idealistic in the sense that their analysis stressed more on values and norms of politics. Traditional approaches are also considered to be narrow since their analysis and descriptions are primarily confined to the study of western political institutions and systems.

But, despite their limitations, these approaches largely remain popular till the mid-twentieth. It was in this backdrop, various modern approaches to the study of politics were developed aiming to remove the inherent weakness of traditional approaches. These modern approaches, which may include behavioural approach, post-behavioural approach, systems approach, structural-functional approach, communication approach, etc., seek to present scientific, realistic, and analytical perspectives of politics. In this regard, the development of modern approaches is said to have brought a revolutionary change in the study of comparative politics which was, according to Almond and Powell, directed towards; (a) the search for more comprehensive scope, (b) the search for realism, (c) the search for precision, (d) the search for the theoretical order.

In the previous unit, you have studied the use of a very old and important traditional approach of political enquiry called the ‘institutional approach’ which emphasised on the study of formal political institutions and agencies of the government and the state. In this unit, an attempt shall be made to study, review and examine a popular modern approach to the study of comparative politics called the ‘systems approach’, also called the systems analysis, which seeks to take the study of politics beyond the formal institutions and structures, and look into other aspects of politics such as functions, processes and behaviours. The unit will deal with the evolution, historical context, characteristics, strengths and weaknesses and various other aspects of systems approach.

4.2 SYSTEMS APPROACH

The Systems approach is the study of inter-related variables forming one system, a unit, a whole which is composed of many facts, a set of elements standing in interaction. This approach assumes that the system consists of discernible, regular and internally consistent patterns, each interacting with another, and giving, on the whole, the picture of a self-regulating order. It is, thus, the study of a set of interactions occurring within and yet analytically distinct from, the larger system. The systems theory presumes:

- the existence of a whole on its own merit;
- the whole consisting of parts;
- the whole existing apart from the other wholes;
- each whole influencing the other and in turn, being influenced itself;
- the parts of the whole are not only inter-related but also interact with one another thereby creating a self-evolving work.

The emphasis of the systems theory is on the articulation of the system and of its components and their behaviours by means of which it maintains itself over time.

4.2.1 Genesis of the Systems Approach

The genesis of systems approach can be traced to the German biologist Ludwig Von Bertalanffy who introduced the general systems theory in the study of Biology in the 1930s. A system, as defined by Bertalanffy is a set of 'elements formulating in interaction'. This concept is based on the idea that elements within a group are in some way or the other related to one another and in turn, interact with one another on the basis of certain identifiable processes. It was from this general systems theory that the social scientists took the idea and applied it as an important tool for explaining social phenomena in the post-Second World War period. Since the 1960s, systems theory or systems analysis became an important element in the study of political science. David Easton was among the first political scientists to formulate systems approach in political analysis. In his book *A Systems Analysis of Political Life* (1965), Easton defined a political system as that 'behaviour or set of interactions through which authoritative allocations are made and implemented for society'. Applying systems approach in political science, he argued that 'each part of the political canvas does not stand alone but is related to other parts' and that 'the operation of one part cannot be fully understood without reference to how the whole system operates'. Other prominent scholars who advocated for a systems approach in political analysis are Gabriel Almond (*Comparative Politics: A Developmental Approach*, 1978), David Apter (*Introduction to Political Analysis*, 1978), Karl Deutsch (*Nation and World: Contemporary Political Science*, 1967), Morton Kaplan (*System and Process in International Politics*, 1957), Harold Lasswell (*Power and Society*, 1950) etc.

4.2.3 Historical Context

The systems approach, like any other modern approach, has evolved in a historical perspective. As the traditional approaches to the study of comparative politics proved futile, the need to understand it in a scientific manner became more important. The influence of other disciplines, both natural and social sciences and their mutual inter dependence gave a new impetus for looking out these disciplines, comparative politics including, afresh and brought to the fore the idea that scientific analysis is the only way to understand politics. The study of political systems became, as times passed on, more important than the study of Constitutions and governments, the study of political processes came to be regarded more instructive, than the study of political institutions. The post-second World War period witnessed, in the USA particularly, a fundamental shift in the writings of numerous American scholars when they began to borrow a lot from other social and natural sciences so as to give new empirical orientation to political studies which helped ultimately to examine numerous concepts, out in the process enriched their findings. The Social Science Research Council (USA) contributed a lot to provide an environment in which scientific analysis in comparative politics could be carried on. Some other American foundations such as the Ford Foundation, the Rockefeller Foundation, and the Carnegie Foundation provided liberal funds for studies in comparative politics. Thus, it was possible to introduce new approaches, new definitions, and new research tools in comparative politics. All this led to what may be conveniently termed as revolution in the discipline: a revolution of sorts in the definition of its mission, problems and methods' (See Michael Rush and Philip Althoff, An Introduction to Political Sociology).

The introduction of the systems analysis, like other modern approaches, in comparative politics by writers like Easton, Almond, and Kaplan was, in fact, a reaction against the traditional tendency of uni-dimensionalisation, impeding, in the process, the patterns of scientific analysis which make possible the unification of all knowledge. The systems approach is one of the modern approaches that help to understand political activity and political behaviour more clearly than before. It looks at the social phenomenon as a set of interactive relationships. So considered, the systems analysis covers not only the science of politics but also virtually all social sciences.

Check Your Progress 1

Note: i) Use the space given below for your answer.

ii) Check your answer with the model answer given at the end of the unit.

1. The emphasis of the systems approach is on :

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2. State briefly the inherent weakness of the traditional approaches.

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4.3 GENERAL SYSTEMS THEORY AND SYSTEMS THEORY

4.3.1 Distinctions between General Systems and Systems Approaches

The systems analysis may have sprung from the general systems theory, but the two are different in many respects. To identify the systems theory with the general systems theory amounts to committing the philosophical error of the first order. While the general systems theory gives the impression of a system as one which is as integrated as the parts of the human body, the systems theory does recognise the separate existence of parts. What it means is that the general systems theory advocates organised unity of the system whereas the systems theory speaks of unity in diversity. That is one reason that the general systems theory has been rarely applied to the analysis of potential and social phenomena while the systems theory has been applied successfully in political analysis. David Easton, for example, has applied the systems theory to politics. Professor Kaplan has brought out the distinction between the general systems theory and the systems theory. He says, "... systems theory is not a general theory of all systems. Although general systems theory does attempt to distinguish different types of systems and to establish a framework within which similarities between systems can be recognised despite differences of subject matter, different kinds of systems require different theories for explanatory purposes. Systems theory not only represents a step away from the general theory approach but also explains why such efforts are likely to fail. Thus the correct application of systems theory to politics would involve a move away from general theory toward comparative theory". Furthermore, it has not been possible to make use of the concepts of general systems theory in social sciences such as political science while the systems theory has been able to provide concepts (such as input-output, stability, equilibrium, feedback) which have been well recognized by the empirical political scientists.

4.3.2 Systems Analysis: Characteristic Features

Systems analysis implies system as a set of interactions. According to O.R. Young, it is "a set of objects, together with relationships between the objects and between their attributes". To say that a system exists is to say that it exists through

its elements, say objects; and its elements (objects) are interacted and they interact within a patterned frame. A system's analyst perceives inter-related and a web-like objects and looks for ever-existing relationships among them. O.R. Young has advocated for an interactive relationship among the objectives. His main concerns are i) to emphasise the patterned behaviour among the objects of the system, ii) to explain the interactive behaviour among them, iii) to search for factors that help maintain the system.

Systems analysis elaborates, for understanding the system itself, a set of concepts. These include system, sub-system, environment, input, output, conversion process feedback, etc. System implies persisting relationships, demonstrating behavioural patterns, among its numerous parts, say objects or entities. A system that constitutes an element of a larger system is called a **sub-system**. The setting within which a system occurs or works is called **environment**. The line that separates the system from its environment is known as **boundary**. The system obtains inputs from the environment in the form of demands upon the system and supports for its functioning. As the system operates, inputs are subjected to what may be called conversion process and it leads to system outputs embodying rules to be forced or policies to be implemented. When system outputs affect the environment so to change or modify inputs, feedback occurs.

The systems approach, therefore, has characteristics of its own that may be summed up as;

- a social phenomenon does not exist in isolation, but numerous parts joined together to make a whole. It is a unit, a living unit with existence and goal of its own.
- Its parts may not be and, are not organically related together, but they do make a whole in the sense that they interact and are inter-related. Specific behavioural relationships pattern them into a living system.
- It operates through a mechanism of inputs and outputs and under/ within an environment which influences it and which, in turn, provides feedback to the environment.
- Its main concern is as to how best it maintains itself and faces the challenges of decay and decline.
- It implies patterned relationships among its numerous parts, explaining their relative behaviour and role they are expected to perform.

4.3.3 Systems Approaches: Concerns and Objectives

Systems analysis is concerned with certain objectives. One of its major concerns is the 'maintenance of the system's integrity' which is, according to Welsh, depends on the system's ability to maintain order. The system evolves a 'regularized procedures' by which resources in the society are distributed so that

members in the system are sufficiently satisfied to protect the system from chaos and collapse.

The second concern of the systems approach is that to how the system meets the challenge of change in its environment. Welsh argued that since changes in the environment are natural, it is natural for the environment to affect the system and that the system has to adapt itself to the realities the environmental changes. The systems approach identifies the conflict between systems necessity of responding to the changes and the already engineered changes as provided by the environment, and also the capacities to remove the conflict.

The third objective of the systems approach is the importance it gives to the ‘goal-realisation’ as the central aspect of the system. No system can exist over a substantial period without articulating, determining and pursuing some specific identifiable goals. According to Welsh, the pursuance of these goals is an important focus in the systems approach.

Check Your Progress 2

- Note: i) Use the space given below .for your answer.
- ii) Check your answer with the model answer given at the end of this unit.

1) Identify the main differences between the General Systems Theory and the Systems Theory.

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2) State two characteristic features of the Systems Approach.

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4.4 DERIVATIVES OF THE SYSTEMS ANALYSIS

4.4.1 Political System Derivative: Input-Output Derivative

Political system or the input-output approach is one derivative of the systems analysis introduced by David Easton. He provided ‘an original set of concepts for arranging at the level of theory and interpreting political phenomena in a new and helpful way’ (Davies and Lewis: *Models of Political Systems*). Easton selects the

political system as the basic unit of analysis and concentrates on the intra-system behaviour of various systems. He defines political system as ‘those interactions through which values are authoritatively allocated and implemented for a society’. It would be useful to highlight some of the characteristic features of Easton’s concept of the political system which can be briefly put as:

- Political system implies a set of interaction through which values are authoritatively allocated. This means the decisions of those, who are in power, are binding.
- Political system is a system of regularised persistent patterns of relationships among the people and institutions within it.
- Political system like any natural system is a self-regulating system which can alter, correct, or adjust its processes and structures by itself.
- Political system is dynamic in the sense that it can maintain itself through the feedback mechanism. The feedback mechanism helps the system to persist through everything else associated it may change, even radically
- Political system is different from other systems of environments physical, biological, social, economic, ecological, etc.
- Inputs through demands and supports put the political system at work while outputs through policies and decisions throw back what is not accepted as feedback.

O.R. Young sums up the essentials of Easton's political system, saying: “Above all, the political system is seen as a conversion process performing work, producing output and altering its environment, with a continuous exchange between a political system and its environment based on the steady operation of the dynamic processes. At the same time, the systems approach provides numerous concepts for dealing both with political dynamics in the form of systematic adaptation processes and even with purposive redirection in the form of goal-changing feedback”.

However, Easton’s political system approach has not been free from criticisms. For instance, Professor S.P. Verma regards it as an abstraction whose relation to empirical politics (which is classic) is impossible to establish. Eugene Meehan also said that Easton does less to explain the theory and more to create the conceptual framework. His analysis, it may be pointed out, is confined to the question of locating and distributing power in the political system. He seems to be concerned more with questions such as persistence and adaptation of the political system as also with the regulation of stress, stability and equilibrium and thus advocates only the status quo situation. Therefore, there is much less in Easton's formulation, about the politics of decline, disruption and breakdown in the political system. Despite all claims that the political system approach is designed for macro-level studies, Easton’s analysis has largely focused on western countries. Easton’s political system of the input-output model also deals

only with the present and has, therefore, no perspective of the future and has less study of the past.

However, the merits of the input-output or political system approach cannot be ignored. It has provided an excellent technique for comparative analysis by introducing a set of concepts and categories that have made the comparative analysis more instructive. Easton's analysis is among the most inclusive systematic approach of political analysis. It also laid the foundation for systems analysis in political science which provided a general functional theory of politics.

4.4.2 Structural-Functional Derivative

The structural-functional analysis adopted by Gabriel Almond is another derivative of the systems approach widely adopted in political science, especially in comparative politics. It is primarily concerned with the phenomenon of system maintenance and regulation. The basic theoretical proposition of this approach is that all systems exist to perform functions through their structures. The basic assumptions of the structural-functional derivative of the systems approach are:

- society is a single inter-connected system in which each of its elements performs a specific function and whose basic goal is the maintenance of the equilibrium;
- Society consists of its numerous parts which are inter-related;
- The dominant tendency of the social system is towards stability which is maintained by its in-built mechanism;
- System's ability to resolve internal conflicts is usually an admitted fact;
- Changes in the system are natural, but they are neither sudden nor revolutionary but are always gradual and adaptive as well as adjustive;
- System has its own structure, aims, principles and functions.

The structural-functional derivative speaks of the political system as composed of several structures as patterns of action and resultant institutions with their assigned functions. A function, in this context, means 'purposes served with respect to the maintenance or perpetuation of the system', and a structure means 'any set of related roles, including such concrete organisational structures as political parties and legislatures. The structural-functional analysis, therefore, involves the identification of a set of requisite or at least recurring functions in the kind of system under investigation. It attempts to determine the kinds of structures and their interrelations through which those functions are performed.

Gabriel Almond's *The Politics of the Developing Areas*, 1960, summed up structural-functional analysis as the legitimate patterns of human interactions by which order is maintained; all political structures perform their respective functions, with different degrees in different political systems. The Input functions include:

- a) political socialisation and recruitment;
- b) interest articulation;
- c) interest aggregation;
- d) political communication;

Whereas, the output functions consist of:

- a) rule-making;
- b) rule-application;
- c) Rule-adjudication.

Gabriel Almond, while considering politics as the integrative and adaptive functions of a society based on more or less legitimate physical coercion, regards political system as “*the system of interactions* to be found in all independent societies which *perform the functions* of integration and adaptation by means of the employment or threat of employment of more or less legitimate order-maintaining or transforming system in the society”. He argued that there is interdependence between political and other societal systems; that political structures perform the same functions in all systems; that all political structures are multi-functional; and that all systems adapt to their environment when political structures behave dysfunctionally.

Thus there is a basic difference between Easton’s input-output model and Almond’s structural-functional approach. While Easton emphasised on interaction and interrelationship aspects of the parts of the political system, Almond is more concerned with the political structures and the functions performed by them. And this is perhaps the first weakness of the structural-functional analysis which talks about the functions of the structures and ignores the interactions which are characteristics of the numerous structures as parts of the political system.

Almond’s model suffers from being an analysis at the micro-level, for it explains the western political system, or to be more specific, the American political system. There is undue importance on the input aspect, and much less on the output aspect in his explanation of the political system, giving, in the process, the feedback mechanism only a passing reference. Like Easton, Almond too has emerged as status-quoist, for he too emphasised on the maintenance of the system. While commenting on Almond’s insistence on separating the two terms – ‘structures’ and ‘functions’, Sartori said, ‘the structural-functional analysis is a lame scholar that claims to walk on two feet, but actually on one foot and a bad foot at that’. He cannot visualise the interplay between ‘structure’ and ‘function’ because the two terms are seldom, if ever, neatly disjointed, the structure remains throughout a kin brother of its inputted functional purposes”.

And yet, the merit of the structural-functional model cannot be grossly ignored. It has successfully introduced new conceptual tools in political science, especially in comparative politics. It has also offered new insights into political realities. And that is one reason that this model has been widely adopted, and is being used as a descriptive and ordering framework.

4.4.3 Cybernetics Derivative

Another important derivative of the systems analysis is the ‘communication approach’ which Karl Deutsch called as ‘Cybernetics’. Cybernetics, as defined by Deutsch is the *science of communication and control*. It focuses on the systematic study of communication and control in organisations of all kinds. The idea of Cybernetics suggests that ‘all organisations are alike in certain fundamental ways and that every organisation is held together by communication. Deutsch’s Cybernetics approach viewed ‘governments’ as organisations where information-processes are communicated through channels. Information, according to Cybernetics, is a patterned relationship between events; communication means the transfer of such patterned relations; and channels are the paths through which information is transferred. Deutsch rightly says that his book *The Nerves of Government* (1966) deals less with the bones or muscles of the body politic and more with its nerves...its channels of communication. The political system, according to Deutsch, is nothing but a system of decision-making and enforcement, as a network of communication channels.

Drawing largely from the science of neurophysiology, psychology and electrical engineering, Deutsch perceived the similarities in processes and functional requirements between living things, electronic machines and social organisations. According to him, organizations in the society have the capacity to transmit and react to information (Davies and Lewis, *Models of Political Systems*, 1971).

The characteristic features of the cybernetics model of the systems analysis can be, briefly, stated as under:

- Feedback constitutes a key concept in the cybernetics model. It is also called a servo-mechanism. By feedback, Deutsch means a communications network that produces action in response to an input information;
- All organisations, including a political system, are characterised by feedback mechanisms. It is feedback that introduces dynamism into what may be otherwise a static analysis.

Thus Deutsch’s model of Cybernetics deals with *communication, control* and *channels* against Easton's input-output model of interactions and Almond’s structural-functional analysis of *structures* and their *functions*. All these seek to explain the functioning of the system – its ability to adapt itself amidst changes and its capacity to maintain itself over time.

However, Deutsch’s Cybernetics model has numerous drawbacks: it is essentially an engineering approach which explains the performance of human beings and living institutions as if they are machines. The cybernetics is also ‘quantity-oriented’ rather than ‘quality-oriented’ which makes the understanding of political phenomena complex. But, as a derivative of the systems approach, cybernetics contributed its bit in explaining political phenomena concerning

human behaviour. In this sense, cybernetics model has indeed expanded our effort in understanding the political system.

Check Your Progress 3

Note: i) Use the space given below for your answer.
ii) Check your answer with the model answer given at the end of this unit.

1) Give the three characteristic features of Easton's input-output model.

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2) What are the limitations of Deutsch's cybernetics theory?

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4.5 SYSTEMS THEORY: AN EVALUATION

The introduction of systems approaches in political studies provides a broader and better understanding of not only the political activities, behaviours, process of a given political system but also politics at large. This is so because the systems approach takes into account the political phenomena as one unit, a system in itself, not merely the sum-total of its various parts, but all parts standing in interaction- with one another.

The systems theorists have drawn much from biology and other natural sciences and have equated the organic system with social system. Indeed, there are similarities between the two systems, but analogies are only and always analogies. Any attempt to extend the argument amounts to falsification. To relate a hand to human body is not when we relate an individual to the society or a legislature to the executive organ of the government. The systems theorists have only built an extended form of organic theory which the individualists had once argued.

All the systems theorists have committed themselves to building and maintaining the system. Their concern has been only to explain the system as it exists. What they have, additionally, done is to state the causes which endanger its existence and factors which can strengthen it. They are, at best, the status-quoists who have little knowledge about past and perhaps no concern for the future. All the

concepts that systems theorists have developed do not go beyond the explanation and understanding of the present. The entire approach is rooted in conservation and reaction. (Verma, 1966).

The systems theorists, in Political Science or in the field of Comparative Government and Politics, have substituted political system in place of the state by arguing that the term political system explains much more than the term state. Indeed, the point is wide and clear. But when these theorists come to highlight the characteristics of political system, they do not say more than the political power or force with which the conventional word 'state' has been usually associated.

What the systems analysts have done is that they have condemned the traditionalists for having made the political analysis descriptive, static and non-comparative. What they have, instead, done is that they have introduced the numerous concepts from both natural and other social sciences in Political Science or Comparative Politics so as to make the discipline more interdisciplinary. The claim that the systems theorists have evolved a scientific and empirical discipline is too tall.

4.5.2 Strength of the Systems Approach

If the idea behind the systems approach is to explain the concept of system as a key to understand the social web, the efforts of the systems theorists have not gone waste. It is important to note that the influence of the systems analysis has been so pervasive that most comparative politics research makers use of the systems concepts. It is also important to state that the systems approach has well addressed and well-directed itself to numerous meaningful questions – questions such as the relationships of systems to their environment, the persistence of the system itself and overtime, stability of the system, function assigned to the structures as parts of the system, dynamics and machines of the system.

Professor S.N. Ray has summed up the merits of the systems theory very aptly, saying that, 'it (the system theory) gives us an excellent opportunity for fusing micro-analytical studies with macro-analytical ones. The concepts developed by this theory open up new questions and create new dimensions for investigation into the political processes. It often facilitates the communication of insights and ways of looking at things from other disciplines. It may be regarded as one of the most ambitious attempts to construct a theoretical framework from within political sciences.

4.6 LET US SUM UP

Systems approach is one of the modern approaches adopted in the study of Political Science, especially in Comparative Governments and Politics. It viewed the political system as a set of interactions, interrelations, patterned behaviour among the individuals and institutions, a set of structures performing their

respective functions and one that seeks to achieve certain goal and attempts to maintain itself amidst vicissitudes.

The systems approach though claims to provide a dynamic analysis of the system, remains confined to its maintenance. It claims to have undertaken an empirical research, but has failed to provide enough conceptual tools for investigation. It has not been able to project system, particularly political system more than the state. The approach is, more or less, conservative in so far as it is status-quoist.

Yet the systems approach is unique in many respects. It has provided a wider scope in understanding and analysing social behaviour and social interactions. It has drawn a lot from natural sciences and has very successfully used their concepts in social sciences. It has been able to provide a degree of methodological sophistication to the discipline of political science.

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4.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1. The systems approach primary emphasized on (a) on the articulation of the system (b) on the articulation of the components of the system (c) on the behaviour by means of which the system is able to maintain itself.
2. The traditional approaches are largely historical and descriptive. They are also normative and idealistic. They lack explanatory power.

Check Your Progress 2

1. The General Systems Theory has been rarely applied to the social sciences while the systems theory has been successfully applied (b) The General Systems Theory, developed as it is from natural sciences (biology particularly) treats the systems as more or less organically integrated from within while the systems theory lays emphasis on the interactions aspect of the elements of the system.
2. The characteristics of systems approach are; (a) it viewed social phenomena as a unit (b) it regarded the system as a set of interactions of various elements.

Check Your Progress 3

1. Easton's input-output provided an excellent technique for comparative politics. Its significance is that it has provided a set of concepts and categories which has helped in comprehending the system more clearly.
2. Its engineering approach equating individuals and society with machines. Moreover, its concern with quantity rather than quality of communication poses a challenge to understanding political phenomena.